

NORTHWEST TERRITORIES

School Health Program

GRADE EIGHT



Northwest
Territories

Education, Culture and Employment
Health and Social Services

NORTHWEST TERRITORIES

School Health Program

GRADE 8



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August, 1996

NORTHWEST TERRITORIES

School Health Program

INTRODUCTION

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ACKNOWLEDGEMENTS

Health and Welfare Canada, Health Promotion Directorate, Prairie Region provided most of the funding for this project. The Northwest Territories Departments of Health and Education gratefully acknowledge this contribution.

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- Margaret Dukes - St. John Ambulance Association, Ottawa

The Department of Education and the Department of Health wish to acknowledge the support and cooperation of Regional and Area Superintendents of Education in facilitating the pilot-testing process in schools in all regions.

Special thanks are due to the many teachers in the Northwest Territories who tested the various units of the program. The time and effort which they gave and the resulting feedback were invaluable in the development of this program.

The Department of Education and Department of Health wish to thank the Department of Education, Manitoba for permission to reproduce sections of the Manitoba Health Education Curriculum, 1983, and "A Parent's Guide to Family Life Education: An Optional Health Unit 1986". Winnipeg: The Department of Education, 1986.

NORTHWEST TERRITORIES

School Health Program

PHILOSOPHY AND RATIONALE

THE RATIONALE FOR HEALTH EDUCATION

Traditionally, almost all human and financial resources related to health care in the Northwest Territories have been devoted to acute treatment of illnesses in nursing stations, doctors' offices, hospitals and drug treatment centres. The human and financial costs of this approach have been high.

This approach has led to dependence on medical institutions and professionals. As a result, there is a recognized need to promote a more comprehensive approach to health, especially as it relates to lifestyle. In addition to acute care services, this new approach would include education, environmental changes and greater individual responsibility for health.

THE NEED FOR A HEALTH EDUCATION PROGRAM IN N.W.T. SCHOOLS

Dr. Otto Schaefer, a well-known northern medical officer, has shown that abrupt changes in the diet of native populations have contributed to an increasing incidence of non-communicable diseases, such as cancer and obesity, as well as diseases of the respiratory and circulatory systems. Furthermore, according to Dr. Schaefer, the breakdown of the traditional social structure, specifically the family unit, is associated with wide-spread alcohol and drug abuse, increases in sexually transmitted diseases, family violence and suicide.

In November 1982, the survey "Tobacco Use Among Students in the Northwest Territories" reported that smoking rates in the school population of the N.W.T. were among the highest recorded for any school population in Canada. Smoking started in the early years of elementary school and by the late adolescent years (15 to 19). 49% of boys and 53% of girls were regular smokers. It also found that approximately 910 of Northwest Territories school children used chewing tobacco or snuff. It concluded that four variables were important in the decision to smoke - age, smoking behaviour of friends, smoking behaviour of brothers or sisters and parental smoking.

In 1984, according to the "Report on Health Conditions in the Northwest Territories", accidents, injury and violence accounted for more than 30% of all deaths. The rates for suicide, infant deaths, sexually transmitted diseases and teenage pregnancies were all above the national average.

In addition, there is evidence from treatment centres, that more and more young people are seeking help for drug problems at a younger age.

Also in 1984, the Social Program Evaluation Group from Queen's University, with a grant from Health and Welfare Canada, conducted the Canada Health Attitudes and Behaviours Survey in all provinces and territories. They conducted this survey in a number of selected communities in the Northwest Territories among Grade 4, Grade 7 and Grade 10 students. It concluded that with respect to:

Nutrition

- young people in the Northwest Territories were well below the national average for Grade 4 and Grade 7, and slightly below for Grade 10, in meeting the daily requirements of all four food groups (both in amount and variety);
- young people at all three grade levels consumed more foods with a high sugar content than their southern counterparts.

Alcohol & Drug Use

- higher than average percentage of Grade 7 and Grade 10 students in the Northwest Territories smoked cigarettes,
- of Grade 10 students, lower numbers used alcohol (some communities in which the surveys were conducted were "dry" communities);
- there was an extremely high incidence of cannabis use.

Self-esteem

- Northwest Territories young people felt slightly less positive about themselves and their relationships with their parents than other young Canadians.

Family Life Education

- a higher proportion of students in the N.W.T. than elsewhere in Canada learned about human sexuality in school.

Many of the problem health conditions identified in these and other studies are related to lifestyle behaviours and unhealthy environmental conditions which can be modified by the individual.

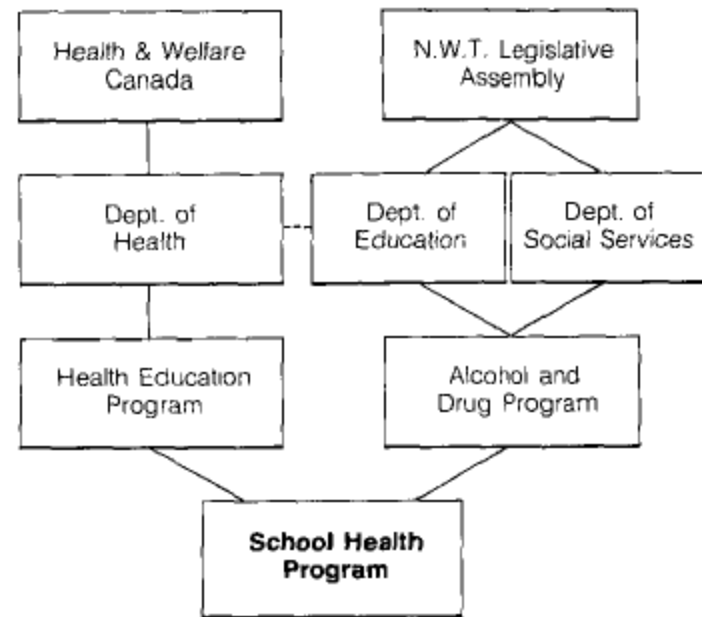
THE HISTORY OF THE N.W.T. SCHOOL HEALTH PROGRAM

Prior to 1979, teachers in the Northwest Territories had no formal health program to follow. In 1979, the Department of Education published "*The Northwest Territories Community School Health Program.*" It outlined the goals which students should achieve by the end of Grade 9. Although the list of goals provided teachers with a framework for unit and lesson planning, it was not a comprehensive health program.

In 1983, on the premise that many of the health problems which exist in the Northwest Territories could be prevented or reduced through an education program in the schools, the Northwest Territories Department of Health received funding from Health and Welfare Canada to develop a program for Kindergarten to Grade 12 students in consultation with the Department of Education.

At the same time, the Northwest Territories Legislative Assembly allocated separate funding to the Department of Social Services and the Department of Education to develop an Alcohol and Drug Program for schools.

These two programs together form the Northwest Territories School Health Program.



ASSESSING THE HEALTH NEEDS OF N.W.T. SCHOOL CHILDREN

The public, particularly parents and students, must accept a health education program in order for it to have an impact on their everyday lives. Such acceptance requires involvement. Local involvement also ensures the relevance of the program to the students for whom it is designed.

To ensure input by northerners, the Department of Health established two advisory committees with members representing professional, cultural and regional groups. These advisory committees provided general overall direction to the project.

The program staff conducted a comprehensive needs assessment to assess the perceived health needs of students in communities.

They distributed questionnaires to the following selected groups of people in every community in the Northwest Territories:

- pre-adolescent students and their parents
- adolescent students and their parents
- Local Education Authorities teachers
- administrators

The questionnaires asked:

- what aspects of health students were interested in; what parents thought it was important for their children to learn about health, and,
- what Local Education Authorities and teachers perceived the needs of the students in their local school were.

Well over 3000 people responded to the questionnaires. They made a significant contribution to this program by articulating the health needs of students.

At the same time, researchers examined statistical data about the delivery of health care in the Northwest Territories to determine why people in various age groups sought professional health care. They found, for example, that, in the 15-19 age group, the main reasons for health care were a result of injuries or poisoning. This was closely followed by diseases of the respiratory system.

Evidence from:

- the examination of problem health conditions in the N.W.T.
- the assessment of student health needs by themselves and others close to them, and
- the analysis of reasons why people seek medical help indicates that many young people are seeking treatment for problem conditions which could have been prevented. Young people must be encouraged to accept responsibility for their own health in order to maintain and enhance personal health.

A VISION OF HEALTH

Health is a state of complete physical, mental and social well-being. It is the result of a dynamic interdependence of these elements, as well as cultural and spiritual elements. Any change which occurs in one dimension will affect the others.

To reach a state of complete well-being, an individual must be able to realize aspirations, satisfy needs and change or cope with the environment.

This vision of health and the premise that health is a resource for everyday life serves as a basis for the Northwest Territories School Health Program.

The World Health Organization states "Health promotion is the process of enabling people to increase control over, and to improve, their health."

This is done in three ways:

- through self-care i.e., making decisions and adopting practices which specifically preserve their health; through mutual aid i.e., helping each other, supporting each other emotionally, sharing ideas, information and experiences;
- through creating healthy environments i.e., altering or adapting social, economic and physical surroundings to maintain and enhance health.

In order for individuals to make informed decisions with regard to their health, they must have support, information and skills to help them understand what promotes their health and what they themselves can do to enhance health.

This is the focus of the Northwest Territories School Health Program.

THE ROLE OF SCHOOLS IN HEALTH PROMOTION

Health promotion is specifically dedicated to enabling individuals to take the lead role in determining the status of their own health. The growing commitment to health education programs in schools can create a supportive environment for the development of healthy practices by providing information and encouraging change. Many jurisdictions now acknowledge the importance of health to quality of life by requiring health education as part of the school curriculum.

It is important to articulate the role of the school in health promotion. It is also important to recognize the limitations of the school's role. The public expects a program such as the Northwest Territories School Health Program to solve all the current social, emotional or physical conditions which contribute to a less than perfect state of well-being among students. That is not the role of health education in the school, The School Health Program does complement the efforts of other agencies in health promotion in the N.W.T. by specifically providing information and by developing skills and attitudes to enable individuals to take the lead role in attaining healthy life styles. The school cannot, however, make the student choose a healthy lifestyle.

By providing information and by developing skills, the school, however, does influence beliefs and attitudes, and it is these changing beliefs and attitudes that impact on behaviour.

Health behaviour is related to the general beliefs:

- that people are vulnerable to problem health conditions;
- that these conditions produce undesirable consequences; and,
- that the consequences are usually preventable.

By influencing these health beliefs positively, the school will increase the probability of positive health behaviours.

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NORTHWEST TERRITORIES

School Health Program

IMPLEMENTATION

MAJOR GOALS

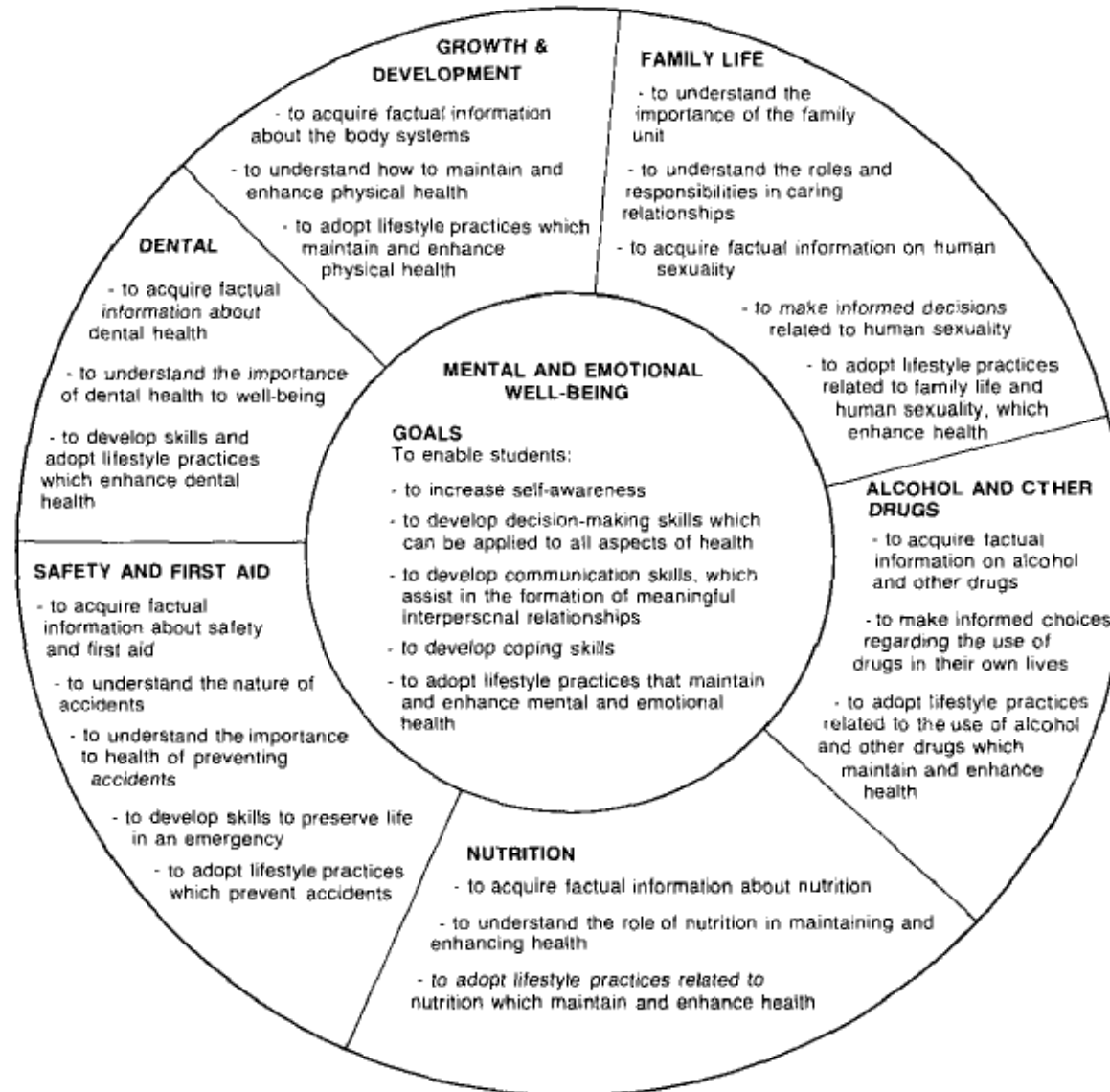
OF THE NORTHWEST TERRITORIES SCHOOL HEALTH PROGRAM

The major goals of the Northwest Territories School Health Program are:

- *to provide factual information on the human body;*
- *to enable students to develop skills that, along with the factual information, will allow them to make informed choices related to health;*
- *to enhance students' self-esteem through self-understanding;*
- *to enable students to develop attitudes which lead to positive lifestyle behaviours; and,*
- *to promote positive lifestyle practices which are conducive to lifelong health.*

THE UNITS OF THE PROGRAM

There are seven units in the program. The central unit is Mental and Emotional Well-Being. It is the major skill-building unit.



SCOPE AND SEQUENCE

The following charts provide an overview of the major topics, indicating at which grade they are taught.

UNIT	KINDERGARTEN	GRADE 1	GRADE 2	GRADE 3
Mental & Emotional Well-Being	<p>Self awareness</p> <ul style="list-style-type: none"> physical characteristics abilities feelings <p>Relationships</p> <ul style="list-style-type: none"> doing things with friends 	<p>Self awareness</p> <ul style="list-style-type: none"> physical characteristics abilities likes and dislikes <p>Relationships</p> <ul style="list-style-type: none"> working and playing together helping sharing 	<p>Self awareness</p> <ul style="list-style-type: none"> feelings expressing feelings appropriately <p>Relationships</p> <ul style="list-style-type: none"> friends making friends <p>Coping</p> <ul style="list-style-type: none"> stressful situations 	<p>Self awareness</p> <ul style="list-style-type: none"> people are alike and different everyone is unique <p>Relationships</p> <ul style="list-style-type: none"> responsibilities sharing responsibilities different ways of communicating <p>Decision-Making</p> <ul style="list-style-type: none"> choices situations which require decisions
Growth & Development	<p>Body Systems</p> <ul style="list-style-type: none"> external body parts five sensory organs <p>Lifestyle</p> <ul style="list-style-type: none"> positive daily and regular health habits 	<p>Body Systems</p> <ul style="list-style-type: none"> touch taste smell <p>Disease Prevention</p> <ul style="list-style-type: none"> signs of sickness germs spread diseases disease prevention 	<p>Body Systems</p> <ul style="list-style-type: none"> sight hearing <p>Lifestyle</p> <ul style="list-style-type: none"> positive health habits <p>Health Care</p> <ul style="list-style-type: none"> community health care workers <p>Environmental Health</p> <ul style="list-style-type: none"> clean water, air and good soil 	<p>Body Systems</p> <ul style="list-style-type: none"> internal organs <p>Growth Patterns</p> <ul style="list-style-type: none"> changes in height and weight <p>Disease Prevention</p> <ul style="list-style-type: none"> personal responsibility for health <p>Environmental Health</p> <ul style="list-style-type: none"> different kinds of pollution
Family Life		<p>Families</p> <ul style="list-style-type: none"> different members similarities/differences in family structures <p>Human Development & Reproduction</p> <ul style="list-style-type: none"> external body parts/boys/girls <p>Abuse Prevention</p> <ul style="list-style-type: none"> feelings associated with touch safety rules family/community support people 	<p>Families</p> <ul style="list-style-type: none"> families provide for the needs of their members the maintenance of the family unit <p>Human Development & Reproduction</p> <ul style="list-style-type: none"> living things reproduce and grow <p>Abuse Prevention</p> <ul style="list-style-type: none"> potentially abusive situations behaviours that maintain personal safety 	<p>Families</p> <ul style="list-style-type: none"> family structure changes with time new family members some family members require special care <p>Human Development & Reproduction</p> <ul style="list-style-type: none"> body organs related to reproduction human babies are created from the union of a sperm and egg

SCOPE AND SEQUENCE

UNIT	KINDERGARTEN	GRADE 1	GRADE 2	GRADE 3
Nutrition	Food Identification <ul style="list-style-type: none"> foods and non-foods Food Appreciation <ul style="list-style-type: none"> healthy snacks unfamiliar foods 	Food Identification <ul style="list-style-type: none"> foods from plants and animals Food Classification <ul style="list-style-type: none"> four food groups Food Selection <ul style="list-style-type: none"> food from each food group Food Appreciation <ul style="list-style-type: none"> nutritious food to start the day 	Food Identification <ul style="list-style-type: none"> different food farms Food Classification <ul style="list-style-type: none"> functions of each food group nutritious snacks Food Selection <ul style="list-style-type: none"> nutritious meals Food Appreciation <ul style="list-style-type: none"> different food forms 	Food Classification <ul style="list-style-type: none"> classifying into food groups function of each food group common foods which do not belong to a food group Food Selection <ul style="list-style-type: none"> nutritious eating for one day Food Appreciation <ul style="list-style-type: none"> nutritious food to start the day
Dental	Structure and Function <ul style="list-style-type: none"> primary and permanent teeth teeth functions Oral Hygiene <ul style="list-style-type: none"> toothbrushing skills Dental Health <ul style="list-style-type: none"> safe and unsafe food 	Structure and Function <ul style="list-style-type: none"> primary and permanent teeth teeth functions Oral Hygiene <ul style="list-style-type: none"> toothbrushing skills Dental Health <ul style="list-style-type: none"> safe and unsafe food safe and unsafe behaviours Dental Disease <ul style="list-style-type: none"> tooth decay Dental Services and Products <ul style="list-style-type: none"> local dental health workers 	Structure and Function <ul style="list-style-type: none"> primary and permanent teeth Oral Hygiene <ul style="list-style-type: none"> flossing skills Dental Health <ul style="list-style-type: none"> safe and unsafe snacks Dental Disease <ul style="list-style-type: none"> dental plaque Dental Services and Products <ul style="list-style-type: none"> common dental health products 	Structure and Function <ul style="list-style-type: none"> specific tooth groups and their functions Oral Hygiene <ul style="list-style-type: none"> toothbrushing and flossing skills Dental Disease <ul style="list-style-type: none"> dental plaque Dental Services and Products <ul style="list-style-type: none"> personal responsibility for dental health care community dental health workers
Safety & First Aid	Personal Safety <ul style="list-style-type: none"> personal safety rules personal identity facts community safety helpers safety rules for pedestrians Fire Safety <ul style="list-style-type: none"> fire drill procedures Safety <ul style="list-style-type: none"> poisons poison warning sign tasting unknown substances hazard warning signs 	Personal Safety <ul style="list-style-type: none"> personal safety rules personal identity facts community safety helpers emergency phone calls Accident Prevention <ul style="list-style-type: none"> burns and scalds falls First Aid <ul style="list-style-type: none"> first aid for minor cuts Safety <ul style="list-style-type: none"> poisons sniffing unsafe substances tasting unknown substances 	Bum Prevention <ul style="list-style-type: none"> safety rules around electricity Bicycle Safety <ul style="list-style-type: none"> bicycle rules and traffic laws Outdoor Safety <ul style="list-style-type: none"> frostbite Firearm Safety <ul style="list-style-type: none"> firearm safety rules First Aid <ul style="list-style-type: none"> nosebleeds Safety <ul style="list-style-type: none"> hazard warning signs common unsafe substances rules for unsafe substances 	Burn Prevention <ul style="list-style-type: none"> burns and scalds Fire Safety <ul style="list-style-type: none"> clothes on fire burning buildings Outdoor Safety <ul style="list-style-type: none"> Ice safety Personal Safety <ul style="list-style-type: none"> animal bites Safety <ul style="list-style-type: none"> hazard warning signs
Alcohol & Other Drugs		Drugs <ul style="list-style-type: none"> medicine safety 	Drugs <ul style="list-style-type: none"> medicines are drugs medicines may be helpful and harmful 	Drugs <ul style="list-style-type: none"> sources of medicines rules for medicines common substances which contain drugs Tobacco <ul style="list-style-type: none"> effects of tobacco Well-Being <ul style="list-style-type: none"> improving their well-being

SCOPE AND SEQUENCE

UNIT	GRADE 4	GRADE 5	GRADE 6
Mental & Emotional Well-Being	<p>Self awareness</p> <ul style="list-style-type: none"> • strengths and weaknesses • activities affect how people feel <p>Relationships</p> <ul style="list-style-type: none"> • caring behaviours <p>Decision-Making</p> <ul style="list-style-type: none"> • the effects of choices • peer influence • resisting peer pressure 	<p>Relationships</p> <ul style="list-style-type: none"> • communication/effective speaking/active listening • assertive communication skills • the refusal process <p>Decision-Making</p> <ul style="list-style-type: none"> • advertising influence <p>Coping</p> <ul style="list-style-type: none"> • stressful situations • signs of stress • ways of dealing with stress 	<p>Relationships</p> <ul style="list-style-type: none"> • responsibilities in maintaining a relationship • volunteerism <p>Decision-Making</p> <ul style="list-style-type: none"> • values • the decision-making process • group decisions <p>Coping</p> <ul style="list-style-type: none"> • time management <p>Lifestyle</p> <ul style="list-style-type: none"> • assessing/improving personal characteristics
Growth & Development	<p>Body Systems</p> <ul style="list-style-type: none"> • digestive system <p>Disease Prevention</p> <ul style="list-style-type: none"> • communicable/non-communicable diseases <p>Environmental Health</p> <ul style="list-style-type: none"> • safe drinking water <p>Health Care System</p> <ul style="list-style-type: none"> • health care supports 	<p>Body Systems</p> <ul style="list-style-type: none"> • respiratory system/circulatory system • lifestyle behaviours for a healthy cardiovascular system 	<p>Body Systems</p> <ul style="list-style-type: none"> • excretory system/nervous system <p>Disease Prevention</p> <ul style="list-style-type: none"> • germ entry into the body • the three lines of defence • AIDS prevention
Family Life	<p>Families</p> <ul style="list-style-type: none"> • families provide for the needs of their members • family traditions <p>Human Development and Reproduction</p> <ul style="list-style-type: none"> • characteristic changes of puberty • reproductive system • menstruation (optional lesson for girls only) <p>Abuse Prevention</p> <ul style="list-style-type: none"> • touches that produce negative or confused feelings • family/community support people 	<p>Families</p> <ul style="list-style-type: none"> • male/female roles • family activities <p>Human Development and Reproduction</p> <ul style="list-style-type: none"> • characteristic changes of puberty • reproductive system • menstruation • reproductive process/sex cell development/journey of sperm/intercourse/fertilization 	<p>Families</p> <ul style="list-style-type: none"> • responsibilities and relationships change with time • importance of elders <p>Human Development and Reproduction</p> <ul style="list-style-type: none"> • endocrine system • relationship between puberty and the endocrine system • relationship between reproduction and menstruation • reproductive process/stages of fetal development <p>Abuse Prevention</p> <ul style="list-style-type: none"> • sexual abuse/behaviours which prevent abuse • family/community, support people

SCOPE AND SEQUENCE

UNIT	GRADE 4	GRADE 5	GRADE 6
	<p>Food Classification</p> <ul style="list-style-type: none"> • six major nutrients • sources of major nutrients • nutritious and non-nutritious snacks <p>Food Selection</p> <ul style="list-style-type: none"> • factors that affect food choices <p>Food Appreciation</p> <ul style="list-style-type: none"> • nutritious snacks 	<p>Food Classification</p> <ul style="list-style-type: none"> • leader nutrients and their functions • sources of leader nutrients <p>Food Selection</p> <ul style="list-style-type: none"> • recommended daily servings • food availability, • food processing <p>Food Appreciation</p> <ul style="list-style-type: none"> • a nutritious northern meal 	<p>Food Classification</p> <ul style="list-style-type: none"> • leader nutrients and their functions • sources of leader nutrients <p>Food Selection</p> <ul style="list-style-type: none"> • serving sizes • balanced food intake • reading food labels <p>Lifestyle</p> <ul style="list-style-type: none"> • personal nutrition program
Dental	<p>Structure and Function</p> <ul style="list-style-type: none"> • structure and functions of teeth <p>Oral Hygiene</p> <ul style="list-style-type: none"> • oral hygiene skills • healthy dental behaviours <p>Dental Health</p> <ul style="list-style-type: none"> • dental hazards • preventing dental injuries <p>Dental Disease</p> <ul style="list-style-type: none"> • tooth decay • fluoride <p>Dental Services and Products</p> <ul style="list-style-type: none"> • dental health care 	<p>Oral Hygiene</p> <ul style="list-style-type: none"> • toothbrushing and flossing skills <p>Dental Health</p> <ul style="list-style-type: none"> • effects of tobacco products <p>Dental Services and Products</p> <ul style="list-style-type: none"> • benefits and disadvantages of dental health products • homemade toothpaste • role of dental health workers 	<p>Structure and Function</p> <ul style="list-style-type: none"> • structure and functions of teeth <p>Oral Hygiene</p> <ul style="list-style-type: none"> • oral hygiene skills • healthy dental behaviours <p>Dental Disease</p> <ul style="list-style-type: none"> • common dental health problems • signs of dental health problems • treatment for dental health problems • preventing dental health problems <p>Lifestyle</p> <ul style="list-style-type: none"> • personal dental health program
Safety & First Aid	<p>Burn Prevention</p> <ul style="list-style-type: none"> • scalds <p>Bicycle Safety</p> <ul style="list-style-type: none"> • bike maintenance • bike skills and safety rules <p>Fire Safety</p> <ul style="list-style-type: none"> • common causes of fire • fire exit plans • individual responsibility <p>First Aid</p> <ul style="list-style-type: none"> • frostbite and hypothermia <p>Motor Vehicle Safety</p> <ul style="list-style-type: none"> • all terrain vehicles • snowmobiles 	<p>Burn Prevention</p> <ul style="list-style-type: none"> • burns from flames • burns from electricity <p>Fire Safety</p> <ul style="list-style-type: none"> • home/campfire safety <p>Outdoor Safety</p> <ul style="list-style-type: none"> • safe camping • water and ice safety <p>First Aid</p> <ul style="list-style-type: none"> • burns • external bleeding 	<p>Motor Vehicle Safety</p> <ul style="list-style-type: none"> • all terrain vehicles • snowmobiles <p>Babysitting Safety</p> <ul style="list-style-type: none"> • responsibilities • common rules • safety rules • emergencies <p>Outdoor Safety</p> <ul style="list-style-type: none"> • survival <p>First Aid</p> <ul style="list-style-type: none"> • artificial respiration • choking • external bleeding • poisoning • unconsciousness <p>Lifestyle</p> <ul style="list-style-type: none"> • importance of first aid • safety organizations and professionals • personal safety and first aid program
Alcohol & Other Drugs	<p>Drugs</p> <ul style="list-style-type: none"> • specific drugs in commonly used substances • medical and non-medical drugs • effect of drugs on the brain • reasons for using/not using drugs • personal responsibility for decisions about use of drugs • use and misuse of drugs <p>Caffeine</p> <ul style="list-style-type: none"> • caffeine affects the body <p>Alcohol</p> <ul style="list-style-type: none"> • alcohol affects the body • factors which determine the effects of alcohol • reasons for using/not using alcohol • misuse of alcohol • community resources for alcohol problems <p>Well-Being</p> <ul style="list-style-type: none"> • feeling good without drugs 	<p>Drugs</p> <ul style="list-style-type: none"> • specific drugs in commonly used substances • tobacco affects the body • drug myths • community resources for drug information • peer pressure/advertising influence decisions about drug use <p>Alcohol</p> <ul style="list-style-type: none"> • short/long term effects of alcohol • use and misuse of alcohol • community resources for alcohol problems <p>Well-Being</p> <ul style="list-style-type: none"> • feeling good without drugs 	<p>Drugs</p> <ul style="list-style-type: none"> • personal responsibility for decisions about drug use • values related to drug use • drug myths • peer pressure/advertising influence decisions about drug use <p>Alcohol</p> <ul style="list-style-type: none"> • factors which determine the effects of alcohol • social effects of alcohol misuse • effects of alcohol on young people <p>Well-Being</p> <ul style="list-style-type: none"> • individual activities which promote well-being • leisure time activities in the community

SCOPE AND SEQUENCE

UNIT	GRADE 7	GRADE 8	GRADE 9
Mental & Emotional Well-Being	<ul style="list-style-type: none"> • self-esteem • conversations • criticism • personal plan to enhance self-esteem 	<ul style="list-style-type: none"> • characteristics of effective working groups • reasons for forming group • depression • suicide • stress <ul style="list-style-type: none"> - causes - methods of dealing with stress 	<ul style="list-style-type: none"> • future career choices • job seeking • assessment of personal lifestyles • personal plan to improve lifestyle
Growth & Development	<ul style="list-style-type: none"> • integumentary system/immune system • common health problems of adolescence • health behaviours which help prevent adult health problems • physical fitness <ul style="list-style-type: none"> - components - personal plan 	<ul style="list-style-type: none"> • skeletal system/muscular system • personal exercise plan for the muscular system 	<ul style="list-style-type: none"> • inter-relationship of the body system • NWT Health Care system function <ul style="list-style-type: none"> - responsible use • economics of health care • health careers
Family Life	<ul style="list-style-type: none"> • family decisions • family communication • reproductive system function • relationship between endocrine system and the menstrual cycle • stages of the reproductive process • abstinence • risks and consequences of early pregnancy • sexually transmitted diseases <ul style="list-style-type: none"> - AIDS - chlamydia - gonorrhoea - preventive behaviours • sexual assault <ul style="list-style-type: none"> - common myths - consequences for victim and offender • potentially dangerous situations • behaviours which help prevent sexual assault 	<ul style="list-style-type: none"> • family structures change • menstruation <ul style="list-style-type: none"> - the implications • stages of the reproductive process • abstinence and assertiveness • positive health behaviours related to pregnancy • sexually transmitted diseases <ul style="list-style-type: none"> - AIDS - syphilis - trichomonas - pubic lice - preventive behaviours • birth control <ul style="list-style-type: none"> - methods - attitudes • family violence <ul style="list-style-type: none"> - causal factors - coping 	<ul style="list-style-type: none"> • sex-role stereotyping • effective parenting • support systems for families • reproductive system <ul style="list-style-type: none"> - its role in the formation of new life • heredity • fetal development stages <ul style="list-style-type: none"> - risk factors • birth control risks and consequences • unplanned pregnancy <ul style="list-style-type: none"> - alternatives attitudes - prevention • positive lifestyle practices related to family life • constructive relationships

SCOPE AND SEQUENCE

UNIT	GRADE 7	GRADE 8	GRADE 9
Nutrition	<p>Food Classification</p> <ul style="list-style-type: none"> • NWT Food Guide <p>Food Selection</p> <ul style="list-style-type: none"> • menu planning for different age groups <p>Food Consumerism</p> <ul style="list-style-type: none"> • advertising affects food choices • food additives <p>Food Appreciation</p> <ul style="list-style-type: none"> • food items with few additives 	<p>Energy Balance</p> <ul style="list-style-type: none"> • energy needs • stored energy • energy intake and output <p>Food Consumerism</p> <ul style="list-style-type: none"> • analyzing diets <p>Lifestyle</p> <ul style="list-style-type: none"> • weight control 	<p>Food Selection</p> <ul style="list-style-type: none"> • factors that influence food choices • food customs in the NWT • community feast menu <p>Lifestyle</p> <ul style="list-style-type: none"> • nutrition concerns in the NWT • preventive behaviours • Canadian nutrition and dietary recommendations • personal nutrition program
Dental	<p>Dental Health</p> <ul style="list-style-type: none"> • dental emergencies <p>Dental Disease</p> <ul style="list-style-type: none"> • common dental health problems of children and youth • nursing bottle mouth 	<p>Dental Health</p> <ul style="list-style-type: none"> • safe, unsafe foods <p>Dental Services and Products</p> <ul style="list-style-type: none"> • professional preventive procedures • fluoride • common dental health products <p>Lifestyle</p> <ul style="list-style-type: none"> • personal action plan for dental health 	<p>Dental Health</p> <ul style="list-style-type: none"> • behaviours/factors that promote dental health <p>Dental Careers</p> <ul style="list-style-type: none"> • requirements for dental careers <p>Lifestyle</p> <ul style="list-style-type: none"> • positive lifestyle practices related to dental health
Safety & First Aid	<p>Babysitting Safety</p> <ul style="list-style-type: none"> • responsibilities • common injuries • childcare routines and play • safety rules <p>Outdoor Safety</p> <ul style="list-style-type: none"> • firearm safety <p>First Aid</p> <ul style="list-style-type: none"> • burns • poisoning <p>Lifestyle</p> <ul style="list-style-type: none"> • safety organizations and professionals • personal safety and first aid program 	<p>Outdoor Safety</p> <ul style="list-style-type: none"> • survival safety boating safety • sports safety <p>First Aid</p> <ul style="list-style-type: none"> • frostbite/hypothermia • head/eye injuries diabetic emergencies • epileptic seizures/convulsions • fainting <p>Lifestyle</p> <ul style="list-style-type: none"> • importance of first aid • personal safety and first aid program 	<p>First Aid</p> <ul style="list-style-type: none"> • artificial respiration • choking • external/internal bleeding • shock • unconsciousness • fractures, sprains, dislocations • heart attacks, strokes • poisoning <p>Lifestyle</p> <ul style="list-style-type: none"> • leading causes of injuries/accidental death • personal safety and first aid program
Alcohol & Other Drugs	<p>Drugs</p> <ul style="list-style-type: none"> • methods of taking drugs • different categories of drugs • traditional medicine <p>Alcohol</p> <ul style="list-style-type: none"> • different types of alcohol • metabolism of alcohol • effects of alcohol • reasons for using/not using alcohol <p>Cannabis</p> <ul style="list-style-type: none"> • cannabis and the body <p>Well-Being</p> <ul style="list-style-type: none"> • peer pressure and drug use • positive role models 	<p>Drugs</p> <ul style="list-style-type: none"> • dangers of combining drugs • advertising influences decisions about drug use <p>Alcohol</p> <ul style="list-style-type: none"> • historical use of alcohol • use, misuse, abuse of alcohol community resources for alcohol problems • teenage alcohol problems • fetal alcohol syndrome • advertising influences decisions about alcohol use <p>Cannabis</p> <ul style="list-style-type: none"> • physical and psychological effects of cannabis • cannabis and the reproductive system 	<p>Drugs</p> <ul style="list-style-type: none"> • drug groups • side effects of drugs • drugs and the law <p>Alcohol</p> <ul style="list-style-type: none"> • alcohol and the law • The Young Offenders' Act • local control of alcohol <p>Well-Being</p> <ul style="list-style-type: none"> • personal attitudes towards drug use

TIME ALLOCATION

Effective September 1987, Health Education will become a required part of the school curriculum.

During the first year of implementation, teachers will implement 40 hours of the program. Thereafter, the recommended minimum time allocation for health education will be 60 hours per year for Grade 1 to Grade 9 students. (Since many Kindergarten students attend school for only half a day, it is not possible to recommend 60 hours for that Grade. However, health education should be taught in Kindergarten.)

This means approximately 90 minutes per week for a school with a 190 day school year,

- or 3 x 30 minute lessons per week at the elementary level
- and 2 x 45 minute lessons per week at the junior high level.

The following recommended hourly time allocations apply to each unit: Teachers should note that time requirements for Nutrition, Dental Health and Safety and First Aid have been calculated; however, these units will not be available until September 1988.

Differences in age, experience, language proficiency and developmental level will influence each student's learning. Some students may require enrichment activities or additional assistance. Some lessons will take more than one class period, but allowance has been made in the time allocations for this to happen.

Since Mental and Emotional Well-Being is the basic skill-building unit, and since Growth and Development contains much of the information about the body systems, the Department of Education recommends teaching these two units prior to introducing any other unit.

UNIT	GRADE								
	1	2	3	4	5	6	7	8	9
Mental & Emotional	10	10	10	10	10	10	10	10	10
Growth & Development	10	10	10	10	10	10	8	8	8
Family Life	10	10	10	10	10	10	12	12	12
Alcohol & Other Drugs	6	6	6	8	8	10	10	10	10
Nutrition	8	8	8	8	8	6	6	6	6
Dental	8	8	8	6	6	6	4	4	4
Safety & First Aid	8	8	8	8	8	8	10	10	10

THE LESSON FORMAT

The program is laid out in an easy-to-follow, easy-to-use format. Each lesson indicates the **unit name, the grade level, lesson number and theme**:

e.g., Growth and Development
Grade 1 Lesson: 3 Theme: Body Systems

The **concept** for each lesson is clearly articulated at the start of the lesson. Concepts may be repeated within a single grade or between grades. The different objectives, however, ensure that students move from a basic understanding to a more advanced understanding of the same concept.

The **preparation** outlines all the tasks which a teacher will have to complete prior to teaching the lesson and all the materials or resources which are required for that particular lesson.

The **vocabulary** is not an all-inclusive list of words with which students should be familiar. Rather, it is a basic list of the terms which students will have to understand and be able to use in order to learn about the concept. Individual teachers are in the best position to determine the language needs of their students for each lesson.

The lessons, themselves, are divided into three columns:

- the **objectives**, which are behavioural objectives students should achieve, once they have participated in the lesson;
- **student activities**, which are suggested activities that teachers may use with their students to help them achieve the objectives. Teachers should select those activities which are most suitable for their class. They may have to adapt some for the particular students in their class. For younger grades, activities have been made as "hands on" and concrete as possible;
- the **teacher notes**, which provide some basic information, as well as more detail for teachers on how to carry out activities.

At the end of each unit, on coloured pages, **teacher background information** provides more detail on specific topics.

The pages are numbered so that teachers who are looking for a particular lesson will be able to locate it easily.

Each unit has reference letters:

- ME - Mental and Emotional Well-Being
- GD - Growth and Development
- FL - Family Life

Following the reference letter is a number which indicates the lesson number in a particular unit e.g., ME 3 means the third lesson of the Mental and Emotional Well-Being Unit for that particular grade.

The next number indicates the overall page of that unit, e.g., ME 3.12 means the third lesson of the Mental and Emotional Well-Being Unit, the twelfth page of the whole unit. So in other words, teachers can look up the regular page number of each unit, or the lesson number.

Teachers should note that one lesson in the program may take more than one class period, depending on student's previous knowledge, experience and language proficiency. Allowance has been made in the time allocation for this.

APPROACHES TO THE TEACHING OF HEALTH

The methods which an individual teacher uses with this program are as important as the content. Since the program is designed to influence beliefs and attitudes, it is important for students to examine their own and other people's beliefs and attitudes. It is also important for students to practise, in simulated situations, the skills which they are developing, so that using these skills will become second nature to them in the real world. This involves students sharing opinions, feelings, beliefs and information. Both classroom atmosphere and methods will contribute to the success of the program.

BUILDING A POSITIVE CLASSROOM ATMOSPHERE

The success of this program will depend on the establishment of a positive classroom atmosphere, where students and teachers feel comfortable with each other when discussing personal or sensitive issues.

A number of factors will contribute to this positive classroom atmosphere:

- an attitude of mutual respect, where "put-downs" are not acceptable;
- a non-judgemental atmosphere, where each person's opinion is valued;
- openness, honesty and trust by teacher and students;
- confidentiality, where students are not afraid that opinions or information are discussed openly outside the class.

Prior to starting the lessons, teachers should discuss with students the importance of each of these factors. Teachers should remind students of them regularly throughout the lessons.

In the Family Life Unit, students may demonstrate initial embarrassment with the topic by giggling or laughing. This is often because they feel uncomfortable with discussing the topic of sexuality. These feelings will diminish.

- as they become more familiar with the subject;
- if other factors outlined above are contributing to a positive classroom atmosphere;
- if the teacher is comfortable with the subject.

THE TEACHING OF VALUES

Health Education, and especially the Family Life component, cannot be taught without discussing values. The School Health Program uses universal values as the basis for decision-making on any health-related matter, including sexuality.

The program focuses on these values:

- a sense of caring
- respect for self, family and others
- kindness
- honesty and justice
- compassion
- non-exploitation

All units of the program encourage respect for family and cultural values, religious beliefs and the law.

Teachers are encouraged to ask groups of resource people with different points of view to present their views on controversial issues to older students. For example, a discussion on birth control may take the form of a panel discussion, where the members include people with differing opinions. This provides students with the opportunity to listen to other people's opinions, to question them and to think about the expressed opinions in a respectful atmosphere.

Teachers must be alert to the dangers of imposing their values on students. Being non-judgemental will encourage students to be more open.

APPROPRIATE TECHNIQUES FOR TEACHING HEALTH

A number of teaching techniques are particularly appropriate for this program.

1. *Small Group Discussion*

Dividing students up into small groups encourages free discussion. It encourages students who are reluctant to speak out in a large group to feel more comfortable, and also gives students an opportunity to learn from each other.

Successful small group discussion depends upon:

- encouraging students to take a risk in sharing information
- establishing rules at the beginning of the sessions e.g.,
 - no insults or put downs
 - only one person talks at a time
 - show respect for each other's opinion
 - everyone gets a turn, but may choose to pass
- thinking about the composition of the groups e.g.,
 - is there a competent leader?
 - is there an even mix of the sexes?
 - is there a mix of extroverted and introverted children?
- starting to use small group discussions at a young age, so that students become used to this method of sharing
- always concluding the activity by asking one person from each group to report its discussion to the rest of the class.

2. *Brainstorming*

Use brainstorming to solicit ideas or opinions from the students. Gather as many opinions as possible, without making any value judgements on them. This allows for the free flow of ideas. Write the suggestions on the chalkboard or flip chart paper. After brainstorming, categorize and discuss the ideas. This is often effective in small groups.

Five rules of brainstorming to remember are:

- do not evaluate the ideas until after the brainstorming session;
- quantity is more important than quality
- list as many ideas as possible in a given length of time;
- expand on the ideas of others
- if someone else's idea prompts another idea, share it;
- encourage creativity; and,
- record all ideas.

3. *Roleplaying*

Roleplaying is an essential element of any program which influences attitudes and behaviours. Not all teachers, or all students, feel comfortable using roleplay. However, there are some steps to follow which will increase the success of this method: - decide on the topic of the roleplay; - start by using volunteers; - discuss the scenario to be acted out. Help the students to understand what to look for; - discuss each person's part, using a hypothetical situation. Ask students how the person would feel, and what the person would say or do in that situation; - have the students act out the scene; - always finish the roleplay with a discussion about the different people in the scenario, their feelings and possible alternatives; - the more frequently you use roleplay as a teaching method, the more proficient the students will become and the more successful it will be; and, - if role play is not successful the first time, do not give up. Try again!

4. *The Question Box*

When dealing with topics of a sensitive nature, such as those in the Family Life Unit or the Alcohol and Other Drugs Unit, students may be reluctant to ask questions publicly. Use of a question box allows students to ask questions anonymously, and facilitates discussion of a difficult topic which students wish to bring up.

At the end of each class, or at the end of a particular session, let students know that they will be able to write down any question which they wish to ask and to put it into the question box anonymously. At the beginning of the next class, the teacher will respond to the questions in the box.

Another effective use of the question box is to ask students at the beginning of the sessions to write down questions which they wish to have answered during the classes. This allows the teacher to structure the program around the needs of the students.

THE LANGUAGE DEVELOPMENT APPROACH AND THE N.W.T. SCHOOL HEALTH PROGRAM

Who Should Use the Language Development Approach

Students in the Northwest Territories come to school understanding and speaking a number of different languages. Where appropriate, where possible and where mandated by parents and/or L.E.A.'s, teachers should instruct students in Health Education classes in the language in which they are most proficient.

In some communities, students are not proficient in their first language, parents do not want instruction in the first language, or staff, programs and materials are not available to teach in the first language. In those situations, schools instruct Health Education classes in English. Because students in these communities may not be proficient in the English used to teach the curriculum, teachers of Health must take the time and make the effort to teach students the language required to talk, read and write about Health concepts. Success in the Health Education program is not otherwise possible.

The Department of Education directs the use of the Language Development Approach for students who are not proficient in English when it is the language of instruction and for students who are learning English as a Second Language. It is the responsibility of teachers at all levels to use the Language Development framework when preparing their own lessons or presenting lessons provided in the Health units.

What is the Purpose of the Language Development Approach?

The primary purpose of the Language Development Approach is to provide students with the vocabulary and sentence patterns necessary to succeed in school and, in this program, to learn about health concepts. A related aim is to help students develop thinking skills and to use the language of instruction for a variety of purposes: to imagine, to investigate, to explain, to describe, to question, etc.

A second purpose of the approach is to help students learn the vocabulary and sentence patterns required to communicate in various social situations. It provides them with opportunities to learn to use additional language to satisfy needs, to regulate personal behaviour, and to establish and define social behaviour. This purpose is secondary because many students have a first language to use to fulfill these purposes.

The Principles of the Language Development Approach

The Language Development Approach draws on elements of many traditional and contemporary practices in first and second language teaching to form the following set of principles on which to build classroom practice:

1. ***Students need to have their experiences, skills, knowledge, and, particularly, the language they bring to school identified and used as the basis for the school language program.***

This means the Health Education Program should identify and relate new concepts to the students' past experiences, previous knowledge, and immediate environment. Studies indicate that when teaching does not relate to students' everyday lives or existing ideas, little learning takes place.

In the cross cultural classroom of the N.W.T. and with sensitive issues such as family life, it is particularly important to determine students' ideas, family values and relevant experiences, before teaching the lessons.

2. ***Students need to learn to articulate for themselves and to communicate their thoughts, feelings, needs, opinions, and intentions for a variety of purposes in many different communication contexts. They need to be able to understand, learn from and respond to the communication of others.***

This involves being able to: - express/inquire about personal needs, desires, feelings, attitudes etc. - socialize - direct the actions of the self and the actions of others - impart and seek factual information on past and present experiences - reason logically - make and express predictions - project into the experiences, feelings, and reaction of others - determine and express intellectual attitudes - evaluate

The Health program should involve students in a variety of activities which require them to use language in all these ways. Traditional paper and pencil exercises must be extended to include graphing, interviewing, reporting, researching, investigating, problem solving, etc,

3. ***Students need to learn language to communicate, but they also use language to learn. Therefore, language should be taught across the curriculum.***

The Health Education program should teach second language students the language they require to learn about new concepts. Success in Health is not possible otherwise. This may mean teachers cannot cover all concepts for all topics. It is preferable to cover some concepts for all topics rather than omitting some topics altogether.

4. ***Second language students need to spend more time learning to communicate in the language of instruction than they do learning about the language of instruction.***

The time spent in Health Education teaching students language should be devoted to introducing, practising, and applying the vocabulary and sentence patterns students require to talk, read, and write about a concept.

5. ***Students need to learn language that is meaningful. It is easiest to accomplish this when teaching language in a context. Without adequate concept development, the language students learn is either vague or devoid of meaning.***

The Health Education program should take the time to ensure that students learning new concepts have enough first hand or indirect experiences with the concepts to understand them clearly. There is no point in students studying material they don't understand. If teachers do not make the material understandable, students will supply their own meanings. These may or may not be appropriate!

6. ***Students need to learn to develop their thinking skills and to engage in more abstract levels of thoughts as they mature. They must learn the language that allows them to express their thinking about concepts. Initially, they need to learn the concrete vocabulary and functional sentence patterns which enable them to recall, match, sequence, classify, etc. Eventually they need to learn more complex sentence patterns so that they can generalize, analyze, hypothesize, imagine, predict and evaluate.***

The Health Education program for primary students should concentrate on teaching and using concrete thinking skills. The Health Education program for older students should introduce more abstract thinking skills as students can handle them.

7. ***Students need to participate in language activities that integrate the language strands of listening, speaking, reading and writing. Specific skills taught will vary with the proficiency level of the students. Reading and writing activities should use language which students have internalized aurally/orally.***

The language activities in the Health Education program should include all four language strands. Students who cannot talk about a concept will have difficulty reading and writing about it.

8. ***Students need to learn "real" language and how to use it in the natural situations in which it is required.***

The language included in the Health Education program should be as close as possible to the everyday vocabulary and sentence patterns people actually use to talk or write about a concept. Students need to get into the community to use the language they are learning with people outside the classroom.

Program content, classroom organization and teaching techniques used to develop concepts and skills should:

- a) reflect all the above principles
- b) vary according to
 - the language proficiency of the students in the first and second language
 - cultural background (experiences, interests)
 - age/grade levels
 - type of topic
 - learning style of students
 - materials and equipment available
 - teaching style of teacher

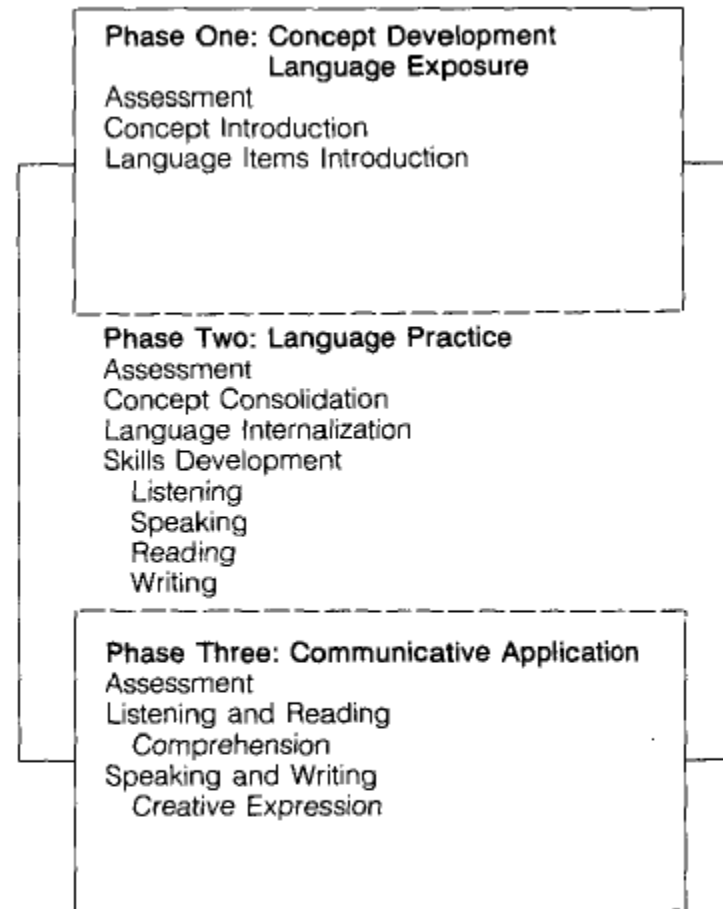
These principles are also valid for students who speak English as a first language. The difference lies in the methods and techniques used. Although designed for second language students, the Language Development Approach allows flexibility in choosing specific classroom practices and techniques to meet the varied language needs of students.

LANGUAGE DEVELOPMENT FRAMEWORK

The Language Development Approach uses the following framework to structure lessons involving conceptual development and language learning for any subject area or for topics of personal interest or cultural relevance.

Intellectual Skills

- Perceiving
- Retrieving
- Recalling
- Matching
- Sequencing
- Classifying
- Comparing/Contrasting
- Generalizing
- Inferring
- Predicting
- Interpreting
- Hypothesizing
- Imagining
- Applying
- Analyzing
- Synthesizing
- Evaluating



*Based on the work of Jim MacDiarmid
Adapted by B. Pugh and C. McGregor*

How to Develop a Language Development Unit

1. Identify the topic of study from the Health Education program.
2. Determine the key concepts and sub-concepts for the topic. Use brainstorming, semantic mapping, or content diagramming to outline these concepts for your own reference.
3. Assess and predict what experiences, knowledge, interests and attitudes students already possess which you can relate to the concept and subconcepts of the topic through:
 - observing the activities in the community in which students engage;
 - determining previous school experiences students have had with respect to the topic;
 - talking with classroom assistants, parents, L.E.A. members, older students, etc.;
 - observing students in the classroom.
4. Determine what materials and resources are available in the school and community to teach the key concepts and sub-concepts.
5. Brainstorm techniques and activities that you can use to teach the concepts and sub-concepts of the unit. Keep in mind the cognitive maturity, proficiency level, and background experiences of the students in the class.
6. Brainstorm the language items (vocabulary and sentence patterns) that students need to know in order to understand and discuss the concepts and subconcepts of the topic.
7. Determine other language items students may need to know in order to carry out the activities.
8. Predict which language items students already know. Predict language items students have in their linguistic storehouses that you can use to introduce the concept specific language.
9. Plan an initial assessment activity that identifies which experiences, concepts and language items students already have for the topic.
10. Plan specific lessons to teach key concepts, subconcepts and associated language.

11. Plan culminating activities which provide students with opportunities to consolidate and use knowledge and language learned throughout the unit. These can be sharing sessions with other classes, parents or community members.
12. Plan activities that evaluate student progress; these should determine what they have learned from the unit in terms of concepts, attitudes, skills and language items.

How to Plan Language Development Lessons

Plan specific lessons to teach key concepts and subconcepts using the Language Development Framework.

Concept Development/Language Exposure Activities

Choose concept development activities that help students relate previous knowledge to the topic of study or fill gaps in that knowledge. These activities should involve direct, first-hand, active learning with concrete materials as much as possible. Where necessary, use indirect experiences (films, filmstrips, pictures, etc.) to allow students to move beyond the confines of the immediate classroom to explore concepts associated with other times and places. Plan several activities which introduce and reinforce the concepts in different ways.

While students learn about the concepts, activities should also introduce them to new language items which express the concepts. The activities should help students to associate new vocabulary with relevant objects or actions and to express the relationships among concepts with appropriate sentence patterns.

Language Practice Activities

In this part of the lesson, students use the new language items introduced in concept development activities in a variety of activities that develop listening, speaking, reading, and writing skills. Through intensive practice of items in a variety of ways, students come to "own" the new language, i.e., commit it to memory so that it becomes part of their permanent storehouse of language items. These activities should also strengthen the bond developed between the new concepts and the language items that represent those concepts. While the whole class may participate in most of the concept development activities, it is important to group students for language practice according to their language needs and skills. During these group activities you can assess how well students are mastering new language items.

Communicative Application

The final phase of the lesson sequence includes opportunities for students to use their acquired knowledge and language to communicate in a variety of situations. Students will demonstrate that they have understood the new concepts and can use the new language items by interacting with others. Activities should involve students in listening, speaking, reading, and writing to solve problems, bridge an information gap, share information, complete a task, develop an arts and crafts project, or share a finished product. These activities will provide students with an opportunity to explore related concepts and language, eventually coming full circle to new concept development and language exposure. While students complete these activities, the teacher can meet individually with students to assess the extent to which they have mastered the concepts and language from the lesson.

Intellectual Skills

An essential component of the framework is the development of intellectual skills. Learning new concepts and language involves thinking skills. On the other hand, the ability to think abstractly involves conceptual and linguistic knowledge.

In the Concept Development/Language Exposure phase, plan assessment activities that establish whether or not students have basic building block concepts and language to engage in more abstract thinking about a topic. Subsequent activities can fill gaps and/or extend the students' background. The structured nature of Language Practice activities demands less high level intellectual activity. Answers are more convergent in nature; the information readily provided or available. However, Communicative Application activities should involve more divergent thinking. Students can draw on what they already have learned during the previous two phases to bridge an information gap or solve a problem.

INITIAL ASSESSMENT ACTIVITIES

In order to help teachers assess where to start with the program, the following activities should be done before teaching each lesson. They will assist in determining:

- what students already know about the concepts and therefore where instruction should begin;
- what interests students have in the topic and therefore the direction the unit should take; and,
- what language students already have to discuss the topic and what language they require.

One of the basic principles of all good teaching is that teachers should start with the student when planning and carrying out a unit. Before beginning the unit, it is important to assess students' knowledge of and interest in the topic. Teachers should determine what students already know about the topic/concepts they intend to cover. What ideas do students already have? What misconceptions do they have which must be addressed? What gaps are there in their knowledge which require teaching certain lessons? What concepts do students know well enough so that teachers can skip the lessons which teach those concepts? What questions do they have? What relationships do they see between different aspects of the topic?

It is also important to identify what experiences students have which relate to the topic/concepts. By identifying these and building upon them in the lessons, teachers can help students relate the new ideas and information to their own lives. It is important for them to do this because it assists students to internalize new concepts.

It helps students make the concepts part of the conceptual framework which they use to understand and describe their world. If they do not have concrete, firsthand experiences to relate to each concept they will have to be provided with them wherever possible.

Another use for these activities is to help teachers identify particular interests of individuals, groups of students, or the whole class. They can then include activities in the lessons which involve student interests, thereby increasing motivation for them to participate and learn. Teachers may decide to add, substitute or omit some lessons because of students' interests.

These activities will also help determine what language students have to discuss the topic, i.e., what vocabulary items students already know and what associations they have for each word. It is important to ascertain the meanings students attach to words; sometimes their interpretations may be surprising! If they do not clearly understand terms or if they use them incorrectly, it will prevent them from understanding and incorporating the concept into their mental framework.

Each unit in the School Health Program has a number of different themes. Teachers should select assessment activities suitable for that particular theme. The examples are for themes from each unit: Mental and Emotional Well-Being, Growth and Development and Family Life.

1. Brainstorming

Mental and Emotional Well-Being	Growth and Development	Family Life
Communication	The Digestive System	Families
Ask students: "What do you know about communication?"	Ask students: "What do you know about the digestive system?"	Ask students: "What do you know about families?"

Answers can be recorded on cards and hung on masking tape strips (sticky surface up) which can then be fastened to the wall or the chalkboard.

communication	digestive system	families
speaking	stomach	mother
T.V.	stomachache	big
art	breaks down	love
friends	food	care
listening	liver	father
music	mixes	grandfather
verbal	energy	work
family	intestines	baby

If students have difficulty with this activity you may wish to direct their thinking or prompt ideas by asking more specific questions:

Why do we communicate?	What body parts are part of the digestive system?	What kinds of families are there?
How do we communicate?	What do they do?	How are families alike?
With whom do we communicate?	Where are they found?	How are families different?
	How do we take care of them?	Who are in families?
		What do families do?

Encourage students to predict answers to these questions even if they are not sure of the exact responses. It might be interesting to record their predictions separately and compare them to the actual answers as they study the unit. Students may think of their own questions as well. Teachers can keep a list of all the questions the class cannot answer to focus the lessons they teach during the unit.

After recording their responses on the cards, *teachers should* have students chant the words with them and talk about the words:

- Which word is the most interesting?
- the least interesting?
- the most puzzling?
- What other word can you think of that means almost the same thing?
- What comes to your mind when I say _____?
- What do you think this word means? Etc.

2. Categorizing

Teachers can distribute the word cards from the brainstorming sessions ensuring that they tell students the words they give them. Younger students should receive only one card at a time so they will not get confused. One student places his/her word card at the top of one of the masking tape strips and tells the word to the class. Teachers ask if there is anyone else who has a word that belongs with the first word and have another student place his/her word card under the first, read the word and explain why it belongs with the first word. The class can give a title to these two cards which now form a category. Teachers can then ask if anyone can start a new category. When students have placed all of the brainstormed words in categories, the class can discuss the titles and change them if necessary. Students can then chant the words in each category. Teachers can transfer the words to a flowchart to provide a permanent reference.

As teachers progress through the unit they may wish to add new information to the chart. They may also identify new questions and hopefully, the answers. At the end of the unit they can review the chart with students and keep it as a reference for future use.

Communication	The Digestive System	Families
Different ways of communicating	Body parts	Who is in them?
verbal non-verbal speaking listening music art	stomach intestines liver mouth esophagus	mother father baby grandmother
With whom	What they do	What do they do?
friends family teacher people at work	squeeze mix break down move	play work love care
Kinds of communication	Problems	What size are they?
aggressive assertive passive	stomach ache nausea diarrhea	big small

SAMPLE QUESTIONS:

Teachers can use these questions during the initial assessment activity to determine what experiences, interests, language, and knowledge students have about the topic. They can also use the questions during discussions in the lessons for evaluation.

Questions for Assessing Experience:

1. Have you been in a situation where _____?
2. What do you know about _____?
3. Have you ever seen _____?
4. Have you ever experienced _____?
5. Have you ever been _____?
6. Have you ever done _____?
7. Has something like this ever happened to you _____?
8. When was the last time you _____?

Questions for Assessing Language:

1. What do you think these words mean _____?
2. Can you give me another word that means _____?
3. What comes to your mind when I say _____?
4. Have you heard of the word(s) _____?
5. What words can you think of when I say the word _____?

Questions for Assessing Thinking Processes:

Cognitive Memory (details, information)

1. Who _____?
2. What are the facts _____?
3. What are the most important details _____?
4. What is the _____?
5. What do you mean by _____?
6. What is your interpretation of what happened? (What do you think happened?)
7. When?
8. Where?

ConvergenUGeneralization (getting the main idea)

1. What are the chief points?
2. Given that information, what is the main idea?
3. What is the single most important idea?
4. State the idea in one sentence.
5. Explain _____

Structuring/Relating (arranging relationships)

1. Categories:
Which group does that belong to?
How would you classify _____?
What type would you _____?
2. Comparisons: How are they alike? same? similar? identical?
3. Contrasts: How is it different? in opposition to? unlike?
4. Cause and Effect: What will happen if? Why?
What will happen as a result of?

Divergent/Using/Applying

1. What might happen if _____?
2. If you use that idea, what would it mean for _____?
3. Apply that idea to our (this) situation.
4. What would result if _____?
5. If you were given these facts, what would you do to _____?
6. How would it be different if we used this idea?
7. What could the advantages/benefits be if we applied this idea/process?

EvaluationIdudgingNaluing

1. How do you feel about this idea?
2. What is your opinion?
3. What is the best _____?
4. Are you satisfied with that answer/plan?
5. Can this statement be made? Why?
6. Out of all the information, what can be used to prove your point?
7. How would you judge?
8. What is your opinion or conclusion about the product/plan/idea?
9. Why did you think it worked/didn't work?
10. What is fact? What is opinion?

EVALUATION

Educators often use the word "evaluation" to mean "testing". Evaluation, however, is an integral part of all educational programs or processes. It includes any form of obtaining information about what students are learning and how effective the program is in achieving its goals.

We learn a great deal from effective evaluation, including:

- what concepts, skills and attitudes a student has learned;
- if a student has achieved the objectives;
- in which areas of the program a student is proficient,
- a student's grade level;
- if the program needs to be reviewed, revised or modified;
- if teaching methods are effective;
- if a student needs additional assistance;
- if a student considers the lessons relevant i.e., do the lessons relate to the world of the student outside the classroom?

EFFECTIVE EVALUATION

For effective evaluation, it is important:

- to link the evaluation to the stated objectives of the program;
- to include as many forms of evaluation as possible;
- to assess students in the cognitive, affective and psycho-motor domains; (in the Health Program, the affective domain is particularly important);
- to ensure that the forms of evaluation are appropriate to the student's developmental level and language proficiency and that they are culturally suitable;
- to ensure that the method of evaluation supports and reinforces goals of the program i.e., if one of the goals of the program is to enhance self-esteem, then the evaluation must include successful experiences which will contribute to that;
- to encourage students to take some responsibility for evaluation.

DIFFERENT APPROACHES TO EVALUATION

It is not possible in this document to include all the possible approaches to evaluation or the detailed information necessary for teachers to use each approach effectively, A more comprehensive effort will be made to address evaluation for this program at a later date.

The approaches included will give teachers some general guidelines on evaluation.

1. *Pre-tests and Post-tests*

In order for teachers to assess what students already know about a topic, and to determine the starting point for the lessons, it may be necessary to administer a pre-test. This pre-test should include items which assess skills, attitudes and behaviours, as well as specific knowledge.

By using the same test or a parallel test after teaching the lessons, teachers will be able to assess what knowledge students have acquired and any possible changes in individual attitudes and behaviours, e.g.,

- | | True | False |
|--|------|-------|
| i) Knowledge
Tobacco contains a drug. | () | () |
| ii) Skills
John's friends want him to skip school. Use the decision-making process to show how he decides what he will do. | | |
| iii) Attitude/Beliefs
Daily exercise is important to me. | | |
| Agree | () | |
| Not Sure | () | |
| Disagree | | () |
| iv) Behaviours
I would eat candy or chips for a snack. | | |
| Most of the time | () | |
| Some of the time | () | |
| Never | | () |

2. *Projects*

Projects are assignments given to individual students or to a small group of students. Usually they involve research on a specific topic within the program.

Projects allow students some freedom to express individuality and to demonstrate particular strengths.

A variety of activities can be incorporated into a project, e.g.,

- written report
- diagrams
- audio-visual material
- photographs
- models
- drama
- drawings
- graphs

It is important to structure the project carefully, and define the requirements clearly to ensure that it is manageable. Requirements should indicate:

- the objectives of the project; completion date;
- how the teacher will evaluate it;
- where to find information.

For example, a project on the "Health Care Worker in the Community" may include:

- a description of what the health care worker does;
- a photograph of the health care worker;
- a recorded interview with the health care worker and/or with community people who have regular contact with the health care worker;
- a video of the health care worker at work;
- a graph to show how much time the health care worker allocates to different tasks;
- telephone numbers;
- a map to show how to go to the health care worker's place of work; and,
- drawings of any special tools/instruments which the health care worker uses.

3. *Simulations*

The Health Education program provides for the acquisition of specific skills and knowledge, and gives the students opportunities to practise appropriate attitudes and behaviours. As a result, simulations are an appropriate way to determine student progress. Discussions of alternative solutions after roleplaying also provides an indication of student attitudes.

If students have learned different ways to resist peer pressure, they can demonstrate how to resist peer pressure in a given situation, e.g.,

Bill wants Mary to go to a party with him on Saturday. Mary's mother says she is too young to go to parties. Bill has told Mary he won't be her friend if she doesn't come.

Demonstrate how Mary resists the pressure from Bill.

4. *Observation*

We expect students' behaviour to reflect what they have learned so direct observation of students is an important method of evaluation. Students may not demonstrate some of the practices in the classroom, however, and so this observation must also occur in the community. Where and when appropriate, observation should include aspects of mental, physical, social activity, as well as intellectual practices of the student, e.g.,

If students have been discussing practices which promote safety in the playground, the teacher can observe students at play at recess to determine if they demonstrate use of safe practices outside the classroom.

5. Checklist

These are a simple method of recording observations usually made in the classroom. Checklists will not necessarily give a teacher information on a student's behaviour. Teachers can develop checklists for evaluating simulations, observations, discussions, etc.

E.g.,

Checklist for Group Discussions

	All of the time	Some of the time	Never
- listens without interrupting	()	()	()
- shows respect for other people's opinions	()	()	()
- participates readily	()	()	()
- responds positively when questioned	()	()	()
- questions others	()	()	()
- etc.			

6. Anecdotal Record

Anecdotal records are brief comments on the teacher's observations. The information recorded is factual and non-judgemental - the evaluation of what was seen is noted after the observation is complete. The comments should be specific and related to the objectives of the program. Record both positive and negative examples, e.g.,

At recess, Sarah helped Margaret to come down from the climbing bars. She pushed James when he tried to help too.

7. Self-Evaluation

Students should also participate in the evaluation process by identifying what they learned from the lessons, what they are interested in, what they think is important for them to know more about, etc. One way of doing this is through a rating scale, e.g., I learned:

a lot	some things	nothing
-------	-------------	---------

I was most interested in: _____

I would like to learn more about _____

8. Student Notebooks

By asking students to keep a health notebook, teachers can assess how well students understand concepts. It is important, however, to treat the notebooks with confidentiality. Students should be aware before they write in the notebook that the teacher will look at them. In particularly sensitive areas, such as Family Life, students may be reluctant to share notebooks with teachers, if not advised in advance.

NORTHWEST TERRITORIES

School Health Program

GRADE 8



Northwest
Territories

Education, Culture and Employment
Health and Social Services

August, 1996

MENTAL AND EMOTIONAL WELL BEING

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	RELATIONSHIPS	People share responsibilities for making groups work	i) examine why people form groups ii) identify groups in the community to which adults and young people belong iii) identify the benefits people derive from these groups
2	RELATIONSHIPS	People share responsibilities for making groups work	i) identify characteristics of effective working groups ii) identify the roles and responsibilities of group members
3	COPING	People can learn to deal effectively with stress in their lives	i) define stress ii) identify causes of stress iii) identify how stress affects the body
4	COPING	People can learn to deal effectively with stress in their lives	i) identify specific methods of dealing with stress
5	COPING	Uncontrolled stress may lead to depression	i) define depression ii) identify causes of depression iii) identify the signals of depression iv) identify ways of dealing with depression
6	SUICIDE PREVENTION	Severe depression may result in suicide	i) identify some basic facts relating to suicide ii) identify possible indicators of suicide iii) identify sources of help in suicide prevention iv) identify ways to prevent a suicide attempt

GROWTH AND DEVELOPMENT

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	BODY SYSTEMS	The skeletal system supports and protects the body and allows for movement	i) name and locate the major bones of the skeletal system
2	BODY SYSTEMS	The skeletal system supports and protects the body and allows for movement	i) describe the functions of the skeletal system ii) state the importance of the skeletal system
3	BODY SYSTEMS	The skeletal system supports and protects the body and allows for movement	i) identify the types of skeletal joints, their locations and functions ii) describe the structures related to a movable joint
4	BODY SYSTEMS	The skeletal system supports and protects the body and allows for movement	i) describe common problem conditions related to the skeletal system ii) describe ways to care for the skeletal system
5	BODY SYSTEMS	The muscular system supports and protects the body and provides shape	i) name and locate the major muscle groups of the muscular system ii) describe how the muscular system produces body movements iii) describe the functions and importance of the muscular system
6	BODY SYSTEMS	The muscular system supports and protects the body and provides shape	i) describe common problem conditions and injuries of the muscular system ii) describe ways to prevent muscle injury
7	PHYSICAL FITNESS	Physical fitness is essential for optimal health	i) identify the components of physical fitness ii) describe ways in which each fitness component can be developed
8	PHYSICAL FITNESS	Physical fitness is essential for optimal health	i) assess their personal physical fitness levels ii) describe the structure of a well-planned physical fitness program iii) participate in a well-planned fitness program

FAMILY LIFE

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	FAMILIES	There are many different family patterns	i) identify family patterns in the community
2	FAMILIES	interpersonal relationships vary from casual to intimate	i) describe types of interpersonal relationships ii) identify characteristics that promote the development of relationships
3	HUMAN DEVELOPMENT AND REPRODUCTION	Reproduction ensures the continuation of new life	i) identify the structure and function of the male and female reproductive systems
4	HUMAN DEVELOPMENT AND REPRODUCTION	The development and union of reproductive sex cells are significant to the development of new life	i) explain the significance of ovulation and sperm development to reproduction
5	TEEN DECISIONS	Assertiveness and abstinence are responsible behaviours for young adolescents	i) explain why abstinence is a responsible behaviour for young adolescents ii) practise assertive responses to sexual pressure
6	TEEN DECISIONS	Individuals can plan the reproduction of new life	i) describe some methods of birth control
7	SEXUALLY TRANSMITTED DISEASES	Sexually transmitted diseases are serious communicable diseases that can be prevented	i) identify the causes, characteristics, consequences, treatment and prevention of common sexually transmitted diseases

8	ABUSE PREVENTION	There are many types of violence that may occur within the family	<ul style="list-style-type: none">i) describe family violenceii) identify factors that may lead to family violenceiii) describe methods of coping with family violence
9	LIFESTYLE	Positive lifestyle practices promote health	<ul style="list-style-type: none">i) identify positive lifestyle practices that promote a young person's healthy sexuality and family relationshipsii) design a personal program to promote a healthy sexuality and/or family relationshipsiii) evaluate the effectiveness of the program

NUTRITION

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	ENERGY BALANCE	Each person has different energy needs	i) define energy, metabolism and kilocalorie ii) identify factors that determine our energy needs iii) identify the energy used for different activities iv) classify foods based on stored energy
2	ENERGY BALANCE	Energy balance is when energy intake equals energy output	i) explain how energy balance occurs ii) estimate their energy intake and energy output for one day to determine energy balance
3	FOOD CONSUMERISM	Diets can be analyzed to determine their nutritional adequacy and suitability	i) evaluate the nutritional effectiveness and suitability of a variety of diets
4	LIFESTYLE	Positive nutrition practices promote health and weight control	i) identify the importance of weight control ii) identify ways of promoting successful weight control iii) design a day's energy intake and energy output

DENTAL HEALTH

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	FACTORS AFFECTING DENTAL HEALTH	Foods eaten affect a person's dental health	i) identify go, caution and stop foods related to dental health
2	DENTAL SERVICES AND PRODUCTS	Preventive dental procedures by professionals promote dental health	i) identify professional preventive procedures that promote dental health
3	DENTAL SERVICES AND PRODUCTS	Dental health products promote dental health	i) identify the importance of fluoride in promoting healthy teeth ii) identify some common dental health products
4	LIFESTYLE	The prevention of dental health problems is a personal responsibility	i) assess dental and nutritional adequacy of foods consumed in a given time period ii) design a personal action plan to promote dental health iii) evaluate the effectiveness of the action plan

SAFETY AND FIRST AID

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
1.	OUTDOOR SAFETY	Outdoor survival requires meeting an individual's basic needs	<ul style="list-style-type: none">i) explain an individual's basic needs in order to surviveii) outline basic survival skillsiii) design a survival kit
2.	OUTDOOR SAFETY	Safe boating practices prevent injuries and death	<ul style="list-style-type: none">i) identify the-safety equipment needed for boatingii) identify potential hazards and risky behaviours while boating that may result in injury and deathiii) explain safety practices and boating laws that prevent injuries and death
3.	OUTDOOR SAFETY	Sports safety involves wearing proper equipment and following safety practices	<ul style="list-style-type: none">i) describe proper equipment to wear for various sports activitiesii) identify safety rules to follow for various sports activities
4.	FIRST AID	Both frostbite and hypothermia can be minimized and prevented by applying safety rules and first aid	<ul style="list-style-type: none">i) explain the causes of frostbiteii) explain the safety rules to follow that prevent frostbiteiii) demonstrate first aid for each type of frostbiteiv) explain what hypothermia is and its causes
5.	FIRST AID	Safety can be enhanced by group co-operation	<ul style="list-style-type: none">i) explain ways in which their group role members can contribute to a successful Co-operative Learning Groupii) work with members of their group to plan an outdoor trip
6a.	FIRST AID	Head injuries can be prevented and minimized by applying safety rules and first aid	<ul style="list-style-type: none">i) state common causes of head injuriesii) identify potential hazards and related risky, behaviours that may result in head injuriesiii) explain safety rules to follow that prevent head injuriesiv) demonstrate first aid for head injuries
6b.	FIRST AID	Eye injuries can be prevented and minimized by applying safety rules and first aid	<ul style="list-style-type: none">i) state common causes of eye injuries in the NWTii) identify potential hazards and related risky behaviours that may result in eye injuriesiii) explain safety rules to follow that prevent eye injuriesiv) demonstrate first aid for eye injuries

SAFETY AND FIRST AID

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
6c.	FIRST AID	It is important to recognize convulsions in children and to apply first aid	<ul style="list-style-type: none">i) explain what convulsions areii) describe the signs of convulsionsiii) demonstrate first aid for convulsions
6d.	FIRST AID	Fainting requires first aid to restore the blood supply to the brain	<ul style="list-style-type: none">i) give examples of causes of faintingii) identify the signs that may result in faintingiii) demonstrate first aid for fainting
6e.	FIRST AID	It is important to recognize that some allergic reactions can be life threatening and to apply first aid	<ul style="list-style-type: none">i) explain what an allergic reaction isii) describe how food and drug allergies can affect people differently from mild to life threateningiii) describe the signs and symptoms of allergic reactions to food, drugsiv) explain first aid for these reactions
6f.	FIRST AID	Positive safety and first aid lifestyle practices may save lives and minimize the effects of injuries	<ul style="list-style-type: none">i) identify the importance of first aidii) design a personal safety and first aid programiii) evaluate the effectiveness of the program
7.	FIRST AID	It is important to recognize epileptic seizures and to apply first aid	<ul style="list-style-type: none">i) explain what epilepsy isii) describe the signs and symptoms of epileptic seizuresiii) explain first aid for an epileptic seizure
8.	FIRST AID	It is important to recognize diabetic emergencies and to apply first aid	<ul style="list-style-type: none">i) explain what diabetes is and its treatmentii) differentiate between insulin shock and diabetic comaiii) explain first aid for a diabetic emergency

ALCOHOL AND OTHER DRUGS

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
1	ALCOHOL	THE DRINKING OF ALCOHOL IN THE N.W.T. HAS A DISTINCT HISTORICAL PRESENCE	i) recognize the presence and drinking of alcohol throughout time ii) explain the distinct history of alcohol in the N.W.T. iii) recognize the relationship between the drinking pattern in the N.W.T. and the northern lifestyle
2	ALCOHOL	MOST PEOPLE WHO CHOOSE TO DRINK ALCOHOL USE IT RESPONSIBLY	i) identify the choices which people have with regard to the use of alcohol ii) explain the responsible use of alcohol iii) identify ways in which people demonstrate responsible use of alcohol
3	ALCOHOL	ALCOHOL MAY BE MISUSED AND ABUSED	i) explain misuse and abuse of alcohol ii) identify alcoholism as a treatable disease iii) identify the progressive stages of alcoholism iv) identify the resources available in the community to help someone with an alcohol problem
4	ALCOHOL	TEENAGERS MAY HAVE DRINKING PROBLEMS	i) identify how a person's life may be affected by alcohol ii) identify the particular problems which alcohol may cause for teenagers iii) assess their personal alcohol use iv) review the resources available in a community for youth
5	DRUGS	IT IS DANGEROUS TO COMBINE DRUGS	i) explain why drugs should never be combined
6	ALCOHOL	EVERYTHING A PREGNANT WOMAN PUTS INTO HER BODY AFFECTS NOT ONLY HER, BUT ALSO THE UNBORN CHILD	i) identify food and drink which are healthy for the unborn baby ii) explain that everything a pregnant woman eats or drinks affects the unborn baby
7	ALCOHOL	FETAL ALCOHOL SYNDROME IS TOTALLY PREVENTABLE	i) describe fetal alcohol syndrome ii) identify behaviours which will prevent fetal alcohol syndrome

ALCOHOL AND OTHER DRUGS

GRADE 8

LESSON NO.	THEME	CONCEPT	OBJECTIVES
8	DRUGS	ADVERTISING CAN INFLUENCE PEOPLE'S DECISIONS ABOUT THE USE OF DRUGS	i) identify techniques used in advertising to influence people's decisions ii) interpret information from the advertisements iii) design an advertisement
9	ALCOHOL	ADVERTISING CAN INFLUENCE PEOPLE'S DECISIONS ABOUT THE USE OF ALCOHOL	i) identify the images of alcohol as portrayed by advertisers ii) identify the negative effects of alcohol use
10	CANNABIS	CANNABIS USE CAN AFFECT BOTH PHYSICAL AND PSYCHOLOGICAL DEVELOPMENT	i) identify some short-term physical effects of cannabis use ii) identify some long-term physical effects of cannabis use iii) identify some short-term psychological effects of cannabis use iv) identify some long-term psychological effects of cannabis use
11	CANNABIS	CANNABIS USE MAY AFFECT THE REPRODUCTIVE SYSTEM	i) identify the possible effects of cannabis on the reproductive system and on the unborn fetus
12	SOLVENTS	SOLVENT ABUSE HAS SHORT AND LONG-TERM EFFECTS ON THE BODY	i) identify some short-term effects of solvent abuse ii) identify some long-term effects of solvent abuse

GRADE 8

MENTAL AND EMOTIONAL WELL-BEING

MENTAL AND EMOTIONAL WELL BEING**GRADE: 8****LESSON: 1****THEME: RELATIONSHIPS**

CONCEPT: PEOPLE SHARE RESPONSIBILITIES FOR MAKING GROUPS WORK

PREPARATION: 1. Prepare a class set of Group Membership worksheets (Activity Sheet ME64)

VOCABULARY: provide for, potential, self-help

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) examine why people form groups	Students: 1. Brainstorm why people, historically, have settled together in groups.	Background Information - Have students respond using the sentence pattern: People have settled together _____ - for safety from animals, other people, the weather - to keep each other company - to share work such as cooking, getting food, budding shelters, making clothes, raising children - to have babies - for friendship and fun - to pass skills on from one generation to the next - for religious and cultural reasons Discuss each with the class and have students give examples.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES				
ii) identify groups in the community to which adults and young people belong iii) identify the benefits people derive from these groups	2. Classify into categories reasons why people settle into groups.	Ask students to classify each response from Student Activity 1 under the appropriate heading and record on an experience chart as shown:				
	3. List some groups in the community to which adults and young people belong.	Physical needs	Safety	Social needs	Self-esteem	Education
		- food - clothing	from animals	- friend ship	- from family - from peers	- learning skills
	4. List the benefits of belonging to the various community groups.	Some examples might be: <ul style="list-style-type: none"> - family - volunteers - Lions, St John - recreational - sports, photography, guiding, scouts, etc - committees - L E A , Health etc - spiritual - church groups e g , bible reading - self-help groups - Alcoholics Anonymous - support groups - Alateen Refer to each group identified in Student Activity 3. Ask students to identify some of the benefits to people who belong to each group.				
		Group family	Benefits to Members - helps to meet everyday physical needs - meets some social needs - shares knowledge, skills, values, culture			

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
	5. Complete the Group Membership worksheet.	recreational	<ul style="list-style-type: none"> - develops skills - meets some social needs - allows development of special interests
		volunteer/committees	<ul style="list-style-type: none"> - helps other people to meet everyday needs - shares knowledge, skills, values - develops a social role - develops and maintains special interests
		spiritual	<ul style="list-style-type: none"> - shares values, culture - shares knowledge, beliefs - builds support systems - develops a social role
		self-help groups/ support groups	<ul style="list-style-type: none"> - shares knowledge, skills - builds support systems - meets some social needs
		<p>Refer to Activity Sheet ME64.</p> <p>Make a class list of groups to which students belong. Discuss the benefits of belonging to these groups.</p>	

GROUP MEMBERSHIP

List the groups to which you belong Check why you belong to these particular groups Describe some of the benefits of belonging to the group(s)



Why I Belong to These Groups

I belong to these groups	friendship	to help myself	to develop my skills	for competition	to help/teach someone else	because someone else put pressure on me	to promote something I am interested in	to be accepted by other people	for recognition and achievement	other
1										
2										
3										
4										

Benefits I get from the group(s) _____

MENTAL AND EMOTIONAL WELL BEING**GRADE: 8****LESSON: 2****THEME: RELATIONSHIPS**

CONCEPT: PEOPLE SHARE RESPONSIBILITIES FOR MAKING GROUPS WORK

PREPARATION: 1. Prepare a class set of Clues worksheet (Activity Sheet ME65A - Teacher Answer Guide ME65B)

VOCABULARY: characteristics, realistic delegate

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify characteristics of effective working groups	Students: 1. Complete the Clues worksheet.	Background Information - Refer to Activity Sheet ME65A. Have students complete the worksheet by filling in the blanks. Each answer is a clue for one characteristic of an effective group. Answers are given on Activity Sheet ME65B.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify the roles and responsibilities of group members	<p>2. Using the list from the previous activity, list some characteristics of effective working groups.</p> <p>3. In small groups, design a new group, outlining the roles and responsibilities of members.</p>	<p>Ask students why some groups work better than others. Reasons might include:</p> <ul style="list-style-type: none"> - realistic goals - finishing tasks on time - effective communication within the group (listening effectively, speaking clearly etc) - delegation/sharing responsibilities - leadership - volunteering for tasks people are interested in - members understanding roles and relationship to other members <p>Discuss, if possible, in reference to effective groups to which they belong.</p> <p>Have students work in groups of 3 – 5. Create a new group or club, give it a name, outline the roles and responsibilities of the leader and members. Identify some activities the group can work on together.</p> <p>Some questions to consider might be:</p> <ul style="list-style-type: none"> - What is the purpose of the group/club (This will help determine group activities) - What skills must members possess - What skills must the leader display - What are the roles of group members - Name some activities in which the group/club may be involved - What are the responsibilities of each group member <p>Suggestions for groups could be:</p> <ul style="list-style-type: none"> - to organize an exchange trip - to run an after school program for a younger grade - to promote a cleaner community - to develop a skill (music, sewing, computers)

CLUES

Complete the worksheet by filling in the blanks. Each answer is a clue for one characteristic of an effective group.

1. Hockey players score _____ .
2. Chores are _____ (Rhymes with masks)
3. If you are late, you are not _____ .
4. I _____ to music, and I _____ out when I have something to say.
5. Coming to school and babysitting are two teenage _____ .
6. The person in charge is the _____ .
7. A person who works for no pay is a _____ .
8. Each actor in a movie plays a certain _____ .

CLUES

Complete the worksheet by filling in the blanks. Each answer is a clue for one characteristic of an effective group.

1. Hockey players score g o a l s.
2. Chores are t a s k s (Rhymes with masks).
3. If you are late, you are not o n t i m e.
4. I l i s t e n to music, and I s p e a k out when I have something to say.
5. Coming to school and babysitting are two teenage r e s p o n s i b i l i t i e s.
6. The person in charge is the l e a d e r.
7. A person who works for no pay is a v o l u n t e e r.
8. Each actor in a movie plays a certain r o l e.

MENTAL AND EMOTIONAL WELL BEING

GRADE: 8

LESSON: 3

THEME: COPING

CONCEPT: PEOPLE CAN LEARN TO DEAL EFFECTIVELY WITH STRESS IN THEIR LIVES

PREPARATION: 1. Prepare an overhead transparency of Activity Sheet ME66
2. Prepare a class set of Stress Case Study worksheets (Activity Sheet ME67)

VOCABULARY: stress, stressors

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) define stress ii) identify causes of stress	Students: 1. Define the term 'stress'. 2. Brainstorm causes of stress.	Background Information Pages 37 to 38 Ask students what stress is. Use a dictionary and general discussion to define the term. Medically, stress is the rate of wear and tear on the body. It can be positive or negative. A good definition to use with students is: Stress is pressure from outside which makes you feel nervous inside. Refer to Activity Sheet ME66. Use the overhead transparency to stimulate student responses. Causes of stress (or stressors) are any changes that occur in school, work, personal and leisure time.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES					
	<p>3. Classify the examples into positive and negative stress.</p> <p>4. Make a class list of 10 - 15 common causes of stress among young people in the community.</p> <p>5. Rank these causes of stress from highest to lowest.</p>	<p>The causes of stress can be life threatening (a motor bike accident), or they can be minor (a bloody nose or a broken date). They can be joyful (winning a contest) or tragic (the death of a friend).</p> <p>Other examples include:</p> <ul style="list-style-type: none"> - going on a date for the first time - pregnancy - quitting school - leaving home - trouble at home - change in <ul style="list-style-type: none"> - recreational activities - social activities - eating habits - holidays - money problems <p>Record on an experience chart.</p> <table border="1"> <thead> <tr> <th>Positive</th> <th>Negative</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> - attending school dance - birth in a family - special holidays (e.g., Christmas) </td> <td> <ul style="list-style-type: none"> - death in a family - fading a grade - argument with a friend </td> </tr> </tbody> </table> <p>Discuss with the entire class.</p> <p>Brainstorm what students believe to be the most common causes of stress for them.</p> <p>Discuss as a class.</p>		Positive	Negative	<ul style="list-style-type: none"> - attending school dance - birth in a family - special holidays (e.g., Christmas) 	<ul style="list-style-type: none"> - death in a family - fading a grade - argument with a friend
Positive	Negative						
<ul style="list-style-type: none"> - attending school dance - birth in a family - special holidays (e.g., Christmas) 	<ul style="list-style-type: none"> - death in a family - fading a grade - argument with a friend 						

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
iii) identify how stress affects the body	6. Complete the Stress Case Study worksheet. 7. Describe how stress affects the body.	Refer to Activity Sheet ME67. Ask students to read the case study and identify the different ways Jeff can tell he is under stress. Ask students how their bodies tell them they are under stress. (Use the case study to help them.) Stress may affect the body physically or mentally. Ways in which stress may affect the body include: <ul style="list-style-type: none"> - pupils of the eyes get bigger - breathing speeds up - heart beats faster - blood pressure rises - hearing becomes sharper - muscles tense up - more energy is available (because the blood sugar level increases) - palms become sweaty - butterflies in stomach - headache - difficulty sleeping - skin rashes may occur

STRESS IS CAUSED BY...

Personal Loss



Death or Splitting Up

Family Changes



School Pressures



Stress is PRESSURE from outside that can make you feel nervous/worried/excited inside

Change in Life-style



Going Away to School



Illness/Injury



STRESS CASE STUDY

Jeff has been going out with Beth for about nine months. Lately, they've been arguing more and more. Today they're walking home from school together.

Beth: I saw you watching Jean in the Math class. I'm sick of you always looking at other girls, as if they all belonged to you.

Jeff: I wasn't watching Jean or any other girl. You're imagining things!

Beth: I'm not putting up with this any more. That's it. We're through!

Jeff's heart beat faster. He could hear it pounding inside his chest. His face got redder.

Jeff: That's not fair! However, if that's what you want, that's fine with me!

Jeff turned away. He really liked Beth. He didn't want their relationship to end like this. As he walked away, his stomach turned over and over. He felt sick! His palms were sweating and every muscle in his body felt like it had tightened up.

That night, it took him a long time to get to sleep. What should he do? Should he try again? Even after he finally fell asleep, he kept waking up and looking at the clock. He kept thinking about Beth.

Next morning, Jeff got up. His head was pounding. He didn't feel like eating breakfast. He wasn't even sure he wanted to go to school. He didn't want to see Beth. It hurt too much.

MENTAL AND EMOTIONAL WELL BEING

GRADE: 8

LESSON: 4

THEME: COPING

CONCEPT: PEOPLE CAN LEARN TO DEAL EFFECTIVELY WITH STRESS IN THEIR LIVES

PREPARATION:

1. Prepare an overhead transparency of Activity Sheet ME68
2. Prepare a class set of Stress in My Life (Daily Record) worksheet (Activity Sheet ME69A)
3. Prepare a class set of Stress in My Life (Conclusions) worksheet (Activity Sheet 69B)

VOCABULARY: effective, react

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify specific methods of dealing with stress	Students: 1. Describe specific effective ways of dealing with stress.	Background Information Pages 37 to 38 Refer to Activity Sheet ME68. Use the overhead transparency to stimulate student responses. Effective ways of dealing with stress: - do not physically or mentally harm anyone or anything - use a variety of coping skills - use coping skills in moderation

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Monitor situations which cause stress, how they are handled and alternative ways they might have been handled.</p> <p>3. Identify ways to deal more effectively with stress.</p>	<p>Effective ways of dealing with stress include:</p> <ul style="list-style-type: none"> - talking the problem over with a friend or family member - organizing one's time efficiently - relaxing daily - participating in physical activity on a regular basis - accepting what cannot be changed - seeking professional help <p>Refer to Activity Sheet ME69A.</p> <p>Have students keep a daily record of stressful situations, signs that they were under stress, what they could have done, etc. Keep the record over one or two weeks. (Each student needs 1 copy of the worksheet for 1 week.)</p> <p>Refer to Activity Sheet ME69B.</p> <p>After students have kept their daily records over a one or two week period, have them answer the questions on Stress in My Life (Conclusions) worksheet.</p> <p>Make a class list of ways to deal more effectively with stress.</p>

DEALING WITH STRESS

Talk it over with someone



Seek professional help



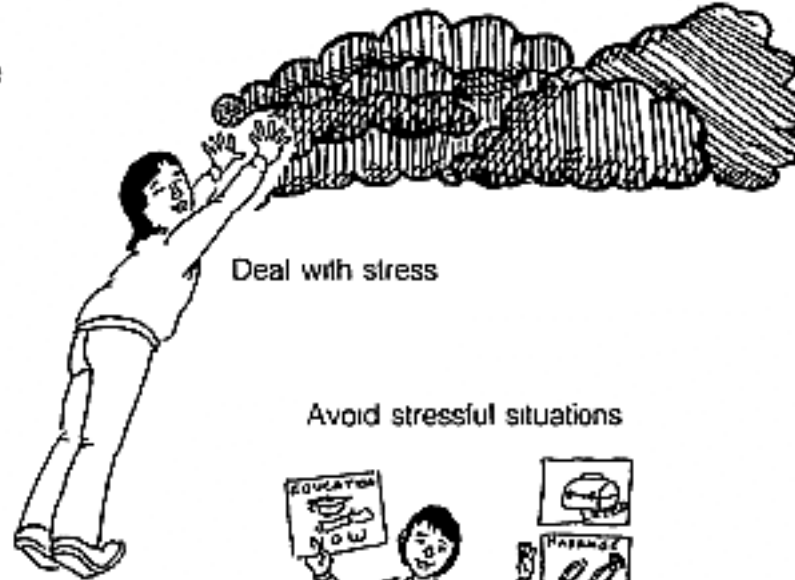
Learn to relax



Organize your time



Deal with stress



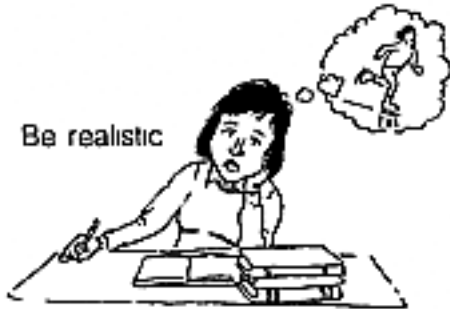
Avoid stressful situations



Exercise regularly



Be realistic



STRESS IN MY LIFE (DAILY RECORD)

Think about a time during each day when you felt under stress.

Put a checkmark beside the signs which you experienced at that time.

Signs of Stress	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
headache/stomachache/backache							
skin rash							
difficulty sleeping							
tiredness							
heart beat faster							
palms became sweaty							
pupils of eyes got bigger							
muscles tensed up							
hearing became sharper							
butterflies in stomach							
breathing speeded up							
Brief description of what made you tense							
How did you feel/react							
Did you cope effectively	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO
What could you have done differently?							

STRESS IN MY LIFE (CONCLUSIONS)

Now that you have kept a daily record of stress in your life, try to answer these questions for yourself.

1. What situations seem to cause you stress?

- a. _____
- b. _____
- c. _____

2. How does your body normally respond to stress?

- a. _____
- b. _____
- c. _____

3. How do you usually feel when you are under stress?

- a. _____
- b. _____
- c. _____

4. Do you usually cope effectively with stress?

Yes _____ No _____

5. How can you cope with stress more effectively?

- a. _____
- b. _____
- c. _____

MENTAL AND EMOTIONAL WELL BEING

GRADE: 8

LESSON: 5

THEME: COPING

CONCEPT: UNCONTROLLED STRESS MAY LEAD TO DEPRESSION

PREPARATION:

VOCABULARY: depression, uncontrolled

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>Students will be able to:</p> <p>i) define depression</p> <p>ii) identify causes of depression</p>	<p>Students:</p> <p>1. Define the term depression.</p> <p>2. Brainstorm common reasons why adolescents feel depressed.</p>	<p>Background Information Pages 37 to 39</p> <p>Use a dictionary and general discussion to define the term.</p> <p>Depression is a feeling of sadness, worthlessness or helplessness.</p> <p>These feelings are usually temporary.</p> <p>Each individual has his/her own stress level. It is not the amount of stress which is important but the amount an individual can handle. One effect of too much stress could be depression.</p> <p>Brainstorm with students situations where too much stress (as identified in Lesson 3) could lead to depression.</p> <p>It is important to emphasize that everyone feels down or 'blue' from time to time. This is normal.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
iii) identify the signals of depression	3. List some common signals of mild depression.	<p>Most people experience temporary feelings of mild depression from time to time.</p> <p>Some signals of mild depression are:</p> <ul style="list-style-type: none"> - feeling sad - feeling rejected - feeling worthless - feeling helpless - feeling isolated - some loss of control - an inability to concentrate - a loss of interest in daily activities - withdrawal - fatigue <p>Discuss with the entire class.</p>
iv) identify ways of dealing with depression	<p>4. Discuss methods of dealing with mild depression.</p> <p>5. Name support people who can assist young people in dealing with mild depression.</p> <p>6. Write and respond to a situation in which a teenager suffers mild depression.</p>	<p>Refer to Activity Sheet ME68 (from Lesson 4).</p> <p>Some methods of dealing with mild depression are:</p> <ul style="list-style-type: none"> - to find something new to do - to associate with positive people - to talk problems over with a trusted family member, friend, teacher, public health nurse, clergy, elder, etc - to do some physical activity <p>Make a list of people:</p> <ul style="list-style-type: none"> - in the community - in the region - who come to the community on a regular basis <p>This can be done individually, in pairs, or in small groups.</p> <p>Have students write a 'Dear Abby' letter outlining a problem which has caused a teenager mild depression. Have students exchange letters and respond to the letter which they receive, suggesting ways in which the teenager might deal with the problem and the depression.</p>

MENTAL AND EMOTIONAL WELL BEING

GRADE: 8

LESSON: 6

THEME: SUICIDE PREVENTION

CONCEPT: SEVERE DEPRESSION MAY RESULT IN SUICIDE

PREPARATION: 1. Prior to the lesson, invite a resource person (Doctor, Mental Health Worker) to the class to discuss suicide prevention with the students

2. Identity community/regional support people

VOCABULARY: suicide, prevention, homicide

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify some basic facts relating to suicide	Students: 1. Discuss data relating to suicide.	Background Information Pages 39 to 41 Teachers should be aware that some parents may have questions about a discussion on suicide in the classroom. Teachers should ensure, through the principal, that Local Education Authorities - and parents - understand why and how the topic of suicide will be addressed in the School Health Program. Teachers should also ensure they have sufficient knowledge of and comfort with the topic, and should be sensitive to the feelings of the students. They should also ensure that they know who local and regional support people are. When depression lasts a long time or when many things go wrong at once, a person may feel that nothing can go right again. He/she may have thoughts of suicide.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Participate in a discussion about suicide.</p>	<p>There are three main kinds of stress related to suicide:</p> <ul style="list-style-type: none"> - stress of adolescent changes - stress of loss - stress to achieve <p>People who seriously consider or attempt suicide feel:</p> <ul style="list-style-type: none"> - alone (No one cares about me) - helpless (I can't do anything about it) - hopeless (Why even try?) - worthless (I'm useless) <p>Using the following data, ask students to answer some questions about suicide in the NWT.</p> <ul style="list-style-type: none"> - In 1986, fifteen people committed suicide in the NWT - Eight of these suicide victims were between the ages of 16 and 25 - There are about 2 1/2 times as many suicides as there are homicides - Seven times as many men complete suicide as do women - Three times as many women attempt suicide as do men - Cases have been documented of young children committing suicide, although it is rare - There are many more attempted suicides than completed suicides. <p>In small groups, have students discuss some of the following questions.</p> <ul style="list-style-type: none"> - Why do you think people are often reluctant to talk about suicide - How do you think a suicide affects family members and friends of the victim? (How does its effect on family and friends differ from other forms of death) - Do you think that seeing death and violence on TV cause some people to have an unrealistic view of death.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify possible indicators of suicide	3. Discuss possible indicators of suicide.	<ul style="list-style-type: none"> - Why do you think the number of suicides has been increasing in the NWT and Canada during the past few years - Why do you think more men complete suicide attempts than women <p>Ask one person from each group to report back to the whole class.</p> <p>In some cases, people who are suicidal give prior indication of their intention. Knowledge of such indicators <i>may</i> help to alert friends, teachers etc that someone is at risk.</p> <p>Some possible indicators of people at risk include:</p> <ol style="list-style-type: none"> 1) Previous attempts at suicide 2) Threats of suicide 3) Extreme depression <ul style="list-style-type: none"> - withdrawal from friends, school, usual activities - writing letters/poems/stories about feelings of hopelessness/worthlessness, etc. - not recovering from depression (e.g., after loss of friend) 4) Changes in personality or behaviour <ul style="list-style-type: none"> - poor appetite - sleeplessness or sleeping too much - use of drugs - emotional outbursts with little cause (anger, crying, laughing) 5) Preparation for death <ul style="list-style-type: none"> - obtaining means to commit suicide (pills, gun, rope, etc) - giving away personal possessions 6) A sudden mood improvement <ul style="list-style-type: none"> - person feels relieved/happy because problems will soon be over

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>iii) identify sources of help in suicide prevention</p> <p>iv) identify ways to prevent a suicide attempt</p>	<p>4. Make a list of support persons who can help in suicide prevention.</p> <p>5. Discuss ways that teenagers may be able to help in a possible suicide situation.</p> <p>6. Discuss suicide prevention with a community resource person.</p>	<p>Ask students to list key support persons from the community, family and friends.</p> <p>(Teachers too should be aware of key support people both in the community and region.)</p> <p>Divide the class into small groups.</p> <p>Some ways that teenagers may help in preventing a possible suicide include:</p> <ul style="list-style-type: none"> - listening carefully to the person - taking the person's problem seriously - seeking help immediately but not leaving the person alone - if talking on the phone, keeping the person talking until they can get someone else to contact the RCMP - avoiding statements such as "Don't worry" or "Your problem's not really that bad." - asking specific questions about the problem - reporting the crisis to someone to relieve guilt, anger or fear they may feel - seeking appropriate help irregardless of the person's request to keep the information a secret. <p>If the community has a resource person knowledgeable about suicide prevention, invite the person to participate in the class discussion.</p>

GRADE 8

TEACHER BACKGROUND INFORMATION

MENTAL AND EMOTIONAL WELL-BEING

GRADE 8

GROWTH AND DEVELOPMENT

GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 1

THEME: BODY SYSTEMS

CONCEPT: THE SKELETAL SYSTEM SUPPORTS AND PROTECTS THE BODY AND ALLOWS FOR MOVEMENT

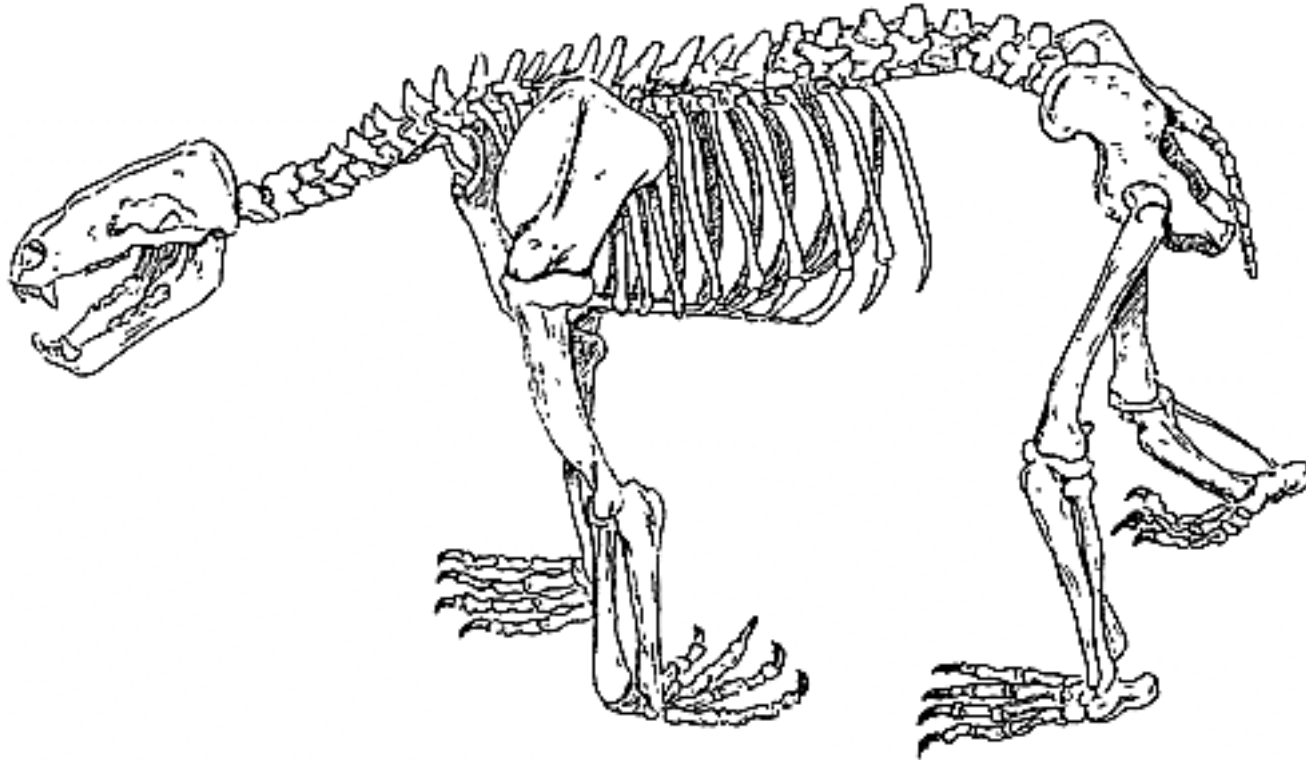
- PREPARATION:
1. Prepare overhead transparencies of Activity Sheets GD69A, 69B, 70A (70B - Teacher Answer Guide)
 2. Prepare a set of Human Skeleton and Bones worksheets for each pair of students (Activity Sheets GD71 A, 71 B and 71 C), scissors
 3. Prepare a class set of the Ezekial Chant (Activity Sheet GD72)
-

VOCABULARY: skeleton, skeletal

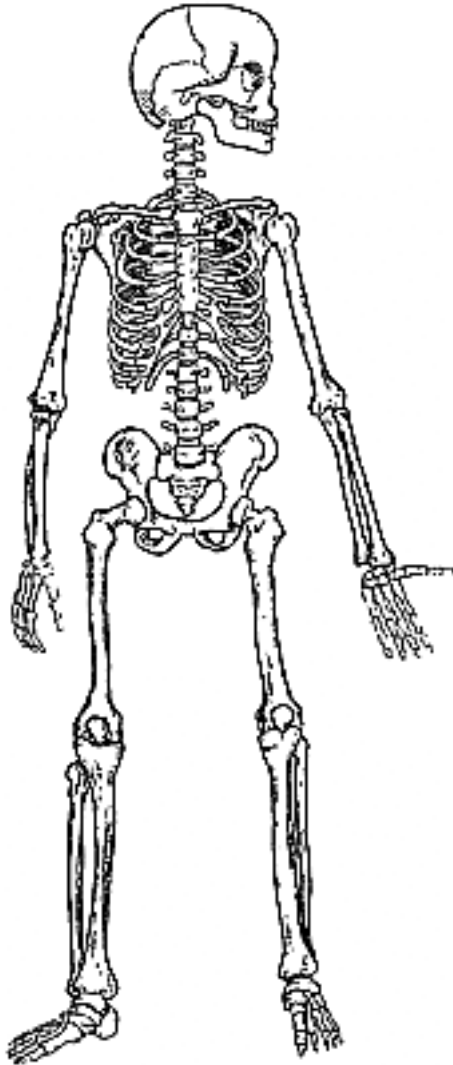
OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) name and locate the major bones of the skeletal system	Students: 1. Explain what a skeleton is. 2. Explain the skeletal system.	Background Information GD79 to GD82 Refer to Activity Sheets GD69A and 69B. Using the overhead transparencies, have students explain what a skeleton is. A skeleton is a framework of bones. Have students explain what is meant by the term 'skeletal system'. The skeletal system is the framework of bones which supports and protects the body and allows for movement.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. Name the major bones of the skeletal system.</p> <p>4. Practise naming the bones and their location.</p> <p>5. Learn the chant "Ezekial".</p>	<p>Refer to Activity Sheets GD70A and GD70B (Teacher Answer Guide).</p> <p>Using the overhead transparency, ask students to name the major bones.</p> <p>Refer to Activity Sheets GD71A, 71B and 71C.</p> <p>In pairs, have students assemble the human body from the worksheets. Practise placing the names on the correct bones.</p> <p>Refer to Activity Sheet GD72.</p>

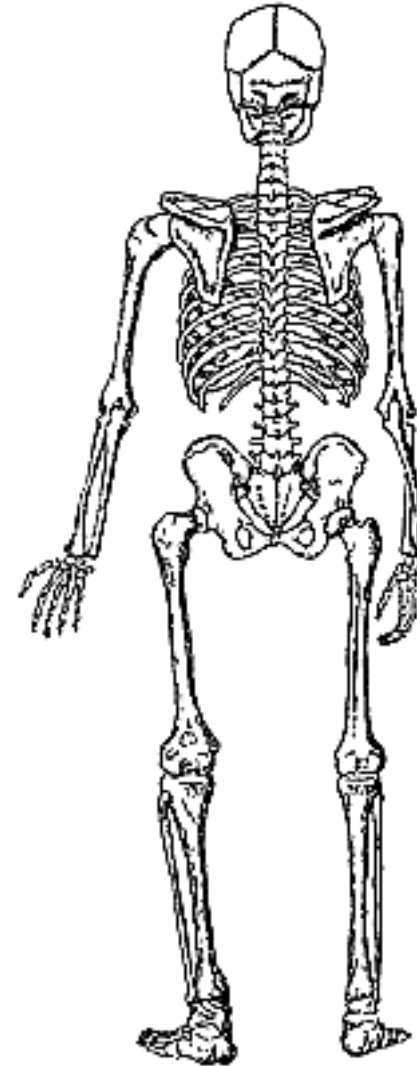
**SKELETON OF A NORTHERN ANIMAL
(BEAR)**



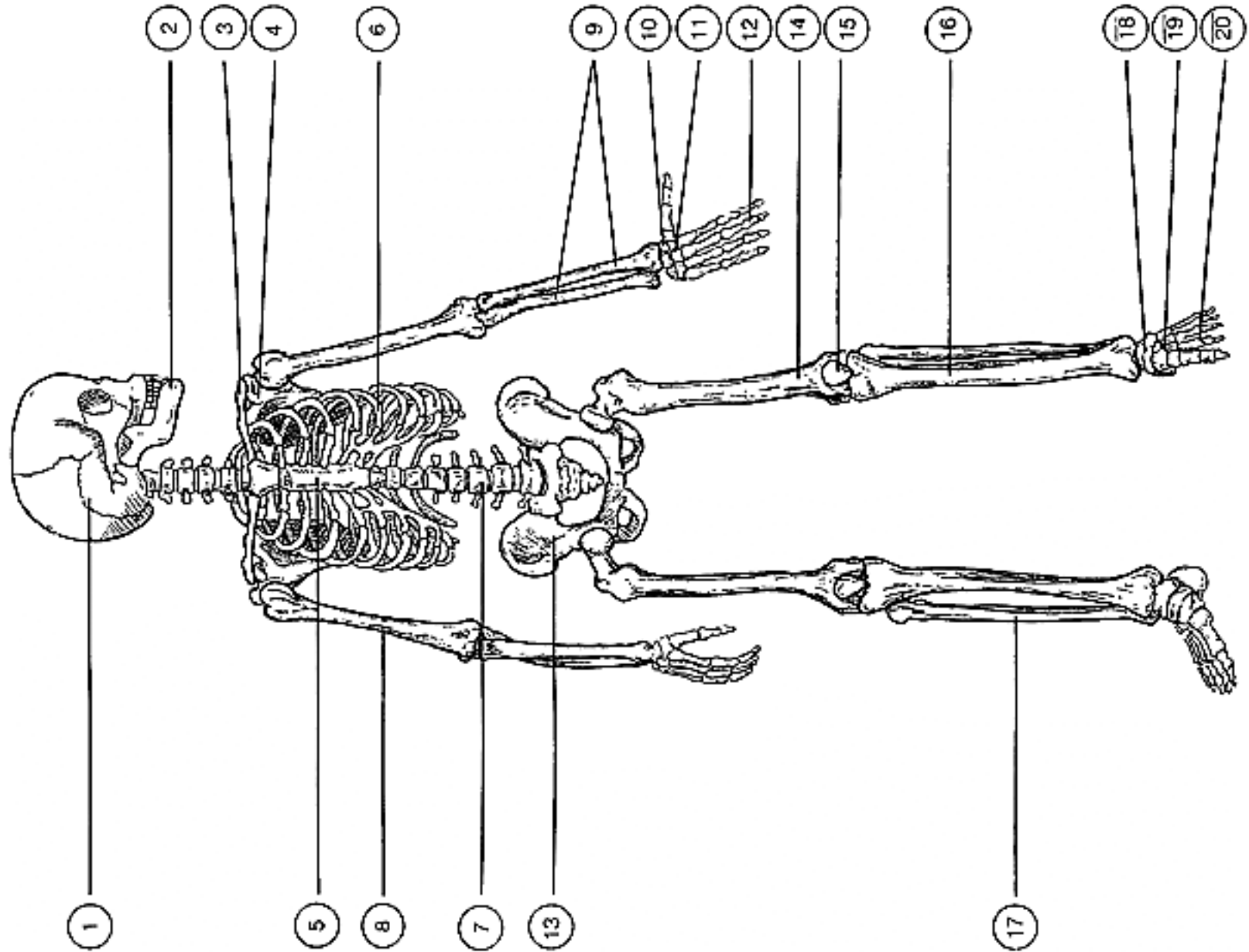
Front view
of Human Skeleton



Back view
of Human Skeleton



HUMAN SKELETON

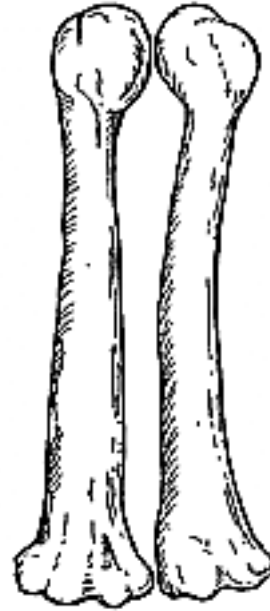
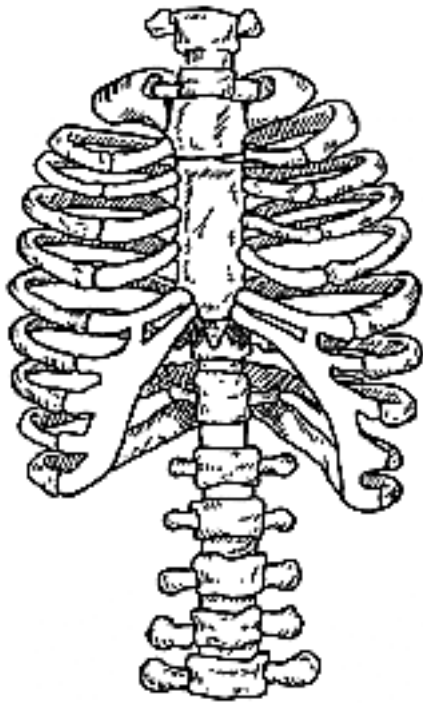


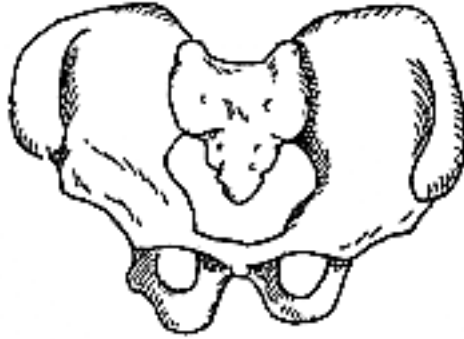
HUMAN SKELETON

Teacher Guide

1. Head bone (skull)
2. Jaw bone (mandible)
3. Collar bone (clavicle)
4. Shoulder blade
5. Breast bone
6. Rib
7. Back bone or Spine
8. Upper arm bone
9. Lower arm bones
10. Wrist bone
11. Hand bone
12. Finger bone
13. Hip bone (pelvis)
14. Thigh bone
15. Kneecap
16. Shin bone
17. Calf bone (fibula)
18. Ankle bone
19. Foot bone
20. Toe bone

HUMAN SKELETON





BONES

Cut these names out and use to label on the human skeleton diagram.

skull

finger bone

rib

upper arm bone

jaw bone

kneecap

toe bone

hand bone

back bone

collar bone

calf bone

hip bone

lower arm bones

thigh bone

breast bone

shin bone

ankle bone

wrist bone

foot bone

shoulder blade

EZEKIAL (CHANT)

Ezekial connected 'dem dry bones
 Ezekial connected 'dem dry bones.
 Ezekial connected 'dem dry bones
 'Dem bones 'dem bones 'dem bones

The toe bone's connected to the foot bone
 The foot bone's connected to the ankle bone
 The ankle bone's connected to the shin bone
 The shin bone's connected to the kneecap
 The kneecap's connected to the thigh bone
 The thigh bone's connected to the hip bone
 The hip bone's connected to the back bone
 The back bone's connected to the rib bone
 The rib bone's connected to the breast bone
 The breast bone's connected to the shoulder blade
 The shoulder blade's connected to the collar bone
 The collar bone's connected to the arm bone
 The arm bone's connected to the wrist bone
 The wrist bone's connected to the hand bone
 The hand bone's connected to the finger bone
 'Dem bones 'dem bones 'dem bones

Ezekial forgot about the head bone.
 Ezekial forgot about the head bone.
 Ezekial forgot about the head bone
 'Dem bones 'dem bones 'dem bones.



The head bone's connected to the jaw bone
 The jaw bone's connected to the collar bone
 The collar bone's connected to the back bone
 The back bone's connected to the hip bone
 The hip bone's connected to the thigh bone
 The thigh bone's connected to the kneecap
 The kneecap's connected to the calf bone
 The calf bone's connected to the ankle bone
 The ankle bone's connected to the foot bone
 The foot bone's connected to the toe bone
 'Dem bones 'dem bones 'dem bones.

adapted by Barbara Hall

GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 2

THEME: BODY SYSTEMS


CONCEPT: THE SKELETAL SYSTEM SUPPORTS AND PROTECTS THE BODY AND ALLOWS FOR MOVEMENT

PREPARATION: 1. Materials for activities in Student Activity 1 (materials to make a scarecrow, vinegar, bone, egg, finger splint and adhesive tape, animal or chicken carcass, shin bone from caribou or beef)
2. Prepare an overhead transparency of Activity Sheet GD73

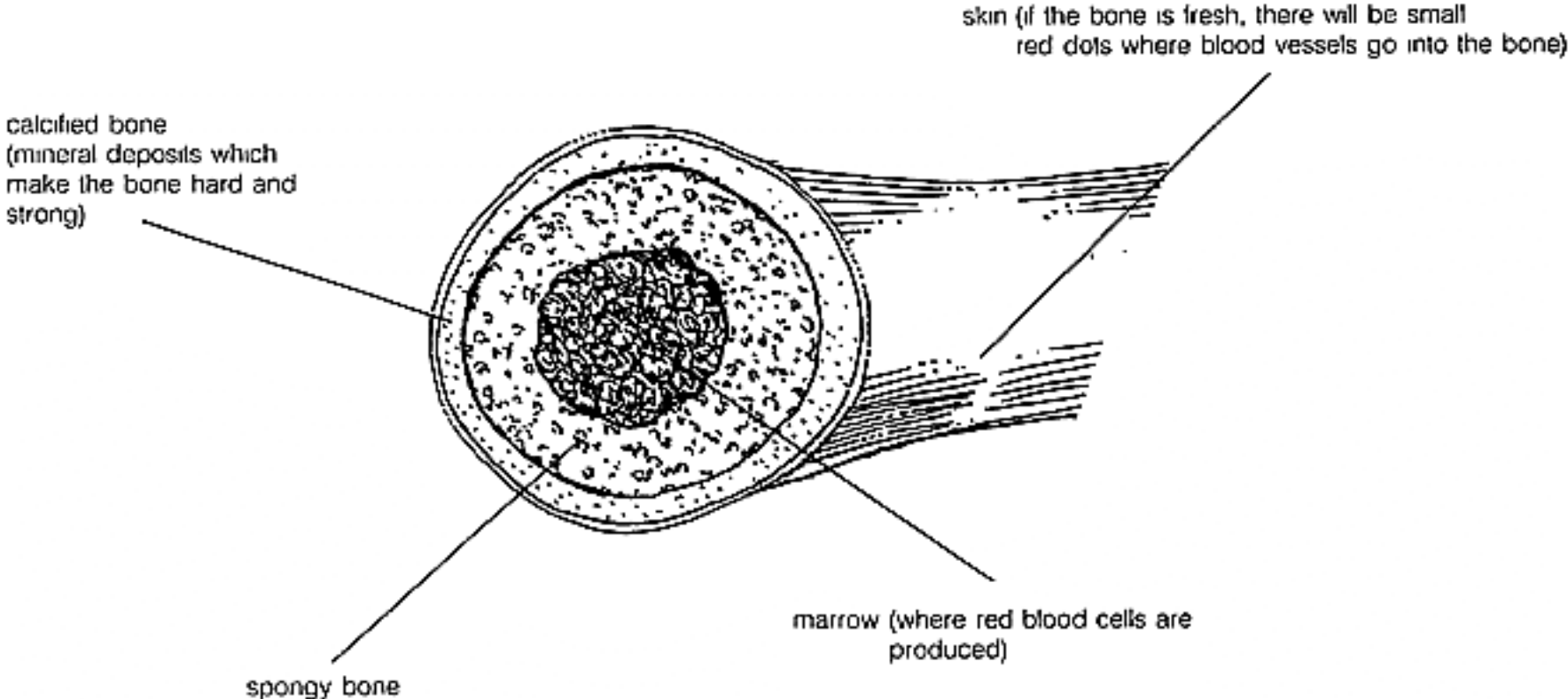
VOCABULARY: minerals, marrow, calcified

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe the functions of the skeletal system	Students: 1. Identify the functions of the skeletal system.	Background Information GD79 to GD82 Refer to Activity Sheet GD73. Use these concrete activities to illustrate the functions of the skeletal system. Function Supports body Gives it its human shape Activity 1: Make a scarecrow from wood and clothes. Remove the wooden skeleton and observe what happens to the clothes Activity 2: Soak a bone in vinegar for a few days It becomes soft and will not support the body this way (The vinegar dissolved the calcium)

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
		<p>Function: Protects vital organs</p> <p>Activity: Show a drawing of the skull and have students state that the brain is located inside. To illustrate the protective function of the skull use a raw egg to form an analogy. The skull protects the brain like an egg shell protects the egg. Break the egg to show what happens if the protection is lost.</p> <p>Function: Allows movement (at joints).</p> <p>Activity: Put a splint on the finger of a volunteer. Students will see that various bones of the skeletal system are joined in such a way as to allow movement. The splint interferes with the natural structure of the skeletal system and prevents movement.</p> <p>Function: Provides foundation for muscles.</p> <p>Activity: Obtain an animal carcass, raw chicken or piece of meat, with bones. Observe where muscles attach to bones.</p> <p>Function: Produces blood cells.</p> <p>Activity: Obtain a shin bone from a local hunter or butcher. Cut it in half to observe the structure. (Refer to Activity Sheet GD73.)</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) state the importance of the skeletal system</p>	<p>2. Write a poem describing what they would be like without bones.</p>	<p>Have students write a poem such as the following:</p> <p>Without Bones</p> <p>I'd have no shape. I'd be a blob. To get some blood. I'd have to rob. My brain might bruise. I couldn't move. Loose muscles are really hard to use.</p> <p>Barbara Hall</p> <p>Be sure they include all functions of the skeletal system in their poems.</p> 

INSIDE A BONE



GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 3




THEME: BODY SYSTEMS

CONCEPT: THE SKELETAL SYSTEM SUPPORTS AND PROTECTS THE BODY AND ALLOWS FOR MOVEMENT







PREPARATION: 1. Prepare an overhead transparency of Activity Sheets GD74 and GD75
2. Collect materials as described in Student Activity 2

VOCABULARY: joint, movable, immovable, gliding, pivot

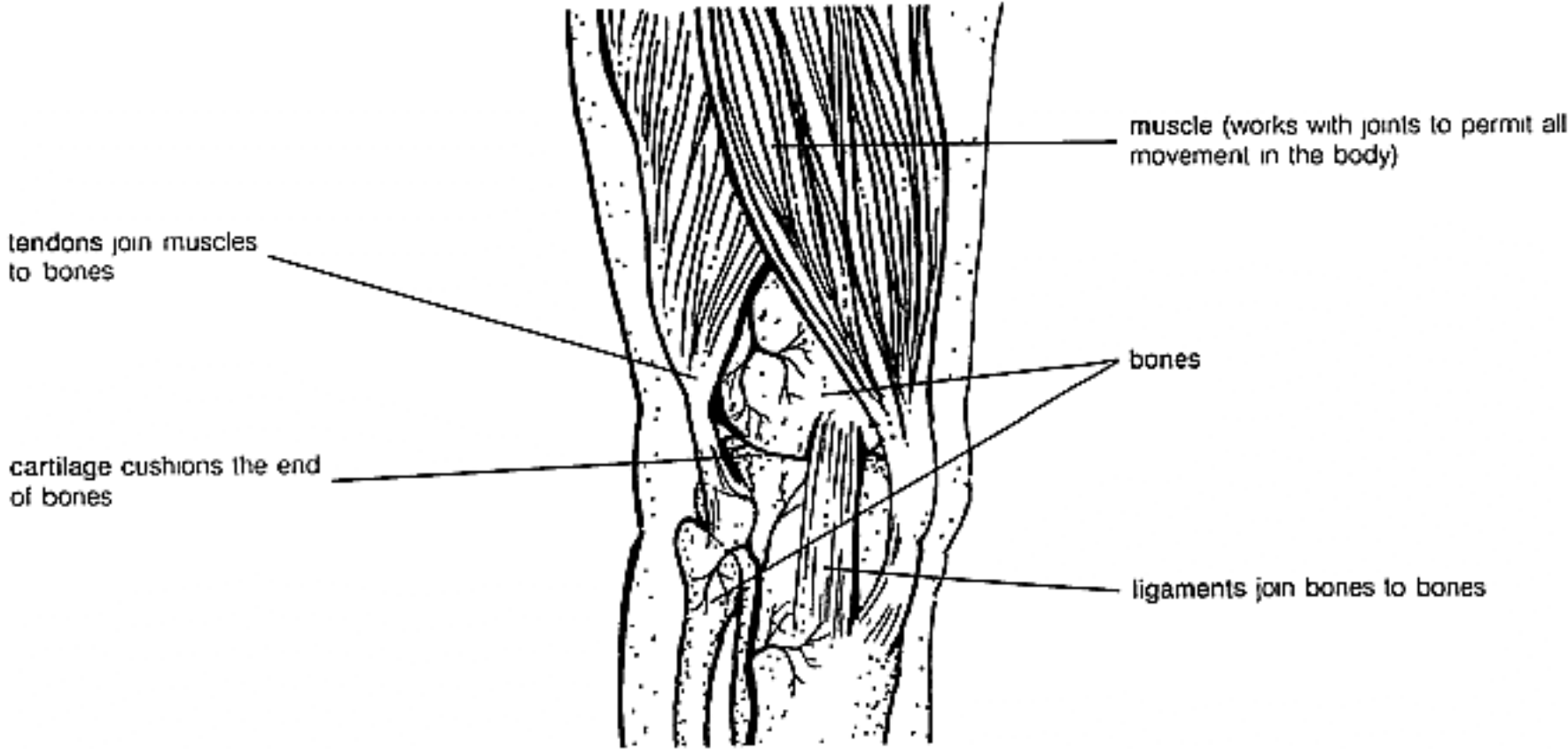
OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>Students will be able to:</p> <p>i) identify the types of skeletal joints, their locations and functions</p>	<p>Students:</p> <ol style="list-style-type: none">1. Define a joint.2. Locate various body joints and describe what they allow the body to do.	<p>Background Information GD79 to GD82</p> <p>A joint is formed where two bones meet.</p> <p>Refer to Activity Sheet GD74.</p> <p>Ask students to point to various body joints and describe what kind of movement it allows the body to do</p> <p>e.g., - bending - stretching - swivelling - pivoting - reaching - grasping/releasing - etc.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe the structures related to a movable joint</p>	<p>3. Describe structures related to a joint.</p>	<p>Using the overhead transparency, describe the types, location and function of various joints.</p> <p>Obtain as many concrete materials as possible to illustrate how these joints move.</p> <p>For example:</p> <p>Hinge joint:</p>  <p>Ball and socket:</p>  <p>Slightly movable:</p>  <p>Pivot:</p> <p>Demonstrate a basketball pivot to illustrate.</p> <p>X-rays may be available from the nursing station and can be shown on an overhead projector to illustrate the structure of various joints.</p> <p>Refer to Activity Sheet GD75.</p> <p>Ask a hunter or butcher for an animal joint. Cut the joint up. Have students examine the different structures related to the joint.</p>

MOVING AND SHAKING

Type of joint	Location	Function
gliding	wrist ankle 	movement support
immovable	skull 	protection
hinge	elbow knee finger 	opens and closes flexibility in 1 direction
ball-and-socket	hip shoulder 	the most movable type of joint moves up, down and sideways
slightly movable	spinal column 	slight movement support
pivot	neck (top of spinal column) 	movement side to side/forward and support back

STRUCTURE OF A JOINT



GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 4

THEME: BODY SYSTEMS

CONCEPT: THE SKELETAL SYSTEM SUPPORTS AND PROTECTS THE BODY AND ALLOWS FOR MOVEMENT

PREPARATION:

1. Collect props to demonstrate ways to care for the skeletal system
2. Prepare a class set of Ways to Care for the Skeletal System worksheet (Activity Sheet GD76A)
3. Prior to the class, arrange for students to visit the nursing station to see a cast being prepared

VOCABULARY: fracture, sprain, dislocate, arthritis, osteoporosis, rickets

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe common problem conditions related to the skeletal system	Students: 1. Brainstorm common problem conditions related to the skeletal system.	Background Information GD79 to GD82 Common problem conditions related to the skeletal system include: - fracture - sprain - dislocation - torn cartilage or ligament - slipped disc - rickets - arthritis - osteoporosis

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe ways to care for the skeletal system</p>	<p>2. Identify ways to care for the skeletal system.</p>	<p>Use a variety of props, activities and pictures to illustrate ways to care for the skeletal system.</p> <p>1) Follow Canada's Food Guide to ensure adequate calcium supply</p> <p>2) Wear protective equipment when playing contact sports, riding ATV's, etc.</p> <p>3) Bend knees, keep back straight when lifting heavy objects</p> <p>4) Wear shoes which fit properly</p> <p>Remind student of how the vinegar dissolved the calcium necessary for hard bones (Lesson 2, Student Activity 1).</p> <p>Show foods which supply calcium - milk, cheese, yoghurt, ice cream.</p> <p>Ask an elder in the community who remembers rickets to talk about the effect. Rickets cause people to be bow-legged.</p> <p>Show helmet, shin pads or other protective equipment. Discuss.</p> <p>Demonstrate and have students practise proper lifting techniques</p> <p>Show a pair of high heels and a pair of running shoes. Discuss which is better for the bones of the feet.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. Complete Ways To Care For The Skeletal System worksheet.</p> <p>4. Write a brief report on a common problem condition related to the skeletal system.</p>	<p>5) Exercise daily to keep bones strong</p> <p>6) Get adequate rest and sleep daily</p> <p>7) See a doctor or nurse if bone or joint injuries are suspected</p> <p>Refer to Activity Sheets GD76A and GD76B (Teacher Answer Guide).</p> <p>While at the nursing station for Student Activity 2 have the nurse demonstrate/describe the treatment of various problem conditions related to the skeletal system.</p> <p>Once back in class ask each student to write a report on one problem condition and its treatment.</p>

WAYS TO CARE FOR THE SKELETAL SYSTEM

1) A helmet is worn to _____ the skull from injury.



Give three examples of activities where protective equipment is needed.

2) Milk contains _____ which makes bones strong.



Give three examples of foods which are good sources of this mineral

3) Lift heavy objects by bending your _____ not your _____



Demonstrate proper lifting technique.

4) If shoes do not _____ bones in the feet will be cramped or will lack proper support.



Trade shoes with a classmate Do they fit properly? Why? Why not?

5) _____ makes bones and muscles stronger.



What do you do? _____

Is this enough? _____

6) _____ is the time when all body tissues, including bones repair themselves after normal wear and tear.



How many hours of this do you get? _____

Is this enough? _____

WAYS TO CARE FOR THE SKELETAL SYSTEM

(Teacher Answer Guide)

1) A helmet is worn to protect the skull from injury



Give three examples of activities where protective equipment is needed

2) Milk contains calcium which makes bones strong



Give three examples of foods which are good sources of this mineral

3) Lift heavy objects by bending your knees not your back



Demonstrate proper lifting technique.

4) If shoes do not fit properly bones in the feet will be cramped or will lack proper support.



Trade shoes with a classmate Do they fit properly? Why? Why not?

5) Exercise makes bones and muscles stronger

What do you do? _____

Is this enough? _____

6) Sleep is the time when all body tissues, including bones repair themselves after normal wear and tear.



How many hours of this do you get? _____

Is this enough? _____

GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 5

THEME: BODY SYSTEMS

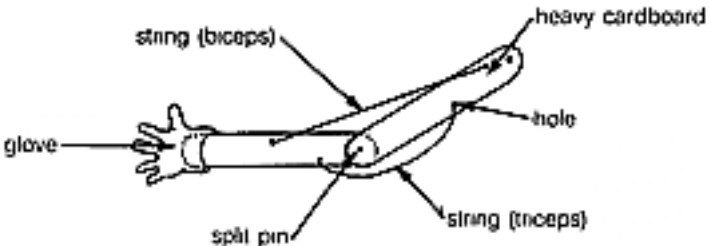
CONCEPT: THE MUSCULAR SYSTEM SUPPORTS AND PROTECTS THE BODY AND PROVIDES SHAPE

- PREPARATION:
1. Prepare an overhead transparency of Activity Sheet GD77
 2. Prepare a class set of Muscles worksheets (Activity Sheet GD78)
 3. Prepare a class set of Functions of the Muscular System (Activity Sheet GD79A - 796, Teacher Answer Guide)
 4. Materials for sample arm
-

VOCABULARY: contract. relax flexible posture pectoral biceps, triceps, gluteus maximus, quadriceps, hamstring

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: ii) name and locate the major muscle groups of the muscular system	Students: 1. Define the term 'muscle'. 2. Observe one muscle in action. 3. Name and locate the major muscle groups of the muscular system.	Background Information GD83 to GD84 A muscle is made up of cells which contract and relax to make the body move. Have students bend and stretch one arm and clench the fist. With the opposite hand, feel the action of the muscle (biceps). Ask students if they know the name of this muscle. Refer to Activity Sheet GD77. Using the overhead transparency, name and locate the major muscle groups. Explain that muscles work in teams. Every set of muscles has an opposing set of muscles to allow movement to be reversed.



OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe how the muscular system produces body movements</p>	<p>4. Name and locate the major muscle groups on their own bodies.</p> <p>5. Describe how muscle groups act on body joints to produce movement at the joints.</p>	<p>Refer to Activity Sheet GD78.</p> <p>Have students cut out the names of each muscle group and stick them on their own bodies in the appropriate locations. Check with a partner if it is the right location.</p> <p>Make a simple arm as shown.</p>  <p>The cardboard = bone string = muscles split pin = elbow joint</p> <p>Muscles can contract or relax. A contracted muscle shortens causing the joint to move. Demonstrate this by shortening the biceps string. The elbow joint closes (or flexes). To produce the opposite joint movement (or to extend the elbow) two things must happen simultaneously.</p> <ol style="list-style-type: none"> i) the triceps string must shorten (contract) ii) the biceps string must lengthen (relax) <p>(Note, that the common expression, "flex your muscle", is not physiologically correct. Joints flex and extend (close and open) while muscles simply contract or relax.)</p>

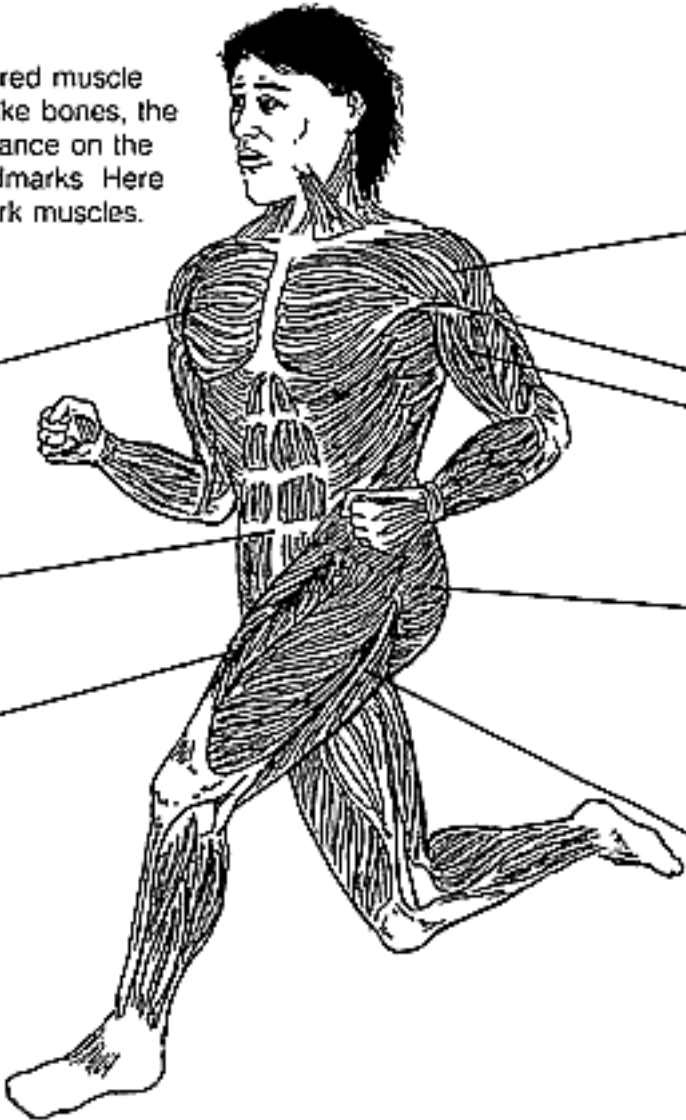
OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>iii) describe the functions and importance of the muscular system</p>	<p>7. Identify how gravity interacts with the muscular system to produce some movements.</p> <p>8. Identify the functions of the muscular system and why each is important.</p>	<p>Repeat the exercise above (trying to touch heel to bottom) in a standing position. When the knee is bent the hamstrings are contracting, quadriceps are relaxed, as before. But to straighten the knee the quadriceps do not have to contract. Gravity produces the movement as the hamstrings relax.</p> <p>Any time a body joint moves, if muscles are "let go" gravity has come into play.</p> <p>Challenge students to provide examples.</p> <ol style="list-style-type: none"> 1) Arm raised above head-Deltoid muscle is contracted. Gravity lowers arm if deltoid relaxes. 2) Sit ups with knees bent-Abdominal muscles are contracted. Gravity lowers upper body if abdominals relax. 3) Picking up a heavy object-Biceps contracted Gravity lowers the object if the biceps are relaxed (as in weight lifting). <p>Use concrete examples to help students identify the following functions of the muscular system.</p> <p>Function Protects internal organs.</p> <p>Activity Show a girdle or a picture of one from the Sears Catalogue. Ask why some women wear girdles. The girdle does some of the work of weak muscles by supporting the torso. The muscles hold internal organs in.</p> <p>Function Gives the human body its shape.</p> <p>Activity Remind students that this is also a function of the skeletal system (Lesson 2, Student Activity 1). Get them to state that while the skeleton gives us a rough human shape, the muscles give us our final definition or form as humans.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>9. Complete the Functions of the Muscular System worksheet.</p>	<p>Function: Produces body movements.</p> <p>Activity: Remind students of Student Activities 5, 6, 7, above.</p> <p>Function: Maintains posture.</p> <p>Activity: Observe various aspects of posture using student volunteers</p> <ul style="list-style-type: none"> - feet (toe in/out or parallel?) - pelvis (tilted forward?) - shoulders (slouched?) <p>Have students practise correct posture - see Teacher Background Information page GD79 and note that it may be tiring to "hold" the correct position because muscles are not accustomed to working this way.</p> <p>Function: Produces heat.</p> <p>Activity: Ask students what they could do if they were riding on a sled and got cold. Have students state that one way to warm up is to walk for a while instead of riding. This is because working muscles produce heat.</p> <p>Refer to Activity Sheets GD79A and GD79B (Teacher Answer Guide).</p> <p>Have students unscramble the words. (They describe functions of the muscular system). Then have them complete the sentences to describe functions of the muscular system.</p>

THE MUSCULAR SYSTEM

Muscle Landmarks

There are more than six hundred muscle groups in the human body. Like bones, the muscles that make an appearance on the body's surface are called landmarks. Here is a short tour of your landmark muscles.



Pectorals

Abdominals

Quadriceps
Straighten the knees
For stair climbing

Deltoids
Shoulder muscles raise the upper arm.

Triceps
Biceps
This team raises and lowers the forearm

Gluteus maximus
Contract your bottom. You can feel these very strong muscles that straighten the hip joint and hold you upright.

Hamstrings

MUSCLES

Cut out the names of each muscle group. Stick the names in the appropriate place on your own body. Check with a partner if it is the right location.

PECTORALS

ABDOMINALS

QUADRICEPS

GLUTEUS MAXIMUS

HAMSTRINGS

TRICEPS

BICEPS

DELTOID

FUNCTIONS OF THE MUSCULAR SYSTEM

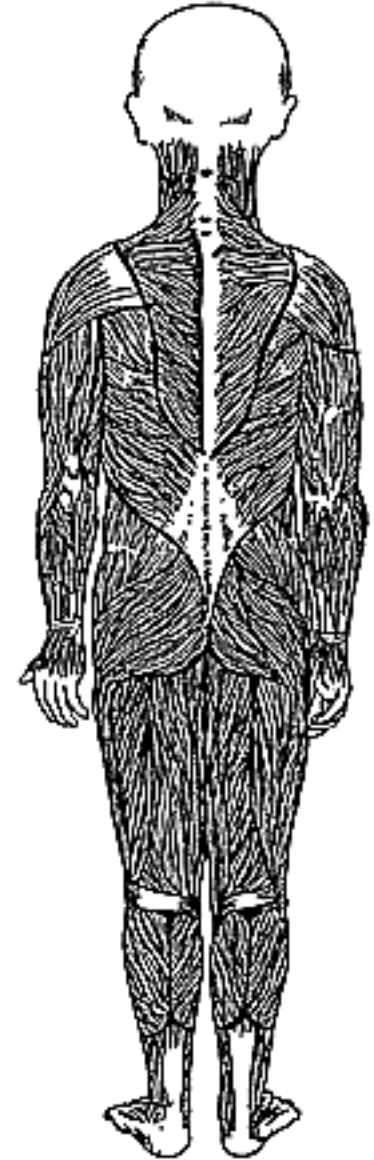


Unscramble the following clues.

- | | | | | |
|----|-----------|----------|-------|-------|
| 1 | munha | heaps | _____ | _____ |
| 2. | namatinis | spoteur | _____ | _____ |
| 3 | stoptrec | nagors | _____ | _____ |
| 4 | wallos | ventemom | _____ | _____ |
| 5. | cropduse | athe | _____ | _____ |

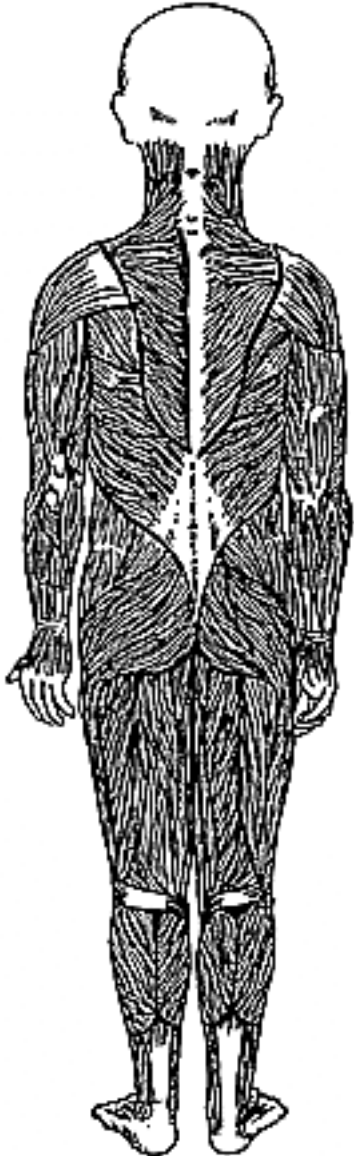
Use the clues above to describe the functions of the muscular system.
Answer in complete sentences

- | | | |
|----|---------------------|-------|
| 1 | The muscular system | _____ |
| 2 | The muscular system | _____ |
| 3. | The muscular system | _____ |
| 4. | The muscular system | _____ |
| 5 | The muscular system | _____ |



FUNCTIONS OF THE MUSCULAR SYSTEM

(Teacher Answer Guide)



Unscramble the following clues.

- | | | | |
|--------------|----------|------------------|-----------------|
| 1. munha | heaps | <u>human</u> | <u>shape</u> |
| 2. namatinis | spoteur | <u>maintains</u> | <u>posture</u> |
| 3. stoplrec | nagors | <u>protects</u> | <u>organs</u> |
| 4. wallos | ventemom | <u>allows</u> | <u>movement</u> |
| 5. cropduse | alhe | <u>produces</u> | <u>heat</u> |

Use the clues above to describe the functions of the muscular system
Answer in complete sentences

1. The muscular system gives the body its human shape
2. The muscular system maintains posture
3. The muscular system protects internal organs
4. The muscular system allows body movements
5. The muscular system produces heat

GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 6

THEME: BODY SYSTEMS

CONCEPT: THE MUSCULAR SYSTEM SUPPORTS AND PROTECTS THE BODY AND PROVIDES SHAPE

PREPARATION: 1. Collect props to illustrate ways to care for the muscular system
2. Materials for making posters

VOCABULARY: cramps splints. tendonitis, muscular dystrophy

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>Students will be able to:</p> <p>i) describe common problem conditions and injuries of the muscular system</p> <p>ii) describe ways to prevent muscle injury</p>	<p>Students:</p> <p>1. Brainstorm common problem conditions or injuries related to the muscular system.</p> <p>2. List ways to prevent muscle injury.</p>	<p>Background Information GD83 to GD84</p> <p>Common problem conditions and injuries related to the muscular system include:</p> <ul style="list-style-type: none">- muscle strains- muscle tears- cramps- shin splints- tendonitis- muscular dystrophy <p>Teachers can refer to the list of ways to care for the skeletal system (Lesson 4). There are many similarities between the two because movement is a result of muscles acting on joints.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. Design a poster illustrating ways to prevent muscle injury.</p>	<p>Use a variety of props, activities and pictures to illustrate ways to care for the muscular system.</p> <p>1) Exercise regularly Show a picture of someone exercising Muscles will shrivel up and become useless if they are not used. They become stronger if used regularly.</p> <p>2) Do a proper warm-up and cool-down before exercising This prevents injury to muscles. It activates energy stores which increase muscle temperature. A proper warm-up and cool-down ensure this is a gradual process.</p> <p>3) Get adequate rest and sleep daily Show a picture of someone sleeping. Sleep is necessary to repair all body tissues after normal daily wear and tear.</p> <p>4) Wear protective equipment when playing contact sports, riding A.T V s etc Show helmet, shin pads or other protective equipment. Discuss.</p> <p>5) Maintain proper posture when lifting, pulling, sitting, etc Demonstrate and have students practise proper posture. This reduces strain on muscles, ligaments and tendons.</p> <p>6) Follow Canada's Food Guide Good nutrition is important for building all body systems.</p> <p>Have students, individually or in pairs, design a poster of ways to prevent muscle injury.</p> <p>Display in the gym.</p>

GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 7

THEME: PHYSICAL FITNESS

CONCEPT: PHYSICAL FITNESS IS ESSENTIAL FOR OPTIMAL HEALTH

- PREPARATION:
1. Prepare an overhead transparency of Activity Sheets GD80 and GD81
 2. Light dumb-bells and heavy barbell or suitable substitute (for Student Activity 2)
 3. A copy of Fitness Rating of Common Activities (Activity Sheets GD82A, 82B - Teacher Answer Guide)
-

VOCABULARY:

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify the components of physical fitness	Students: 1. Define the term 'physical fitness'. 2. Identify the components of physical fitness.	Background Information GD85 to GD96 The exercises suggested here may be adapted for students with physical disabilities. Since physical fitness is important for the optimal health of <i>all</i> students, this section of the program must meet individual needs. Students have already learned about the various components of Physical Fitness in Grade 7 and activities which help develop these components. Physical fitness is the ability of the body to meet the demands of daily living without excessive tiredness. Refer to Activity Sheet GD80. Use the overhead transparency to help students recall the 5 components of fitness. If they are unable to do so try the following concrete activities to illustrate each fitness component. (Most of these were performed in Grade 7.)






OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) describe ways in which each fitness component can be developed	3. Give examples of activities which develop each component of fitness.	<p>a) Cardiovascular Fitness Have students participate in a short fitness activity such as skipping, jogging or stepping up and down on a bench for 5 minutes. Students should take pulse before and after the activity and after a one minute recovery.</p> <p>Good cardiovascular fitness is indicated by:</p> <ul style="list-style-type: none"> - low resting pulse - ability to exercise without pulse going too high - fast recovery rate for pulse <p>b) Muscular Endurance Obtain some light dumb-bells (6 kg maximum). Ask (a) student(s) to perform as many arm curls as possible. How many were done? (It should be a high number, perhaps 50.)</p> <p>c) Muscular Strength Obtain a heavy barbell (20 kg.) Ask (a) student(s) to perform as many arm curls as possible. How many were done? (It should be a low number, not more than 10. Use a heavier barbell if necessary.) (To prevent back strain students should stand with their backs against a wall.)</p> <p>d) Flexibility Bend knees and touch finger tips to floor Slowly, without bouncing, straighten knees as much as possible keeping fingers on floor. Or, sit cross-legged and slowly, without bouncing, bend forward trying to touch forehead to floor.</p> <p>e) Body Fat Percentage Pinch fat (loose flesh) on back of upper arm, using thumb and index finger. Compare the thickness of fat on students who look about the same weight.</p> <p>Brainstorm activities with students. Write their suggestions on the overhead GD81 in the appropriate column.</p> <p>Teachers can refer to Activity Sheets GD82A and GD82B as an answer guide.</p>

THE COMPONENTS OF PHYSICAL FITNESS

COMPONENTS	DEFINITIONS	SPORTS OR ACTIVITIES
a) cardiovascular fitness		
b) muscular endurance		
c) muscular strength		
d) flexibility		
e) body fat percentage		

THE COMPONENTS OF PHYSICAL FITNESS

(Teacher Answer Guide)

COMPONENTS	DEFINITIONS	SPORTS OR ACTIVITIES
a) cardiovascular fitness	<ul style="list-style-type: none"> - ability of heart, lungs and blood vessels to supply oxygen to body cells 	<ul style="list-style-type: none"> - bicycling - cross-country skiing - climbing stairs 
b) muscular endurance	<ul style="list-style-type: none"> - ability to perform activity over a long time period without becoming tired 	<ul style="list-style-type: none"> - backpacking/hiking - paddling a canoe - shovelling snow 
c) muscular strength	<ul style="list-style-type: none"> - ability of muscles to put out a great deal of force over a short period of time 	<ul style="list-style-type: none"> - heavy weight training - portaging a canoe - sit-ups 
d) flexibility	<ul style="list-style-type: none"> - ability to move body joints through a wide range of motion 	<ul style="list-style-type: none"> - dancing - gymnastics - putting on boots 
e) body fat percentage	<ul style="list-style-type: none"> - percent of body weight that is fat 	<ul style="list-style-type: none"> - cross-country skiing - swimming - logging 

FITNESS RATING OF COMMON ACTIVITIES

	Builds cardiovascular fitness	Builds muscle strength	Builds muscle endurance	Builds flexibility
Backpacking	Good	Good	Excellent	Fair
Badminton	Good	Poor	Fair	Fair
Basketball	Excellent	Poor	Good	Poor
Bicycling	Excellent	Fair	Good	Poor
Bowling	Poor	Poor	Poor	Poor
Ballet Dancing	Good	Good	Good	Excellent
Disco Dancing	Good	Poor	Fair	Fair
Social Dancing	Fair	Poor	Poor	Poor
Gymnastics	Fair	Excellent	Excellent	Excellent
Hiking	Good	Fair	Excellent	Fair
Jogging	Excellent	Poor	Poor	Poor
Mountain Climbing	Good	Good	Good	Poor
Rope Jumping	Excellent	Poor	Poor	Poor

	Builds cardiovascular fitness	Builds muscle strength	Builds muscle endurance	Builds flexibility
Skating	Good	Poor	Good	Fair
Cross-Country Skiing	Excellent	Fair	Excellent	Fair
Softball	Poor	Poor	Poor	Poor
Swimming	Excellent	Fair	Excellent	Fair
Tennis/Racquetball	Good	Poor	Fair	Poor
Volleyball	Fair	Fair	Poor	Poor
Walking	Good	Poor	Fair	Poor
Carrying groceries	Fair	Good	Fair	Poor
Packing a baby	Fair	Good	Fair	Poor
Doing exercises	Fair	Good	Fair	Excellent
Climbing stairs	Excellent	Fair	Poor	Poor
Doing housework	Fair	Fair	Poor	Fair
Chopping firewood	Good	Fair	Fair	Poor
Shovelling snow	Good	Good	Good	Poor
Lifting weights	Poor	Excellent	Poor	Poor

Activities which are good for cardiovascular fitness and muscular endurance tend to reduce body fat on the muscles being worked.

GROWTH AND DEVELOPMENT

GRADE: 8

LESSON: 8

THEME: PHYSICAL FITNESS

CONCEPT: PHYSICAL FITNESS IS ESSENTIAL FOR OPTIMAL HEALTH

- PREPARATION:
1. Prepare a class set of the Personal Fitness Record (Activity Sheet GD83)
 2. Materials for fitness tests (Student Activities 2 to 6) 30 cm meter stick, metronome, protractors, rulers, clock with second hand, gym mats
 3. Pretaped fitness program (Student Activity 10) - optional
-

VOCABULARY:

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) assess his/her personal physical fitness level	Students: 1. Locate and measure the pulse accurately.	Background Information GD85 to GD96 To take the pulse in the neck: <ul style="list-style-type: none">- raise chin slightly- press tips of two first fingers gently into soft flesh beside windpipe and just below chin- count for 15 seconds and multiply by 4 To take the pulse in the wrist: <ul style="list-style-type: none">- press tips of first three fingers' into groove on wrist directly in line with the thumb and a few centimeters below the base of the thumb- count for 15 seconds and multiply by 4 * Do not use the thumb. It has its own pulse and could interfere with locating the pulse in the wrist.

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

The Test:

Students work with a partner and record results on Activity Sheet GD83.

1. Upper Arm and Chest (Push-ups)


- a) Push-ups done from the knees are easiest.
- b) Push-ups done from the feet are harder " Keep body straight from hips to head.
- c) Repeat for 30 seconds. The partner counts the number of push-ups completed and records.



2. Abdomen (Sit-ups)

- a) One student lies on his/her back on a gym mat, knees bent, hands under head.
- b) The student partially sits up by curling up, head first, then shoulders, then back, keeping knees bent throughout S/he then lies down, reversing the procedure.
- c) Repeat for 30 seconds. The partner counts the number of sit-ups completed and records.



OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>5. Estimate body fat.</p>	<p>3. Front Thigh (Knee bends)</p> <ul style="list-style-type: none"> a) One student stands with feet shoulder width apart, and parallel to each other. b) The knees are bent until the upper thigh is parallel to the floor and then straightened. (The arms can be swung forward on the knee bend to act as a counter-balance.) c) Repeat for 30 seconds. The partner counts the number of knee bends completed and records. <div style="text-align: center;">  </div> <p>The percentage of body weight accounted for by fat should be about 13% for men and 18% for women. A person who gets very little exercise can be overfat without being overweight. A person with very low fat percentage will weigh more than someone who <i>looks</i> the same weight (but who has more fat) because muscle is denser than fat.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>6. Measure the muscular strength component.</p>	<p>The Test: Students work with a partner and record results on Activity Sheet GD83.</p> <p>a) Expand chest. Have partner measure it just below armpits.</p> <p>b) Relax stomach. Measure at navel. Chest _____ cm.</p> <p>Waist _____ cm.</p> <p>Male If difference is less than 12 cm then you are probably too fat.</p> <p>Female If the difference is less than 25 cm , then you are probably too fat.</p> <p>Muscular strength is the ability of a muscle to exert its maximum force very few times. Someone training for muscle strength will lift the maximum weight only 2 or 3 times. Excessive weight training causes muscles to develop bulk. While the average person needs moderate muscular strength few people want or need to develop maximum strength.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe the structure of a well-planned physical fitness program</p>	<p>7. Explain how a well-planned fitness program should be structured.</p>	<p>The Test:</p> <p>Students work with a partner and record results on Activity Sheet GD83.</p> <ol style="list-style-type: none"> 1. Front Thigh (Wall Sit) <ol style="list-style-type: none"> a) One student stands with back against a wall, and then slides down to a sitting position, i.e., hips at 90° and knees at 90°. b) The partner times the number of seconds the student can hold this position without slipping, and records. <p>Some of this material may be too in-depth for the students in your class. It is important for students to understand enough about a well-planned fitness program to know why they are doing certain things when they actually participate in a fitness program (objective iii).</p> <p>A well-planned fitness program follows the F.I.T. principle.</p> <p>F = Frequency Workout 3 times a week</p> <p>I = Intensity Get your heart rate into the target zone</p> <p>T = Time Keep it there for 15-20 minutes</p> <p>* See Student Activity 8.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>8. Calculate their target heart rate zone.</p> <p>9. Identify the components of a well planned workout.</p>	<p>The upper limit of an individual's heart rate zone is.</p> <p>$200 \text{ minus the person's age}$</p> <p>The lower limit is:</p> <p>$170 \text{ minus the person's age}$</p> <p>Therefore a 13 year old's target rate zone is between 157 and 187 beats per minute. According to the F.I.T. principle a 13 year old needs to exercise vigorously enough to get his/her heart rate into the target zone and keep it there for 15-20 minutes, three times a week.</p> <p>A workout is one session and needs to be repeated three times a week in order to constitute a well-planned fitness program. A workout consists of:</p> <p>Warm up (10 min) - walking, stretching and other light exercise to prepare the body for more strenuous activities to follow</p> <p>Aerobics (15-20 min) - exercises such as skipping, jogging, or others which push the heart rate into the target zone, thus developing the cardiovascular component of fitness</p> <p>Calisthenics (10 min) - exercises to develop muscular endurance of specific muscle groups (e g , arms, abdomen)</p> <p>Cool down (5-10 min) - stretching and relaxation exercises to improve flexibility and prevent muscle stiffness.</p>

PERSONAL FITNESS RECORD

Name: _____ Date of Initial Test _____
 Test _____ Date of Retest: _____

Cardiovascular Fitness

Heart Rate (per minute)	Initial Test	After 1 month of exercise
Lying down		
Resting		
After 3 minutes of jogging		
After 1 minute recovery		

Flexibility

	Initial Test	After 1 month of exercise
Lower Back _____ cm.		
Arm and Shoulder Reach _____ cm.		

Muscular Endurance

GD83

Number done in 30 seconds	Initial Test	After 1 month of exercise
Push-ups		
Sit-ups		
Knee Bends		

Body Fat

Difference between chest and waist measurement	Initial Test	After 1 month of exercise
Chest		
Waist		
Difference		

Muscular Strength

	Initial Test	After 1 month of exercise
Number of seconds wall sit held		

GRADE 8

TEACHER BACKGROUND INFORMATION

GROWTH AND DEVELOPMENT

THE SKELETAL SYSTEM

The 206 bones of the skeletal system form a framework for support, protection and movement of the body. Bones also produce blood cells and store calcium and phosphorus.

Bones can be classified into four types:

- **long bones**, primarily located in the arms and legs;
- **short bones**, irregularly shaped and found in the hands and feet;
- **flat bones**, forming the broad surfaces of protection found in the skull;
- and the remaining bones classified as **irregular** because of their shape. For example, the bones of the vertebrae or backbone are irregular.

The **skull** is made up of twenty-two bones that are fused together prior to adulthood. Its primary function is to protect the brain and sense organs. Thirty-three vertebrae make up the **spinal column**. These bones provide a pivot for support and movement of the head, protect the spinal cord and allow trunk rotation and flexion. The **rib cage**, or **thorax**, consists of the sternum, or breast bone, twelve pairs of ribs and part of the vertebral column. It protects the heart and lungs.

Twenty-five percent of bone is water. The rest is mainly composed of the mineral calcium and the protein collagen, which protect the bone against compression and tension. Bone tissue is permeated by blood vessels, lymph vessels and nerves.

Joints are where two bones join and are kept together by strong connective tissues called **ligaments**. **Muscles** are attached to the bones at the joints by strong cords called **tendons**. A **sprain** is an injury to the joint in which the ligaments and tendons may be damaged. A **dislocation** is the displacement of a bone in a joint.

Joints vary in the amount of movement they allow and are classified as **immovable**, **slightly movable** and **freely movable**. An example of an immovable joint is the skull where bones have fused together. Each vertebrae in the spine is cushioned by a cartilaginous disc which limits movement and makes it a slightly movable joint. A **hinge** joint is a type of freely movable joint and found at the knee and elbow. Another type of a freely

movable joint is the **ball-and-socket** joint found at the hip and shoulder. The range of motion at any joint is dependent on its bone structure, the amount of muscle bulk at the joint and the elasticity of the muscles, tendons and ligaments. Flexibility exercises improve elasticity of joint connective tissues and can increase its range of motion. Bone structure cannot be changed and therefore greatly determines the movement at a joint. For example, movement at the knee is limited to a forward/backward motion because of the joint structure. The shoulder joint, on the other hand, allows movement in all directions because of its ball and socket structure.

Posture

There is no single best posture for all individuals. Each person must take the body he or she has and make the best of it. For each individual, the best posture is that in which the body segments are balanced in the position of least strain and maximum support. This is an individual matter. Correct posture is important for three major reasons:

1. It affects the function of the organic systems. Posture which in any way restricts circulation, respiration, digestion and elimination is not correct.
2. It reduces strain on muscles, ligaments and tendons. An individual's posture is correct when the body has good balance and alignment, and the skeletal system is the main support for internal organs so that minimal muscle effort is required.
3. It increases the attractiveness of an individual. In addition to contributing to the attractiveness of an individual, posture may well influence a person's concept of himself, and how others view him. Therefore, posture has important psychological implications.

Faulty posture can be the result of one or a combination of reasons. The eight most common are injury, disease, heredity, poor nutrition, poor habits, muscular or nervous weakness, mental attitudes, and improper clothing.

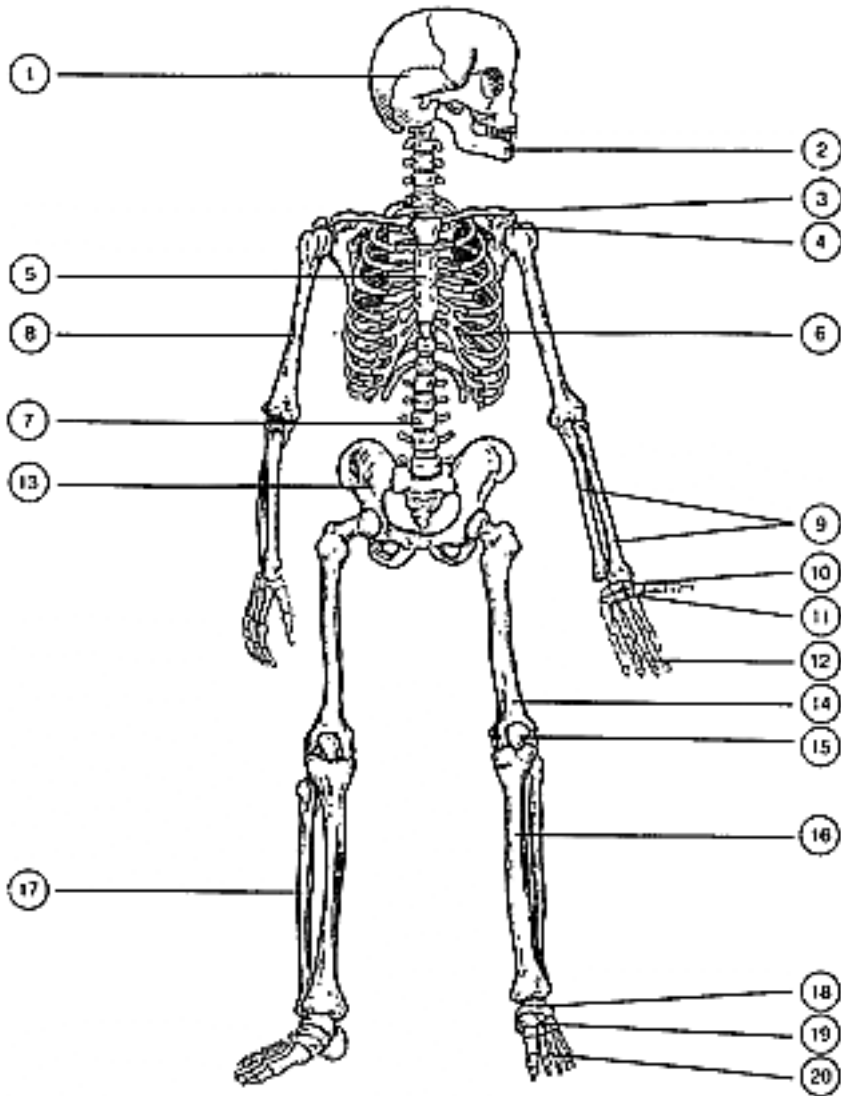
Whatever the cause or causes, the body will quickly adapt itself to faulty posture, and the positions will feel normal and correct. Muscles will shorten or stretch to accommodate incorrect alignment, and after a long period of time, especially in the case of growing children, bone structure may.

also change. As a result, prolonged poor posture is very difficult to change without systematic training. Certain muscles will have to regain strength and flexibility, while others will have to be stretched before they allow the skeletal system to return to its proper alignment. Often if one segment of the skeletal system has a postural fault, another part of the system will have to compensate. Therefore, there will be more than one fault in the posture.

If one is attempting to correct postural faults in another individual, the following 5 steps provide a helpful guide for change.

1. Correctly identify the postural deviation and inform the individual of its nature and the importance of correcting it.
2. Attempt to identify the basic causes of the deviation, and control the causes.
3. Motivate the individual to want to correct the deviation - if he/she is not motivated, corrective exercises alone probably will fail.
4. Prescribe an exercise program designed to correct the condition, or consult a doctor.
5. Regularly evaluate the effects of the program.

HUMAN SKELETON



1. Head bone (skull)
2. Jaw bone (mandible)
3. Collar bone (clavicle)
4. Shoulder blade
5. Breast bone
6. Rib
7. Spine (back bone)
8. Upper arm bone
9. Lower arm bones
10. Wrist bone
11. Hand bone
12. Finger bone
13. Hip bone (pelvis)
14. Thigh bone
15. Kneecap
16. Shin bone
17. Calf bone (fibula)
18. Ankle bone
19. Foot bone
20. Toe bone

COMMON PROBLEMS AND INJURIES OF THE SKELETAL SYSTEM

Problem	Cause	Brief Description
fracture	<ul style="list-style-type: none"> - accident 	<p>There are 3 kinds of breaks in bones:</p> <ul style="list-style-type: none"> - Greenstick fractures - partial fractures common in children - Simple fractures - bones break in two but ends do not pierce the skin - Compound fractures - bones break through the skin and are exposed to germs
sprain	<ul style="list-style-type: none"> - ligaments or tendons are overstretched - unexpected twist - accident 	<ul style="list-style-type: none"> - injury of a joint when ligaments and tendons are overstretched - swelling and internal bleeding
dislocation	<ul style="list-style-type: none"> - accident - ligaments are stretched or torn 	<ul style="list-style-type: none"> - injury causing the ends of bones to be pulled out of the joint and ligaments are severely stretched or torn
torn cartilage	<ul style="list-style-type: none"> - a blow 	<ul style="list-style-type: none"> - damage to the cartilage due to a blow - swelling and often loss of free movement
ruptured (slipped) disc	<ul style="list-style-type: none"> - injury - accident 	<ul style="list-style-type: none"> - the cartilage disc between two vertebrae slips out - pressure on a nerve will cause pain and numbness
arthritis	<ul style="list-style-type: none"> - unknown - possible faulty immune system 	<ul style="list-style-type: none"> - swelling and puffiness of tissues in and around joints with stiffness - permanent damage and disability may occur
scoliosis	<ul style="list-style-type: none"> - curvature of the spine 	<ul style="list-style-type: none"> - usually begins in adolescence - uneven shoulder, hip, waistline may show signs of scoliosis
osteoporosis	<ul style="list-style-type: none"> - gradual loss of calcium from bones - factors may include diet, lack of exercise, heredity, race, sex 	<ul style="list-style-type: none"> - usually occurs in older women - makes bones brittle and prone to breaking - can also result in chronic back pain, loss of height and hip fractures - treatment and prevention include an adequate calcium intake and physical activity

THE MUSCULAR SYSTEM

Man's muscles enable him to move, work, play, talk, see, hear and escape from danger. They help determine his size, shape, weight and general appearance. They protect his vital organs and help propel food materials, excretions, blood and other body fluids from place to place within his body.

Excitability means that the muscle is able to receive and respond to stimuli. This stimulus is usually supplied by the central nervous system.

Contractibility means that, as a result of stimuli, the muscle can shorten and thicken.

Extensibility means that the muscle can be stretched beyond its normal length.

Elasticity means that a muscle readily returns to its resting length when the stretching force is eliminated.

The human body is composed of three different types of muscle tissues, cardiac, smooth and skeletal. Each of these muscle types are different in both function and purpose.

Cardiac Muscle Tissue

Cardiac muscle, as its name suggests, forms the walls and partitions of the heart. Like all muscle tissue it is composed of fibres or cells.

Cardiac muscle is an involuntary muscle so we have no mental control over it. This type of muscle contracts rhythmically from stimuli from within the heart muscle itself. The heart muscle fibres appear to be interwoven, although they aren't, and when an impulse is received, all fibres in that section contract and move together as a single unit. The heart muscle has two sections, one forming the walls and the system of the atria and the other forming the walls and systems of the ventricles.

Smooth Muscle Tissue

Smooth muscle tissue is located in the walls of internal organs other than the heart. Like cardiac muscle, it is under the control of the automatic nervous system and individuals have no control over its function. In other words, it is an involuntary muscle. It is characterized by non-striated muscle fibres, which are slender and tapered at each end. The cells are smaller than those found in most skeletal muscles, and each cell has only one nucleus.

Skeletal Muscle Tissue

There are over 425 named skeletal muscles in the body, most of which appear in pairs on the right and left side of the body. In that these muscles attach to the skeleton, their function is one of maintaining posture and initiating movement. Most of these muscles are under voluntary control - they move because the body tells them to via the central nervous system.

Skeletal muscle is made of striated fibres, varying greatly in length, with more than one nucleus. Muscles are a mixture of red and white fibres.

Finally, rapid movements are performed by muscles in which white cells predominate and slow sustained movements are performed by muscles in which red cells predominate. Fibres are banded together to form muscles. The thick part of the muscle which expands and contracts is called the "belly". It narrows at either end and attaches to the skeleton by means of one or more thick, nonelastic bands called tendons.

Source: Harvey D. and White D. (ed.), "Body Systems and Physical Fitness", Health Education Methods Project for Elementary School Teachers. Ottawa, Ont.: Health and Welfare Canada, 1983.

COMMON PROBLEMS AND INJURIES OF THE MUSCULAR SYSTEM

Problem	Cause	Brief Description
muscle cramp	<ul style="list-style-type: none"> - improper warmup - improper clothing - muscle overwork 	<ul style="list-style-type: none"> - prolonged muscle contraction - treatment includes massage then slowly stretch the muscle, release and repeat, apply heat after cramping has stopped
muscular dystrophy	<ul style="list-style-type: none"> - genetic 	<ul style="list-style-type: none"> - destruction of muscle fibres with loss of control and movement - death occurs when heart muscles fail - treatment includes medical management but no known cure
muscle strain	<ul style="list-style-type: none"> - improper warmup - improper clothing - improper lifting 	<ul style="list-style-type: none"> - muscles overworked (stretched) - muscle fibres torn with pain - treatment includes light exercise, apply ice then heat, rest
muscle tear (sprain)	<ul style="list-style-type: none"> - improper warmup - improper clothing - improper lifting - inappropriate muscle load 	<ul style="list-style-type: none"> - muscles stressed and large fibres are pulled or torn from the bone, with a snap and sharp pain - blood vessels are broken - swelling - treatment includes apply pressure, elevate injury, apply cold then heat, then rest, seek medical attention
shin splints	<ul style="list-style-type: none"> - too rapid warmup - improper clothing - improper jogging techniques and equipment 	<ul style="list-style-type: none"> - stiff, sore areas along inside or outside of shin bones above the ankle - treatment includes rest, apply heat, seek medical attention
tendonitis	<ul style="list-style-type: none"> - overwork or accident 	<ul style="list-style-type: none"> - irritated and swollen tendon - slow to heal - treatment rest

FITNESS

Physical fitness can be defined as the capability of the heart, lungs, blood vessels and muscles to function at optimal efficiency. This refers to the condition of the body needed to meet the demands of daily living, both for work and recreation. A person should be able to undertake his/her daily tasks without undue tiredness. Health components of fitness include:

- cardiovascular fitness
- muscular endurance
- muscular strength
- flexibility
- body fat percentage

Factors such as speed, balance, agility, power and co-ordination are motor ability components which contribute to the efficiency of movement during skill performance. While development of all these components is important for total fitness, the N.W.T. School Health Program focuses on the health components of physical fitness leaving skill development to be addressed as part of the Physical Education program.

Cardiovascular fitness, the most essential fitness component, refers to the body's ability to continue in strenuous tasks for long periods of time.

A person's life depends on the capacity of the heart, blood vessels and lungs to deliver oxygen and nutrients to body tissues and to remove waste products. Cardiovascular exercise makes the heart and lungs work harder in order to supply the working muscles with oxygen. This kind of activity is often called **aerobics**, which simply means "requiring oxygen". Examples of aerobic activities include swimming, jogging, racquet sports, cross-country skiing and cycling (those exercises which involve large muscle groups). For aerobic exercise to be of value to the cardiovascular system, moderate to strenuous activity should be sustained for at least 15-20 minutes on a regular basis of 3 times per week. (This is the F.I.T. principle described in Lesson 8, Student Activity 7.) Strenuous activities are those exercises which involve large muscle groups such as arms, legs and torso and raise the resting heart rate to **about** 150 beats per minute (See Lesson 8, Student Activity 8.)

Muscular strength is the force that a muscle can exert against a resistance in **one** maximal effort. Strength is necessary for good posture, many daily work tasks and recreational activities. For example, muscular strength is required to swing a tennis racquet, lift a box of books or throw a ball. Strength is developed by **isometric** and **isotonic** kinds of exercise. In **isometric** exercise, muscle groups work against each other or against an object that cannot be moved. For example, pressing the palms of the hands together and holding the contraction is an isometric exercise for arm strength. **Isotonic** exercise refers to the contraction of muscles against a moving resistance. Calisthenics and weight lifting involve isotonic contractions, muscles contract and relax. The dynamic movement of isotonic exercise is considered more beneficial in developing strength because the muscles move through a full range of motion. The development of strength results from an increase in the thickness of muscle fibres, rather than from an increase in the number of fibres. This increase in fibre thickness is called hypertrophy and occurs when the muscle is progressively overloaded. The overload principle means that a muscle works against a greater-than-normal resistance. As strength improves, the amount of resistance can be increased.

True muscular strength training involves using the maximum weight or resistance possible so that an exercise can only be repeated two or three times – i.e., lifting a very heavy weight. As strength improves, the resistance is increased but the number of repetitions of the exercise remains very low.

While "the average person" needs to develop some muscular strength, muscular endurance is generally the focus.

Muscular endurance is the ability of a muscle to work continually over a period of time. It is required in everyday activities such as shovelling snow, climbing stairs and washing windows. Backpacking, fogging and rope jumping all require muscular endurance. Exercises such as sit-ups, push-ups, chin-ups and weight-training performed using the overload principle will develop muscular endurance.

Training for muscular endurance involves selecting a weight or resistance such that a given exercise can be repeated about twenty times before the muscle becomes tired. As fitness improves, either the weight, the number of repetitions, or both can be increased. It is this type of muscular fitness training which most people choose/need to develop. While strength does improve, the focus is on endurance which tones the muscle and reduces fat, but does not add muscle bulk.

Flexibility is the ability of the joints and muscles to move through a full range of motion. The degree of elasticity in muscles and ligaments differs among people and also between joints in the body. Maintaining good flexibility is important to prevent muscle injury and soreness, as well as to enable ease of movement in many activities. Slow, controlled stretching of muscles, as is found in Yoga, is the best method of improving flexibility. It is also important prior to other activities because it warms the muscles and increases the blood supply.

Body fat percentage refers to the percentage of a person's total body weight which is represented by fat. In women, this should be about 18%, while in men, it should be about 13%. It is possible to be overfat without being overweight. A person who gets insufficient exercise will not necessarily be overweight (according to the scales) but may well carry excess fat deposited on top of the unused muscles. Regular exercise which increases blood circulation to working muscles will "burn off" some of the fat. While this rarely translates into a weight loss, since muscles are developing while fat is diminishing, it will mean a person looks slimmer and is less prone to fatigue.

Aerobic exercises and muscular endurance exercises (i.e., those activities requiring a muscle group to perform the same exercise many, many times) are effective in reducing the amount of fat deposited on top of the muscles being worked.

A balanced fitness program does not necessarily mean a fitness class or "gym-style" workout. However, it does mean addressing all five components of fitness, paying particular attention to cardiovascular fitness, and to personal weaknesses and needs. Playing a sport rarely, if ever, addresses all components. (Tennis only uses one arm! Volleyball does not provide enough continuous aerobic exercise, etc., etc.) This is not to imply that playing tennis or volleyball are not good forms of exercise or a good way to improve physical fitness. They are excellent as long as they are supplemented with appropriate other activities.

It is important to note that many exercises address more than one component of fitness. Jogging for example would increase cardiovascular fitness, muscular endurance in the legs, especially calf and thigh muscles, and reduce fat deposits on those same muscles. A fitness class, or individual program designed by a qualified instructor, would ensure a balanced fitness program designed to meet the needs and interests of its participants.

The benefits of fitness to health are many:

- better resistance to illness, stress and tension;
- more energy, less chronic fatigue;
- better weight control;
- increased metabolism or burning up of calories;
- better digestion;
- stronger muscles, better posture;
- reduced risk of coronary heart disease;
- increased capacity of the blood to carry oxygen;
- increased capacity of the lungs to take oxygen.

The increased lung capacity causes a stronger pumping action of the heart and lowers the resting heart rate, thus decreasing blood pressure.

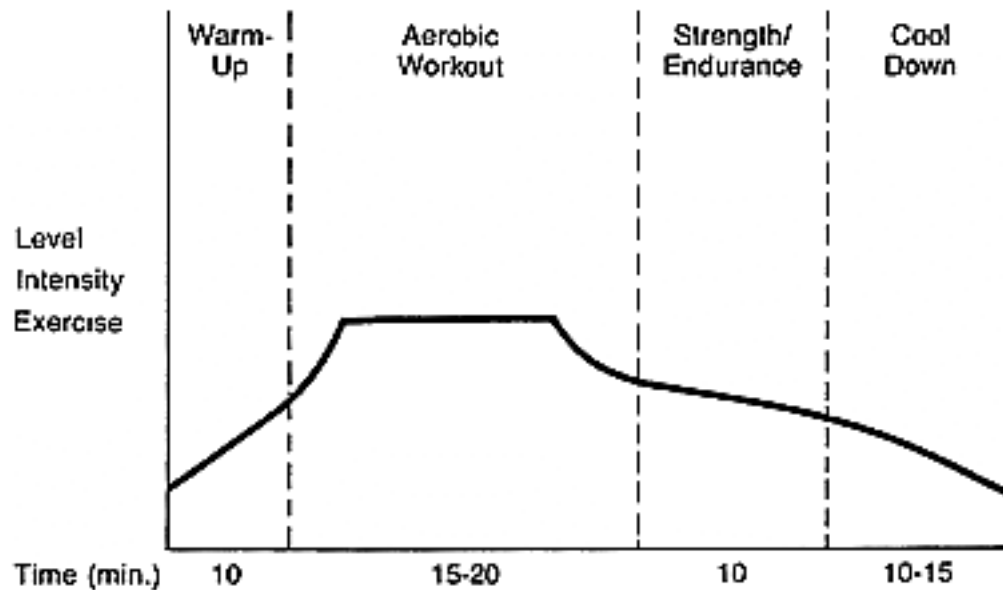
Source: Harvey, D. and White, D. (ed.), "Body Systems and Physical Fitness", Health Education Methods Project for Elementary School Teachers, and Barbara Hall, B.P.H.E., Department of Education, GNWT, Yellowknife

PHYSIOLOGY OF EXERCISE

General Rules for Fitness Prescription

- Begin gradually. Too much too soon can cause sore muscles.
 - Do not overdo. The level of intensity should depend on the individual's goals (fun vs. conditioning vs. competition). Too high an intensity too soon is not desirable. The end product, fatigue, increases the participant's chances of incurring an injury.
 - Exercises should be performed at a pace which allows correct execution. Variation in the form could alter or reduce the effectiveness of the exercise.
 - For execution of exercises, use muscle force instead of momentum. For example, standing leg lifts should be performed by lifting and lowering the leg not by swinging it.
 - Exercises should be performed through a full range of motion.
 - Consideration must be given to any existing musculo-skeletal problems. Any exercises that may potentially aggravate the situation should be avoided. Alternatives should be provided.
 - The activity program should be appropriate to the individual's training goals and lifestyle. It must provide some positive reinforcement or it will be discontinued.
 - Everyone has a limit In terms of physical abilities, each person has a ceding on their optimal performance. This factor exerts a greater influence on those in an intensive training program.
 - Frequency of training workouts should be a minimum of 3 times a week and a maximum of 5 times a week. Some activities may be engaged in more frequently. However, intensity and fitness base will serve as a guideline.
 - Do not work through pain. Exercise will involve a certain amount of fatigue and may produce some discomfort, but should not produce pain. If that is the case, the program content, intensity, and duration should be reviewed.
 - A proper program progression moves from the least intense to the most intense back to the least intense components.
 - How the individual feels and the heart rate response serve as guidelines for the intensity Initially the participants should be monitored closely until they are confident of their workout.
 - All programs should start with a warm-up that relates to the workout activity. A general conditioning program should begin with gross motor activity, stretching exercises, then light aerobics. Total time should be a minimum of 10 minutes (more on this in the next section).
 - The workout of a general conditioning program should consist of a minimum of 15-20 minutes of aerobics plus muscular strength and endurance work.
 - Beginners should start their aerobic work at a low intensity and minimum duration. Once adaptation occurs, overload can be reapplied, preferably one variable at a time.
 - A short cool down of light aerobic work should always follow the strenuous aerobic work.
 - Cool down should be a minimum of 10 minutes, time dependent upon intensity of exercise and fitness level of the participants.
- Proper application of the principles outlined is necessary to guarantee safety as well as improvements.

The Basic Activity Sessions



A) The Warm-Up

Safety begins with the content of the actual exercise class. The initial phase, the warm-up, prepares the body for the more strenuous activity to follow. With regards to safety, a proper warm-up may:

- prevent injury to the muscle
- reduce the risk of subsequent muscle soreness
- help prevent cardiovascular problems in a cardiac "at-risk" population

The purpose of the warm-up is to prepare the body physiologically for the more strenuous activity which is to follow. It has been shown to stimulate hormones, increase core temperatures and activate muscle energy stores (Berger, 1982). Combined, these reactions facilitate an easy transition into the workout. Although some research shows no significant improvement in performance, most would agree that a warm-up is

beneficial. In a coronary prone population and for those engaging in explosive events, this phase is crucial.

Since the warm-up is a preparatory phase, it should relate to the main task. For example, the baseball pitcher, throwing warm-up pitches, is obviously selecting a different warm-up from the skating drills used by hockey players.

For a conditioning program, a general warm-up should start with gross motor activities (for example, walking, side-stepping, arm circles). Basic gross motor activities produce a slight rise in internal tissue temperature which enhances the flexibility component. The warm-up should then move into static stretching (no bouncing), then into a lower intensity version of the workout. By gradually increasing the intensity, the body systems have time to adjust to the heavier demands.

The energy production causes a rise in body and muscle tissue temperature which in turn increases:

- (a) "Enzyme activity - This will affect the metabolic reactions associated with the energy systems.
- (b) Blood flow and oxygen availability - The implication of this is improved energy production.
- (c) Contraction and reflex time - Improved efficiency of muscular movements affects the quality of performance." (Mathews & Fox, 1976, p 245)

The intensity and duration of each component in the warm-up will depend upon the fitness level of the group and the rigors of the workout. Time spent on stretching exercises will depend upon group characteristics:

Class needs - For example, if a participant has a lower back problem or is very inflexible, more time may be spent on the significant muscle groups.

Class interests - The minimal total time of a warm-up is 10-15 minutes (Pollock, 1978). However, if the group enjoys this aspect of the workout, and there is time available, the duration may be increased without compromising the workout.

Program design - The purpose of the training program will influence the composition of the flexibility component. A gymnast or volleyball player will require a greater emphasis on stretching than a baseball player or a jogger.

Stretching exercises should follow a logical sequence for example, head to toe, toe to head. A systematic approach guarantees that all major muscle groups are involved and improves the participants' recall of the pattern.

Although a pulse check will determine an adequate warm-up, reference to how the individual feels can serve as another guideline. This encourages the participant to draw a parallel from how they feel to the physiological heart rate response.

B) The Workout

With adequate warm-up, an individual should experience a gradual increase in heart rate, easing into the target heart range. Precautionary pulse checks can be made during the workout to guard against too high or too low an intensity. Once the person has developed a regular routine and is familiar with his/her 'moderately hard' pace, the number of heart rate checks may be reduced.

Beginners should start at the low end of the range and workout for the minimum amount of time. Once adaptation has occurred, overload may be applied by increasing the intensity or duration. Increasing both variables at once should be done with caution as it might create too much physical stress for the novice.

A minimum of 15-20 minutes of the workout should be devoted to the aerobics component in the target heart rate zone (American College of Sports Medicine, 1978) (refer to Exercise Intensity Guide). Following the 'moderately-hard' intensity aerobic workout, a light aerobic cool down is necessary before starting muscular endurance activities; for example, a slow jog to a walk, swinging the arms to increase circulation to all body parts. This will ensure a lower intensity level and discourage lightheadedness or dizziness.

Muscular strength and endurance exercises should include all major muscle groups. Time should be allocated, allowing proper time for the other portions of the session. (Refer to muscular strength and muscular endurance - Components of Fitness prescription).

C) The Cool Down

Just as the heart rate had been gradually increased during the warm-up, it should be gradually reduced during the cool down. The objective is to make the transition from the high intensity activity gradually down to the least intensive activity (e.g., running to fogging to walking) by employing lighter forms of the aerobic or gross motor activities. Failure to do so could result in blood pooling in the active muscles. This could lead to muscle stiffness, thought to be caused by increased levels of lactic acid and can lead to dizziness, possibly due to reduced venous return.

The cool down is the optimum time to improve flexibility. Research supports low intensity stretching at elevated internal temperatures for permanent lengthening of the connective tissue (Sapega et al, 1981). Stretching should be done for all major muscle groups. If time is limited, emphasis should be placed on the principal muscle groups involved in the workout.

A cool down becomes the body's opportunity to relax from its active exercise state. Waste products resulting from metabolism must be removed. The massaging action of the muscles during exercise improves this removal of wastes from the area and augments venous return. Failure to cool down disrupts the massaging action and causes pooling of blood in the formerly active muscles. These factors provoke subsequent muscle soreness and may contribute to dizziness.

Do's and Don'ts of Exercise

- Do not bounce when stretching

A sudden force applied to a muscle invokes a stretch reflex within the contracting muscle. Therefore, bouncing, which induces this response, applies a force against a muscle trying to contract. The outcome can range from muscle soreness to serious muscle injuries.

- Do not exercise if you feel ill

The illness could elicit additional fatigue, which increases the risk of injury. Others may be susceptible and also become ill. Take the time off to properly recover.

- Do not exercise immediately following a meal

Allow at least 2-3 hours for digestion before getting actively involved. Food such as fat and meat are slow to digest needing about 3-4 hours. On the other hand, carbohydrates may be eaten up to 2 hours prior to the activity. Eating too soon before exercise could detract from performance and cause muscle cramps.

* For persons with diabetes, exercising just after a meal (1/2 to 1 hour) helps to control the rise in blood sugar which normally occurs at that time and reduces the possibility of low blood sugar.

- Do not continue to exercise if there is pain

Although it is not easy to differentiate, discomfort as a result of exercise is not the same as pain. Pain should be a signal to stop or change the exercises.

- Do not try to make up for lost time

Participants need to realize that if they are away from a program, they should ease themselves back into the routine, rather than continuing from where they had left off.

- Do not chew gum or eat hard candies during a workout or game

This could cause choking.

- Do not bend over immediately after cardiovascular exercise

Bending over immediately after jogging may cause you to pass out.

- Do work at your own pace, try not to compete with others

Guidelines have been provided to encourage a safe and enjoyable program. Trying to outdo the next person contradicts the rationale behind the guidelines.

- Do get involved in exercises that are FUN!

Potentially Harmful Exercises and Alternatives

From one point of view, there is no such thing as a safe exercise. However, a well-trained body can do most movements with limited risk of harm.

The reality of fitness classes involves participants who have a wide variety of skills, abilities, histories and experiences with physical activity - and most people are aware that certain movements or exercises can cause them potential harm.

When leaders think of exercise precautions, they usually think about not doing specific exercises such as straight leg setups or double leg raises.

In addition to knowing what exercises to avoid, it is also important to have a strong theoretical understanding of how to design a class that adapts the various components to suit a specific group or individual. Another dimension of exercise precautions involves leaders ensuring that the exercise environment, whether land or water, is a safe and enjoyable place to use. This means checking for slivers in wooden surfaces, holes in floors, inappropriate air and water temperature. A preventive attitude towards program design and the exercise environment can prevent a great deal of potential discomfort!



Exercise Precautions

The following list describes some potentially harmful exercises and suggests an alternate activity for each

Exercise

Yoga Plow



Purpose

stretch the back, neck

Potential Harm

Stresses blood vessels to the brain and upper spinal cord by kinking vertebral artery, thereby cutting off circulation. It also places great pressure on spinal discs and ligaments, and can cause permanent fibre damage at the base of the spine and the sciatic nerve by stretching nerve fibres beyond their limits.

Alternate

Fetal roll, drop chin to chest.



Hurdler's Stretch



stretching hamstrings

Often stretches the muscles and ligaments in the groin farther than they were designed to be stretched. Chronic groin pull can be the painful result. It can also lead to injury of the medial collateral ligament (the one which helps stabilize the knee) because of twist caused by foot flared outward. The sciatic nerve is also stressed - more so among adults.

The sole of the foot of the bent leg should touch the inside of the straight leg.



Duck Walk and Deep Knee Bends



muscular strength - quadriceps

Tearing of lateral knee cartilage.

Partial knee bends.



Exercise
Toe Touching



Purpose
stretch the hamstrings

Potential Harm
When swooping forward to plant palms firmly on the floor, the posterior longitudinal ligament, which is one of the main supporting ligaments of the spine is overly stressed as the back can give no support while toe touching. As well, this movement does not relax the muscles but actually tightens them. The sciatic nerve also runs the risk of being pulled.

Alternate
Let the knees bend.



Ballet Stretch



hamstring stretch

The sciatic nerves are unnaturally elongated and the stretch imposed on the back of the knee, low back ligaments, muscles, joints and discs is very risky.

Single leg raises with leg on floor bent.



Straight Leg Raises



strengthening
quadriceps

Stretches the sciatic nerve beyond its normal limits. If back isn't held flat to the floor it leads to low back pressure on the ligaments, muscles and discs.

Bend the leg on the floor and lift one leg at a time.



Exercise

Knee Stretches

Purpose

stretching the quadriceps



Potential Harm

Exceeds the natural skeletal range of motion of the knee - the value of this is questionable. It stretches the patellar and collateral knee ligaments, which are needed for stabilizing the knee.

Alternate

Lying supine with your right hand, grab your right ankle and pull toward your body.



Situps - straight leg

abdominal strength



After you come up about 300 from the floor the abdominal muscles have been maximally shortened. After that point it becomes a hip exercise - they cannot flatten the lower abdomen. Also after the 300 point back strain and nerve elongation begin to occur.

Bend your legs, do partial setups, cross your arms in front of you instead of behind your head. However if you have back trouble, be cautious about even bent leg setups.



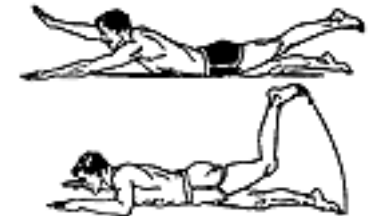
Cobra

stretch abdominals



It causes pressure on the lower back.

Avoid it with people who have back problems. Otherwise do not hyperextend the neck, and you can alternate arms and legs and extend.



Exercise

Full Head Roll

Purpose

stretch the neck

Potential Harm

Increases pressure on vertebral discs and nerves. Extreme range of motion, especially hyperextension should be avoided.

Alternate

Lateral Flexion instead.



Shoulder Stand

stretch upper back and neck

Increases pressure on vertebral discs and nerves. Same problems as the Yoga Plow, best to avoid

Use the hug and stretch instead.



Groin Stretch

stretch groin area

Can be contraindicated if you bend forward from the head and shoulders. This puts pressure on the lower back.

Be sure to concentrate on making the initial move forward from your hips. Keep your lower back flat and look forward.



*Rules related to particular exercises change on an on-going basis
Teachers who teach physical fitness should keep themselves updated on these

Exercise Precautions

Basic Rules that Apply to Exercising In the Cold

- Do not underestimate the temperature. A lot of problems occur in temperatures of 1°C - 10°C when dampness, not severe cold, is the problem. Try to get dry as soon as possible.
- Keep the torso warm so that heat can be sent to less insulated areas.
- Avoid sweating. Clothing can serve as an insulator. However, it should allow adequate ventilation to maintain the balance of heat loss and heat production.
- Use your head. Keep it covered to help force the heat to the extremities. Uncover it when necessary to avoid sweating.
- Dress appropriately. Keep comfortably warm, removing clothes as the internal temperature increases.

Adapted from Manitoba Provincial Fitness Leadership Development Program - Fitness Leader Manual, Manitoba Health, Health Promotion Directorate, Fitness Section



GRADE 8

FAMILY LIFE

THE FAMILY LIFE UNIT

INVOLVEMENT OF PARENTS

Parents are the primary educators of their children on family life education. Schools should play a supporting role to supplement parental education.

Generally, most parents support family life education in school. However, they may have a number of questions about the program before they will give that support. For that reason, it is vital for schools to involve parents in discussing the unit, *before using the materials*.

Parents must be given an opportunity to find out what will be taught in the lessons, to meet the teachers (and other resource people) who will be delivering the program, and to ask questions. This can be done most effectively by holding a parent information session.

This should include:

- the principal of the school
- teachers who will be teaching the lesson
- any resource people, such as the community health nurse, who might be involved with the lessons

Most parents attending the meeting want to find out about the content, objectives and methods used in the unit. Basic information during the session should include:

- a brief outline of the program
- a sample of some of the activities in which students will participate
- sample handouts
- copies of any activities in which parents will participate during the evening
- translation of goals, etc , as necessary
- viewing of any films which may be used

It is important to emphasize that the purpose of the Family Life unit is to support, and not to replace, the parent or family role and responsibility. The parent information session is one important way for teachers to show that they want and welcome parental support, involvement and concern.

Parent meetings are often a good opportunity to initiate ongoing parenting groups. Parents may decide to meet regularly during the year to discuss topics related to Family Life or other health programs going on in the school. The G.N.W.T. Family Life Education Consultants may be able to assist in the development of parent groups.

Following the meeting, parents will be able to decide whether they want their children to be involved in the lessons.

PARENTS, WHO DO NOT WISH THEIR CHILDREN TO PARTICIPATE IN THE LESSONS, MAY INDICATE TO THE SCHOOL THAT THEY WILL BE WITHDRAWING THEIR CHILDREN) FROM THIS PARTICULAR UNIT. PARENTS MUST MAKE THE FINAL DECISION

Schools must make alternative arrangements for students who are withdrawn from these classes.

In order to withdraw their child(ren) from the classes, parents must sign a withdrawal form (see sample).

FAMILY LIFE CLASSES

NAME: _____

GRADE: _____

I do not wish _____ to participate in the Family Life classes which will be offered by the school in the near future.

Parent/Guardian signature

Date

Because of the need to foster a positive classroom atmosphere, teachers need to take time to get to know their students. Teachers should teach the Mental and Emotional Well-Being and the Growth and Development units before introducing the Family Life lessons. Many of the skills which students will be developing in the Mental and Emotional Well-Being unit, such as decision-making skills, communication skills, relationship building and coping skills, will assist in the development of an atmosphere conducive to effective Family Life education.

FAMILY LIFE

GRADE: 8

LESSON: 1

THEME: FAMILIES

CONCEPT: THERE ARE MANY DIFFERENT FAMILY PATTERNS

PREPARATION: 1. Prepare a class set of What Type Of Family? (Activity Sheet FL90)

VOCABULARY: structure

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify family patterns in the community	Students: 1. Identify different family structures in the community. 2. Describe why these different structures occur.	Background Information - Refer to Activity Sheet FL90A (and FL90B Teacher Answer Guide). Have students complete the worksheet and then identify families in their community which exemplify each family type. Different structures are based on: - who the family members are (death, divorce, fertility) - what the roles of different members are - family responsibilities - customs (traditions) e.g., adoption

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

3. Compare and contrast two family structures.

Refer to Activity Sheet FL90A.

Take two families described on Activity Sheet FL90A and provide additional information. For example:

Bella's family: Her dad works full time for D.P.W. Her mum is a substitute teacher and works about one day each week. Bella, the oldest, is in Grade 8 and is expected to help her mother around the house.

Martha's family: Both parents work Martha is in Grade 8 and her older brother is away at high school.

Have students compare and contrast the two families in terms of their size, the roles and responsibilities of the members, customs that affect the family structure, etc.

4. Describe what a family is.

Have students brainstorm what a family is. The definition which students decide on should include:

- a group of related people (they may or may not live together depending on whether the local concept of a family is nuclear or extended)
- family members nurture, love, support and care for each other

WHAT TYPE OF FAMILY?



Here are some different types of families. Read each description and write the name of the family in the box. Be careful, one family has two labels.

- Single-parent Family
- Adopted Family
- Nuclear Family

- Foster Family
- Extended Family
- Blended Family



Martha, her parents and younger brother have recently moved to a new community. All of Martha's grandparents and aunts and uncles live in another community.

George's mother divorced his dad when George was very young. He barely remembers him since he moved to another community shortly after the divorce. The house is pretty quiet with just George and his mother living there.

JoJo's mother died several years ago and his dad recently remarried. JoJo now has to share his room with his new stepbrother.

Ada and William have only one child living with them right now. But there have been times when they've had three or four children staying with them. The Department of Social Services places children in Ada's and William's home on a temporary basis until the children can be adopted or other permanent arrangements made.

Bella is used to a full and busy household. She has three sisters and her grandfather lives with them along with an adopted brother. When Bella's mom works one of her aunts comes to babysit. Her other grandparents live next door and spend a lot of time visiting at Bella's.

WHAT TYPE OF FAMILY?

(Teacher Answer Guide)

Here are some different types of families. Read each description and write the name of the family in the box. Be careful, one family has two labels.



- Single-parent Family
- Adopted Family
- Nuclear Family

- Foster Family
- Extended Family
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Nuclear Family

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Single-parent Family

JoJo's mother died several years ago and his dad recently remarried. JoJo now has to share his room with his new stepbrother.

Blended Family

Ada and William have only one child living with them right now. But there have been times when they've had three or four children staying with them. The Department of Social Services places children in Ada's and William's home on a temporary basis until the children can be adopted or other permanent arrangements made.

Foster Family

Bella is used to a full and busy household. She has three sisters and her grandfather lives with them along with an adopted brother. When Bella's mom works one of her aunts comes to babysit. Her other grandparents live next door and spend a lot of time visiting at Bella's.

Extended Family

Adopted Family

FAMILY LIFE

GRADE: 8

LESSON: 2

THEME: FAMILIES

CONCEPT: INTERPERSONAL RELATIONSHIPS VARY FROM CASUAL TO INTIMATE

PREPARATION: 1. Prepare a class set of Social Circles (Activity Sheet FL91)

VOCABULARY: interpersonal relationship, acquaintance, casual, intimate

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe types of interpersonal relationships	Students: 1. List a variety of relationships that exist between people.	Background Information - Have students think about various people in their lives with whom they have relationships e.g., close friends, acquaintances, family etc. Make a list of these relationships. Relationships vary from acquaintance (i.e., someone you know to say 'Hi' to), to intimate (i.e., someone you would tell your secrets or innermost thoughts to).

OBJECTIVES

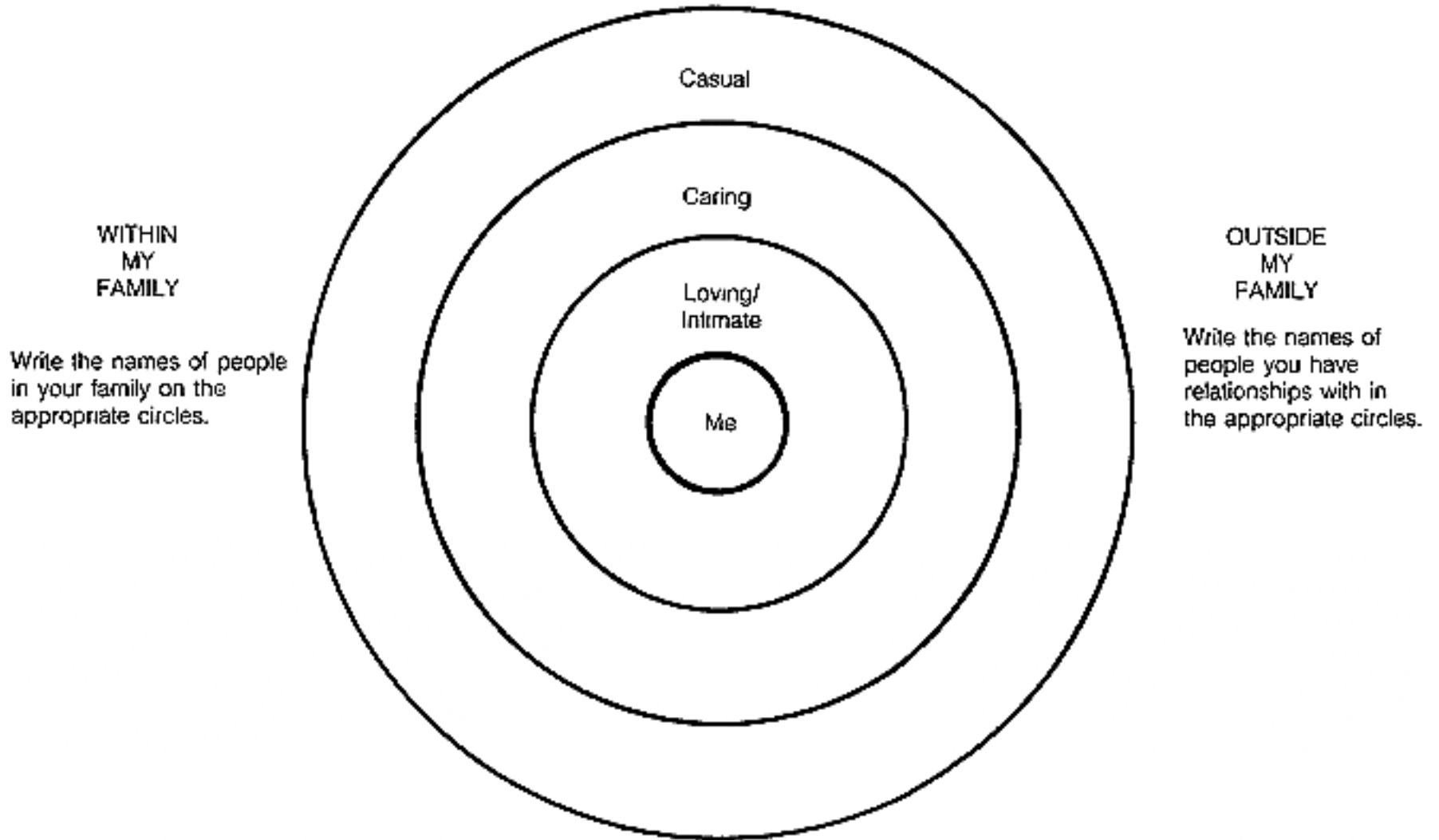
STUDENT ACTIVITIES

TEACHER NOTES

<p>ii) identify characteristics that promote the development of relationships</p>	<p>2. Identify their own social circles.</p>	<p>Discuss in general terms the types of relationships which are likely to be casual, caring and loving or intimate. For example:</p> <table border="1"> <thead> <tr> <th>Relationship</th> <th>Within Families</th> <th>Outside Families</th> </tr> </thead> <tbody> <tr> <td>casual</td> <td>- distant relatives</td> <td>- acquaintances - teacher/student - coach/player</td> </tr> <tr> <td>caring</td> <td>- mother/daughter - grandfather/ grandson</td> <td>- close friends - minister - teacher/student</td> </tr> <tr> <td>intimate & loving</td> <td>- husband and wife - mother/daughter</td> <td>- engaged couple - close friends</td> </tr> </tbody> </table>	Relationship	Within Families	Outside Families	casual	- distant relatives	- acquaintances - teacher/student - coach/player	caring	- mother/daughter - grandfather/ grandson	- close friends - minister - teacher/student	intimate & loving	- husband and wife - mother/daughter	- engaged couple - close friends
	Relationship	Within Families	Outside Families											
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caring	- mother/daughter - grandfather/ grandson	- close friends - minister - teacher/student												
intimate & loving	- husband and wife - mother/daughter	- engaged couple - close friends												
<p>3. Identify the characteristics that help build and maintain a close relationship.</p>	<p>Refer to Activity Sheet FL91.</p> <p>Have students complete the worksheet individually giving specific names (e.g., Uncle Jack) and listing as many relationships as possible.</p> <p>Share completed worksheets in small groups or as a class.</p> <p>Divide the class into two groups - girls and boys if numbers are about equal. Have each group brainstorm as many descriptive words or phrases as possible to describe a close relationship. (Ask them to think about their own closest relationship.) Have each group record answers on a flip chart and compare responses when finished.</p>													

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES								
	<p>4. Identify characteristics of one close interpersonal relationship.</p>	<p>Some characteristics of a close relationship include:</p> <ul style="list-style-type: none"> - physical attraction - trust - common interests - sharing - sense of humor - appreciation for each other - commitment - shared goals - respect for self and others - honesty - kindness - forgiveness - empathy (understanding) - effective communication - patience <p>Have students complete this activity with their closest friend or relative. For one week students keep a log of things which occur in their relationship which illustrate the characteristics of a close relationship (as identified in Student Activity 3). For example:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Monday</td> <td style="width: 40%;">Characteristic</td> </tr> <tr> <td>I told Jill that I have a crush on Ralph</td> <td>- trust</td> </tr> <tr> <td></td> <td>- communication</td> </tr> <tr> <td>Jill and I went to fitness class together</td> <td>- common interest</td> </tr> </table>	Monday	Characteristic	I told Jill that I have a crush on Ralph	- trust		- communication	Jill and I went to fitness class together	- common interest
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SOCIAL CIRCLES



FAMILY LIFE

GRADE: 8

LESSON: 3

THEME: HUMAN DEVELOPMENT
AND REPRODUCTION

CONCEPT: REPRODUCTION ENSURES THE CONTINUATION OF NEW LIFE

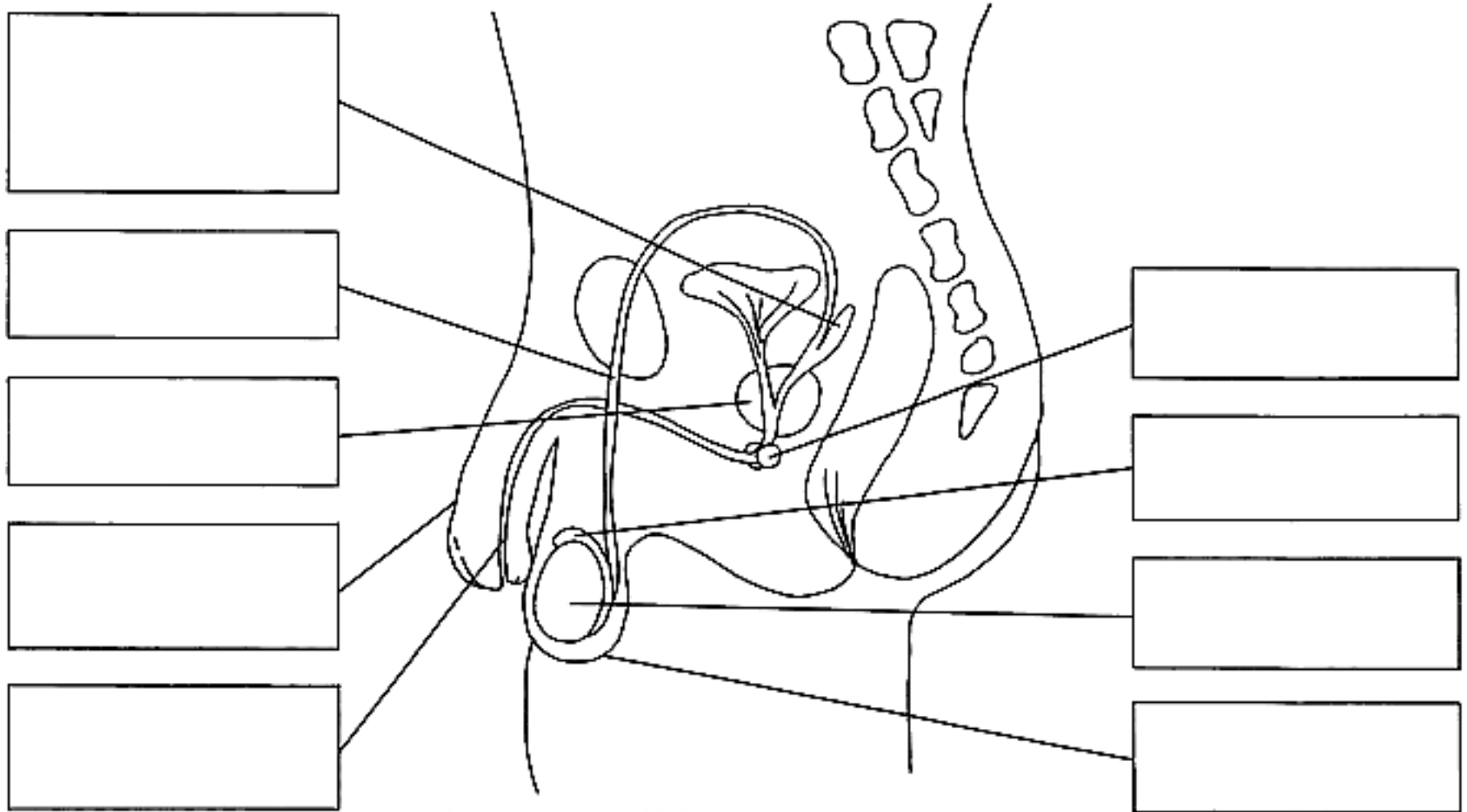
PREPARATION: 1. Prepare a class set of The Reproductive Systems worksheets (Activity Sheets FL92A and 928)

VOCABULARY:

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify the structure and function of the male and female reproductive systems	Students: 1. Complete The Reproductive Systems worksheets.	Background Information FL95 to FL99 Refer to Activity Sheets FL92A and 92B, (FL92C, 92D Teacher Answer Guides). Ask students to complete the two worksheets. This is a review of material learned in previous grades. If students' responses indicate they know the information, teachers should proceed to the next lesson. If students are unsure of the information, teachers should review Family Life Grade 7, Lesson 2 with them.

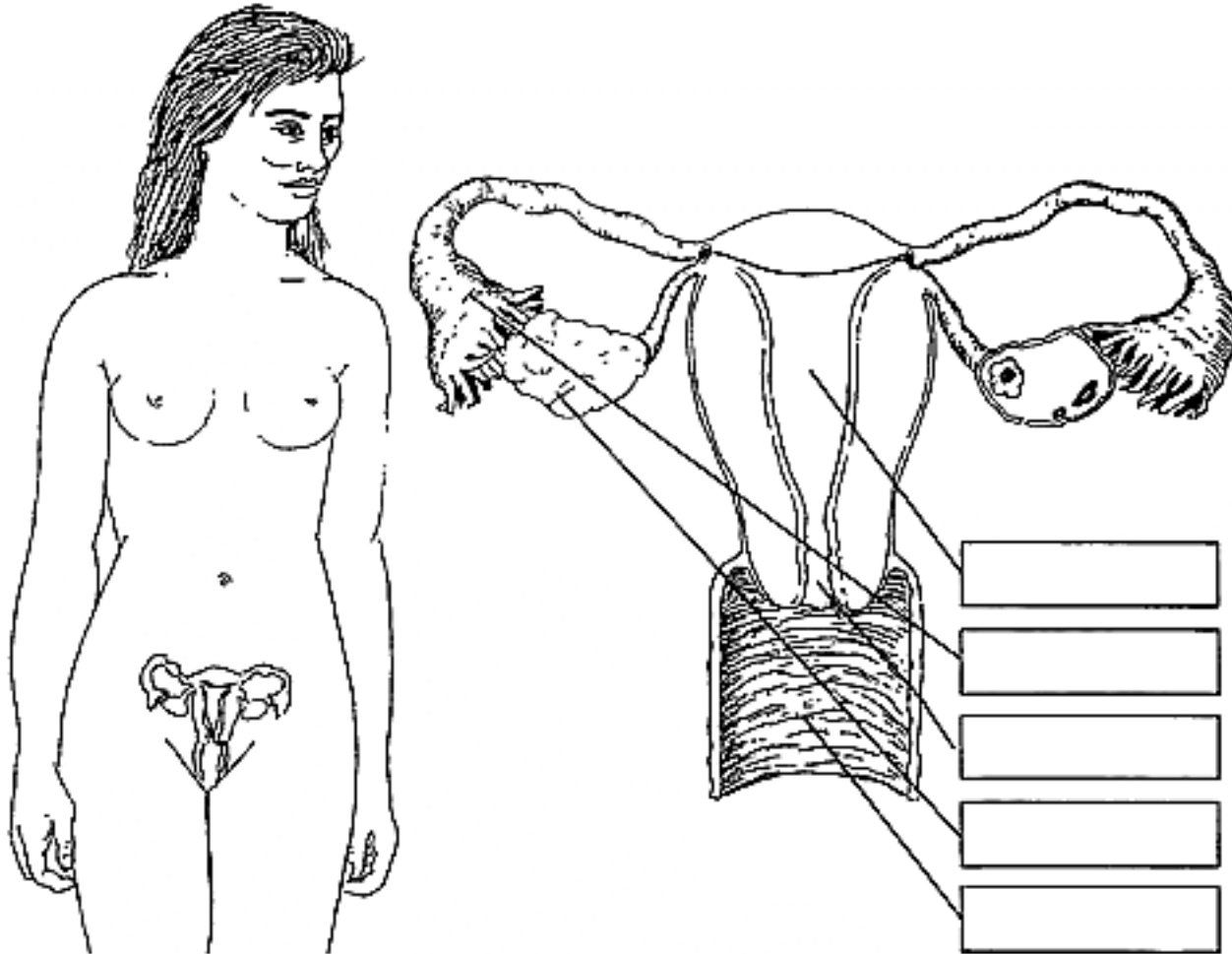
THE REPRODUCTIVE SYSTEM (MALE)

In each box, name the reproductive part and briefly describe its function.



THE REPRODUCTIVE SYSTEM (FEMALE)

In each box, name the reproductive part. Match each part to its function by drawing a line between each.



functions

where eggs develop and are stored

the opening to the uterus

the opening into which the penis is inserted during sexual intercourse

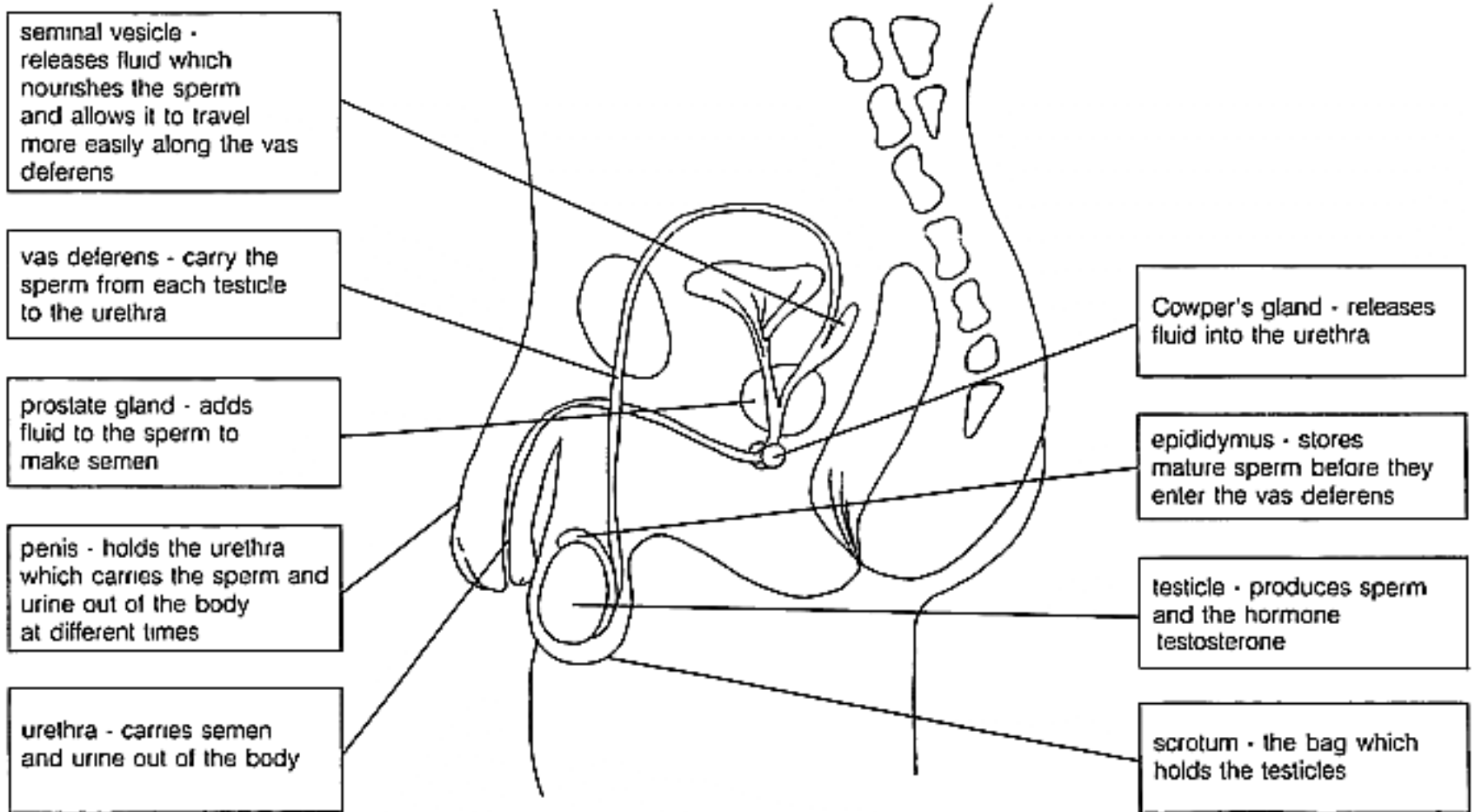
they carry the egg to the uterus

where the egg grows into a baby

THE REPRODUCTIVE SYSTEM (MALE)

(Teacher Answer Guide)

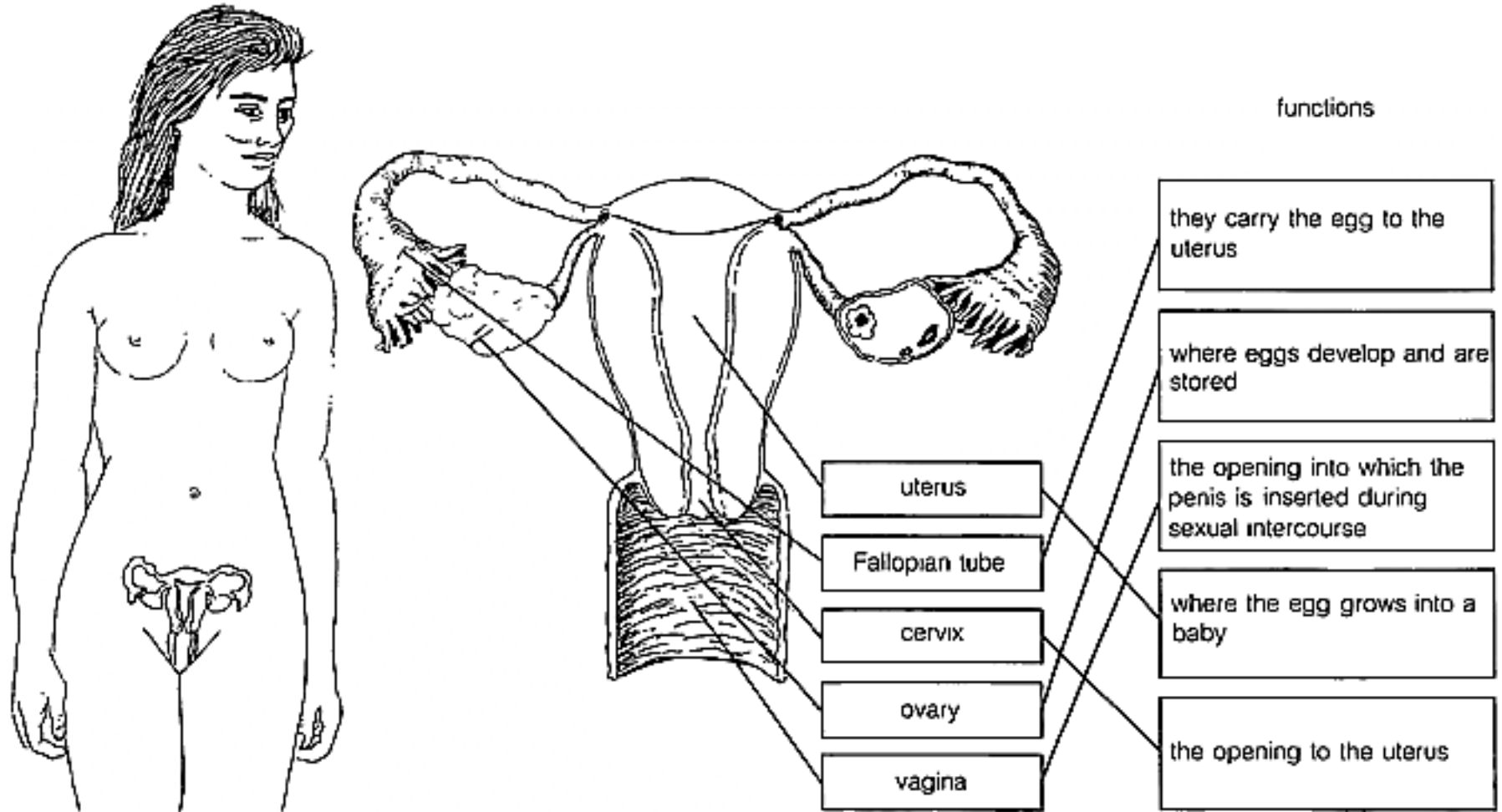
In each box, name the reproductive part and briefly describe its function.



THE REPRODUCTIVE SYSTEM (FEMALE)

(Teacher Answer Guide)

In each box, name the reproductive part. Match each part to its function by drawing a line between each.



FAMILY LIFE

GRADE: 8

LESSON: 4

THEME: HUMAN DEVELOPMENT
AND REPRODUCTION

CONCEPT: THE DEVELOPMENT AND UNION OF REPRODUCTIVE SEX CELLS ARE SIGNIFICANT TO THE DEVELOPMENT OF
NEW LIFE

PREPARATION: 1. Pamphlets, booklets, books etc on aspects of human development and reproduction for research project

VOCABULARY: misconceptions

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to:	Students:	<p>Background Information FL95 to FL99</p> <p>Students have studied various aspects of the reproductive system and reproductive processes in previous grades. Each teacher must identify what knowledge students already possess and what they need to know.</p> <ol style="list-style-type: none">1. Conduct an initial assessment based on Family Life, Grade 7, Lessons 2, 3, 4. If not satisfied with student knowledge review the Grade 7 material.2. Establish a Question Box where students identify questions about human development and topics they wish to study. Use this as the basis for teaching.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>i) explain the significance of ovulation and sperm development to reproduction</p>	<p>1. Complete a project on one aspect of Human Development and Reproduction.</p>	<p>Have students select one topic from the following list, or choose a topic of their own.</p> <ul style="list-style-type: none"> - How would you explain menstruation to your daughter if you were a parent. - How would you answer the question, "Where did I come from?" if you were a parent and your seven year old asked you this. - How would you explain "unexpected" erections and wet dreams to your son if you were a parent. - Identify childhood misconceptions about human reproduction, and explain them. - Write your autobiography from conception to birth - How would you explain the importance of responsible decision-making related to human development, if you were the parent of an adolescent. <p>The project should include:</p> <ul style="list-style-type: none"> - text or roleplay with another student - illustrations or pictures - diagrams - references/bibliography <p>Rather than simply recalling factual information this activity attempts to personalize information about human reproduction.</p>

FAMILY LIFE

GRADE: 8

LESSON: 5

THEME: TEEN DECISIONS

CONCEPT: ASSERTIVENESS AND ABSTINENCE ARE RESPONSIBLE BEHAVIOURS FOR YOUNG ADOLESCENTS

PREPARATION: 1. Prepare a class set of Pressure Lines (Activity Sheet FL93A)

VOCABULARY: abstinence, assertiveness

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
Students will be able to: i) explain why abstinence is a responsible behaviour for young adolescents	Students: 1. List reasons for and against the sexual involvement of young people.	Background Information FL100 Some of this lesson is a review of Family Life, Grade 7, Lessons 5 and 7. In small groups, have students brainstorm reasons why some young people may become sexually involved and why some may not. Record student responses on the chalkboard or an experience chart:	
		Reasons why some young people may become sexually involved	Reasons why some young people may postpone sexual involvement
		<ul style="list-style-type: none">- pressure from boy/girl friend- desire to be part of the group- "it just happens"- societal expectations- curiosity	<ul style="list-style-type: none">- moral reasons- fear of pregnancy or sexually transmitted diseases- either or both partners not ready for sexual involvement

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
ii) practise assertive responses to sexual pressure	2. List advantages and disadvantages of sexual abstinence for young adolescents. 3. Practise assertive responses to pressure.	<ul style="list-style-type: none"> - to express love/caring - for pleasure - desire to appear grown-up - need to feel loved/lovable - sexual assault (incest, rape, threats) 	<ul style="list-style-type: none"> - fear of damage to reputation - decision to wait until commitment to relationship is made
		<p>Discuss with the whole class.</p> <p>Record responses on an experience chart.</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <p>Advantages</p> <ul style="list-style-type: none"> - freedom from fear of pregnancy and sexually transmitted diseases - freedom from guilt - satisfaction of being in control of one's own life - time to develop commitment to relationship </td> <td style="vertical-align: top; width: 50%; border-left: 1px solid black;"> <p>Disadvantages</p> <ul style="list-style-type: none"> - continued pressure from partner and/or group - possible termination of relationship - risk of health problems (especially mental and social) </td> </tr> </table> <p>Refer to Activity Sheet FL93A (FL93B - Teacher Answer Guide).</p> <p>Have two students act out the first situation The first student gives the line:</p> <p style="padding-left: 40px;">"Everybody's doing it."</p> <p>The second student has to think of an assertive response.</p> <p style="padding-left: 40px;">e.g., "Well, I'm not everybody I'm me. Anyway, I don't think everybody <i>is</i> doing it. That's just a lot of talk."</p> <p>Divide the students into small groups. Give each group a copy of Activity Sheet FL91 with the pressure "lines" on it. One person says the pressure "line" and another thinks of an assertive response to it.</p>	<p>Advantages</p> <ul style="list-style-type: none"> - freedom from fear of pregnancy and sexually transmitted diseases - freedom from guilt - satisfaction of being in control of one's own life - time to develop commitment to relationship
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PRESSURE "LINES"

1. Line: "Everybody's doing it."
2. Line "If you love me, you'll have sex with me."
3. Line "If you won't have sex with me, then I don't want to see you any more."
4. Line "I know you want to do it, you're just afraid of what people will say."
5. Line: "It's just part of growing up."
6. Line "I want to marry you someday."
7. Line "We had sex once before, so what's the problem now?"
8. Line: "You don't want people to think you're not a man (woman)."
9. Line "Don't you want to try it to see what it's like?"
10. Line: "But I have to have it!"
11. Line "If you want to be popular with the kids at school ... you'll do it."
12. Line: "If you get pregnant, I'll marry you."
13. Line "You want it as much as I do."
14. Line "You've gotten me all excited. If you love me, you'll prove it."
15. Line: "Hey, let's find out about the fireworks they are always talking about on TV and in the movies."
16. Line "Come on, take a drink. It will get you in the mood."
17. Line "If you don't, someone else will."
18. Line "A lot of your friends are doing it. You're just not with it."



POSSIBLE ASSERTIVE RESPONSES

1. Reply: "Well, I'm not everybody, I'm me. Besides, I don't really believe everybody is doing it. I think it's a lot of talk."
or
"No Thanks"
2. Reply: "If you love me, you'll respect my feelings and not push me into doing something I'm not ready for."
3. Reply: "Well, if that's the way you feel, I'm going to miss seeing you, but that's the way it's gotta be."
4. Reply: "If I wanted to do it, I wouldn't be arguing with you about it."
5. Reply: "Having sex doesn't mean you're grown-up. Being grown-up to me means deciding what I believe and then sticking to those beliefs."
6. Reply: "Marriage is a long way off for me. There's lots I want to do and see. I want to wait until I'm older to have sex."
7. Reply: "I have a right to change my mind. I've decided to wait until I'm older."
8. Reply: "Having sex doesn't prove you are a man (woman). It's not for me right now."
9. Reply: "I think that's a pretty poor reason to have sex, pretending to care just so you can see what it's like. No thanks."
10. Reply: "No you don't. If I can wait, you can wait."
11. Reply: "I don't have to depend on sex to be popular. I have more to offer than that. People like you because of the kind of person you are, the kind of character you have."
12. Reply: "I don't want to risk getting pregnant, and I'm not ready to get married."
13. Reply: "No, I really don't. I've got a lot of plans for my life and I don't want to mess things up by getting pregnant."

FAMILY LIFE

GRADE: 8

LESSON: 6

THEME: TEEN DECISIONS

CONCEPT: INDIVIDUALS CAN PLAN THE REPRODUCTION OF NEW LIFE

- PREPARATION:
1. Invite a nurse or doctor to the class to talk about birth control methods
 2. Prepare overhead transparencies of Activity Sheets FL94A - 94H
 3. Prepare a class set of Birth Control Review (Activity Sheet 95A)
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VOCABULARY: birth control, effective, diaphragm, I.U.D.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe some methods of birth control	Students: 1. Discuss birth control methods.	Background Information FL105 to FL106 Refer to Activity Sheets FL94A - 94H. Prior to the lesson, invite a community health nurse or doctor to the class to talk about birth control methods. This information should include: - sexual abstinence - methods of birth control for males and females and should cover the following areas: - advantages and disadvantages - problems - where to get more information

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Complete Birth Control Review worksheet.</p>	<p>It is important to emphasize that sexual intercourse can lead to pregnancy, unless precautions are taken to prevent it. Most forms of prevention require planning and thought. Such planning and thought is a shared responsibility of males and females.</p> <p>It should also be emphasized that abortion is not a form of birth control. It is a method of terminating a pregnancy for medical or other reasons.</p> <p>While students may ask about tubal ligation, vasectomy etc., this lesson concentrates on methods of birth control which are appropriate for young people.</p> <p>Refer to Activity Sheet FL95A (FL95B - Teacher Answer Guide).</p>

METHODS OF BIRTH CONTROL

1. Sexual abstinence

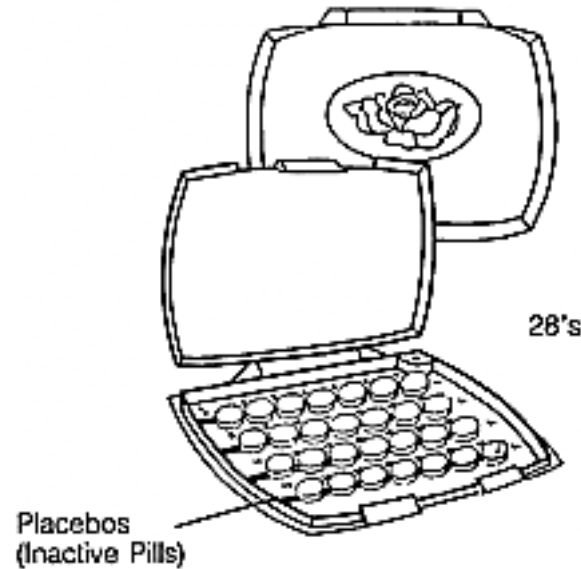
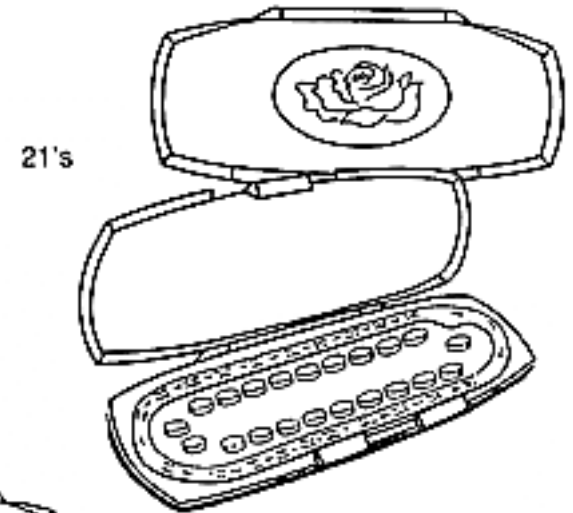
Choosing not to have sexual intercourse and/or saying 'No' to sexual pressure.

Effectiveness: 100%	
Advantages	Disadvantages
<ul style="list-style-type: none"> - freedom from fear of pregnancy and sexually transmitted diseases - freedom from guilt - satisfaction of being in control of one's life - time to develop commitment to relationship - respect for self is maintained 	<ul style="list-style-type: none"> - continued pressure from partner and/or group - possible termination of relationship - risk of health problems (especially mental and social)

2. Oral Contraceptives (The Pill)

The pill suppresses ovulation, thus preventing pregnancy.

Effectiveness: High	
Advantages	Disadvantages
<ul style="list-style-type: none"> - freedom from fear of pregnancy - decreased chance of some health problems, e.g., anemia - allows for spontaneity in sexual activity 	<ul style="list-style-type: none"> - possible increased chance of some serious health problems e.g., stroke - may have some side-effects e.g., headache, weight gain - may be increased pressure to have intercourse



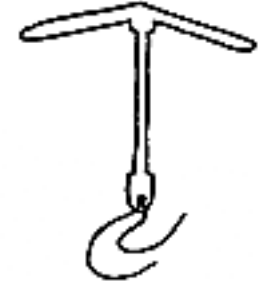
3. I.U.D. (Intra-Uterine Device)

A plastic coil, loop or copper object which is inserted into the uterus by a doctor (Not frequently recommended for young people because of possible health risks.)

Effectiveness: High	
Advantages	Disadvantages
<ul style="list-style-type: none"> - allows for spontaneity in sexual activity - is effective over an extended period of time 	<ul style="list-style-type: none"> - heavier menstrual bleeding - may be displaced - requires services of doctor or nurse (with appropriate training) - may be some health risks e.g., infections



Copper 7



Copper T



Progesterone T



Lippes Loop

4. Condom

A plastic or rubber sheath which traps the sperm. It is worn over the erect penis. It is important to learn to use the condom correctly. A condom is more effective if used in conjunction with spermicide. Other names are 'rubber', 'safe', and 'prophylactic'.

Effectiveness: effective when used with spermicide	
Advantages	Disadvantages
<ul style="list-style-type: none"> - no side effects - available from stores or nursing stations - protects against sexually transmitted diseases 	<ul style="list-style-type: none"> - requires planning - may have negative image - may be reluctance to buy or request a condom in public - condom must not be damaged (note expiry date)



Condom with receptacle tip.



Condom without receptacle tip.

5. Diaphragm

A shallow rubber cup that covers the cervix. It prevents sperm from entering. It is more effective when used with a spermicide, jelly or cream.

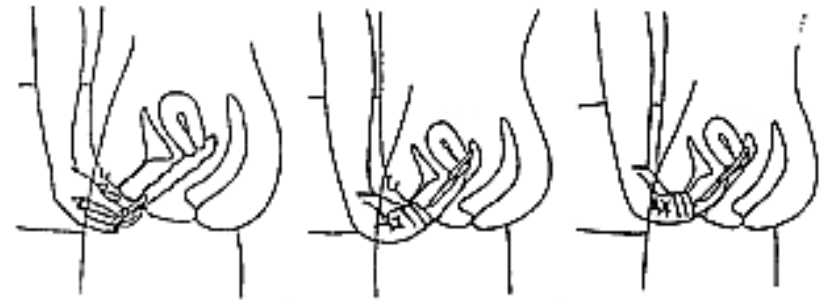
Effectiveness: effective when used with spermicide

Advantages	Disadvantages
<ul style="list-style-type: none"> - may protect from STDs - no side effects - can be inserted beforehand 	<ul style="list-style-type: none"> - must be fitted for correct size by a doctor or nurse (with appropriate training) - must be instructed in its use - may be uncomfortable - does not permit spontaneity - must be left in place for 6-8 hours after intercourse

and below:



To insert diaphragms, spread spermicidal jelly on both sides around the rim. Squeeze rim together and insert as shown

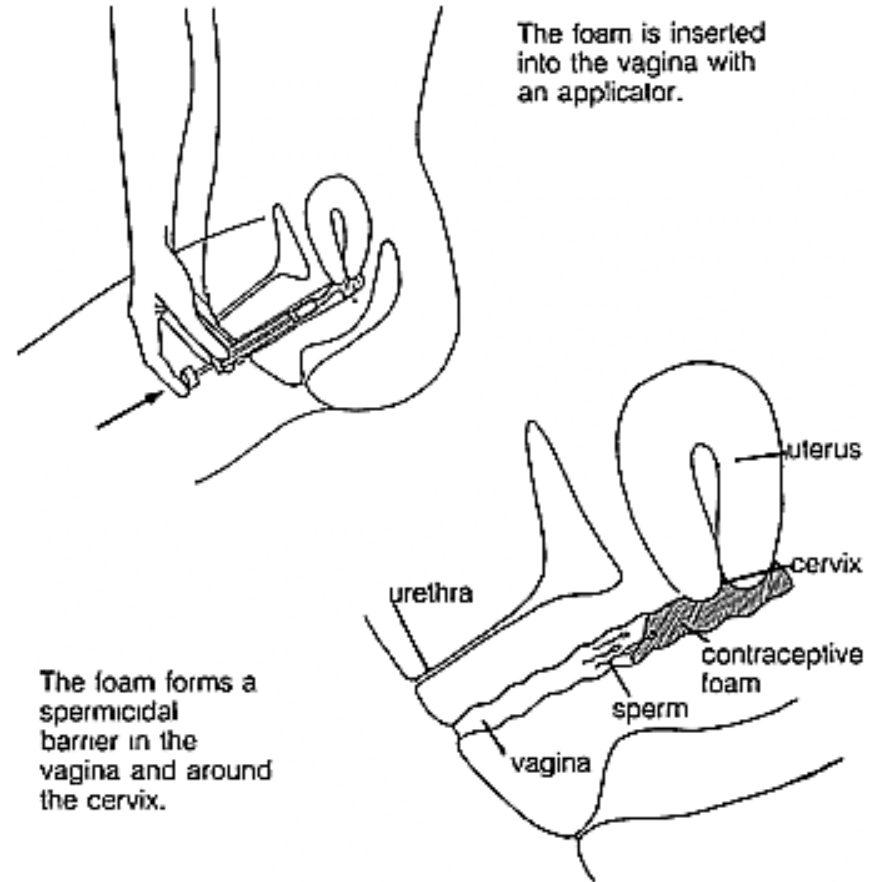


6. Spermicide

Foam, cream or jelly that contain chemicals which kill sperm.

Effectiveness: Low to medium, increases if used along with another form of birth control, e.g., condom

Advantages	Disadvantages
<ul style="list-style-type: none"> - protects a little against STDs 	<ul style="list-style-type: none"> - messy - does not permit spontaneity - only effective for one act of sexual intercourse



7. Withdrawal

Effectiveness: Not Effective	
Advantages	Disadvantages
<ul style="list-style-type: none"> - no preparation required 	<ul style="list-style-type: none"> - frustrating - messy - may cause worry

8. Natural Family Planning

FL94G

Avoiding intercourse just prior to and just after ovulation. The woman takes her temperature each morning and plots it on a chart. A slight temperature increase in mid-cycle indicates that ovulation has taken place.

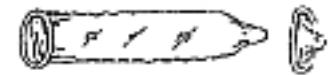
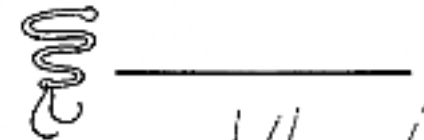
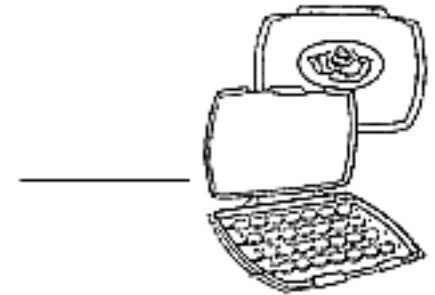
Effectiveness: Not reliable for young people	
Advantages	Disadvantages
<ul style="list-style-type: none"> - become knowledgeable about own body and cycle - no physical health risks 	<ul style="list-style-type: none"> - may be difficult to follow if cycle is irregular - may be frustrating during time when intercourse cannot take place - must take temperature <i>every</i> day and record for several months before a pattern emerges showing when ovulation is likely to take place

BIRTH CONTROL REVIEW

Who Am I?

Write the name of one method of birth control in each blank. Label each diagram.

Clue #1	Possibilities	Clue #2	Answer
I am free	_____ _____ _____	I can be used only by females with a regular cycle.	_____
I must be applied before each act of sexual intercourse	_____ _____ _____	I am used by the male.	_____
I permit spontaneity.	_____ _____	I have to be taken daily.	_____
I require a doctor or trained nurse.	_____ _____	I am not removed after sexual intercourse.	_____
I have several names.	_____ _____ _____ _____	This is my real name	_____



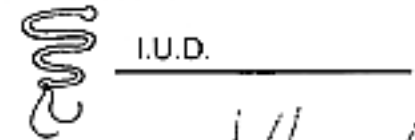
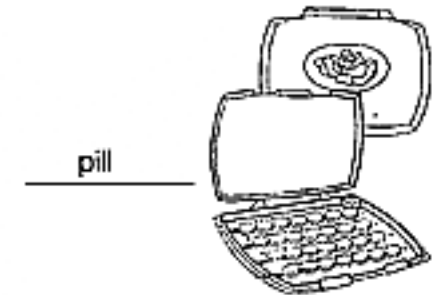
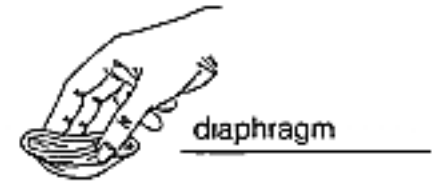
BIRTH CONTROL REVIEW

(Teacher Answer Guide)

Who Am I?

Write the name of one method of birth control in each blank. Label each diagram.

Clue #1	Possibilities	Clue #2	Answer
I am free	<u>abstinence</u> <u>Withdrawal</u> <u>Natural Family Planning</u>	I can be used only by females with a regular cycle	<u>Natural Family Planning</u>
I must be applied before each act of sexual intercourse.	<u>Condom</u> <u>Foam/jelly/cream</u> <u>Diaphragm</u>	I am used by the male	<u>Condom</u>
I permit spontaneity.	<u>I.U.D.</u> <u>The pill</u>	I have to be taken daily	<u>The Pill</u>
I require a doctor or trained nurse.	<u>I.U.D.</u> <u>Diaphragm</u>	I am not removed after sexual intercourse	<u>I.U.D.</u>
I have several names	<u>Condom</u> <u>Safe</u> <u>Rubber</u> <u>Prophylactic</u>	This is my real name	<u>Condom</u>



FAMILY LIFE

GRADE: 8

LESSON: 7

THEME: SEXUALLY TRANSMITTED
DISEASES

CONCEPT: SEXUALLY TRANSMITTED DISEASES ARE SERIOUS COMMUNICABLE DISEASES THAT CAN BE PREVENTED

PREPARATION: 1. Prepare a class set of Fact Sheets on Sexually Transmitted Diseases (Activity Sheets FL96A to 96F)
2. Invite a nurse or doctor to the class to talk about sexually transmitted diseases

VOCABULARY: syphilis, pubic lice, genital herpes, trichomoniasis, sterility, ectopic pregnancy, abstain

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES				
Students will be able to: i) identify the causes, characteristics, consequences, Treatment and prevention of common sexually transmitted diseases	Students: 1. Review the causes , characteristics, consequences, treatment, prevention of chlamydia and gonorrhea.	Background Information. FL102 to FL104 Refer to Activity Sheets FL96A and 96B. This is a review of Family Life, Grade 7, Lesson 8. Have students review the causes, characteristics, consequences, treatment and prevention of chlamydia and gonorrhea. Record student responses using experience charts as illustrated:				
		Causes	Charact- eristics	Consequences	Treatmen t	Prevention

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. List other common sexually transmitted diseases.</p> <p>3. Describe the causes, characteristics, consequences, treatment and prevention of syphilis, pubic lice, genital herpes and trichomoniasis.</p> <p>4. Discuss the common sexually transmitted diseases.</p>	<p>Other common sexually transmitted diseases include:</p> <ul style="list-style-type: none"> - syphilis - pubic lice - genital herpes - trichomoniasis - AIDS <p>There are actually many other of sexually transmitted diseases..</p> <p>Refer to Activity Sheets FL96C, D, E and F.</p> <p>Divide the class into 4 small groups. Give each group a fact sheet on one of the sexually transmitted diseases. Have them prepare an experience chart, similar to those in Student Activity 1 for their particular disease.</p> <p>Have each group report back to the whole class.</p> <p>Prior to the class, invite the local community health nurse or doctor to the class to discuss STDs.</p> <p>Have students prepare questions in advance.</p> <div style="border: 1px solid black; padding: 5px;"> <p>AIDS</p> <p>The AIDS lessons, developed for use with Grades 7, 8 and 9, should be taught at this point. Teachers should use the lessons labelled Grade 8. Refer to the document <i>NWT School Health Program, AIDS Component</i>.</p> </div>

CHLAMYDIA FACT SHEET

Causes of Chlamydia

Chlamydia is an STD caused by an organism. It is one of the most harmful of the STDs. In some cases, it is caused by a germ called ureaplasma and in other cases the cause is unknown.

Characteristics of Chlamydia

Men:

- A discharge from the penis.
- A burning or itching around the opening of the penis
- Rectal discharge
- Sometimes signs appear only in the mornings, then go away and later reappear
- Many men with Chlamydia show no symptoms

Women:

- Discharge from the vagina
- Pain, itching or burning in or around the vagina
- Many women with Chlamydia show no symptoms

Possible Consequences of Chlamydia

If it is left untreated, Chlamydia can:

- spread throughout the entire reproductive system and may lead to abdominal pain and/or fever, nausea, headache and vomiting - cause scarring in the reproductive systems of males and females. If this scarring partially narrows the (Fallopian) tube(s), and the woman becomes pregnant, the growing fertilized egg is prevented from reaching the womb (ectopic pregnancy). The baby continues to grow in the narrowed tube causing the tube to rupture. This is a life-threatening situation.

- cause sterility in both women and men (inability to have children) -
- cause eye infections or pneumonia in the newborn baby born to mothers who have Chlamydia in their birth canal.
- cause an acute inflammation of the joints which may lead to an arthritic condition.

Treatment for Chlamydia

- Seek medical advice.
- Chlamydia is treated with specific antibiotics. ALL of the medication must be taken as directed.
- Return to the doctor if the symptoms persist.
- Sexual partner(s) should be tested and treated immediately.
- It is important to abstain from sex until the doctor verifies that the infection is gone.
- All diagnosis and treatment of Chlamydia is CONFIDENTIAL

Prevention of Chlamydia

Chlamydia is most commonly found in sexually active people between the ages of fifteen and thirty years. All sexually transmitted diseases including Chlamydia may be prevented in similar ways:

- Abstain from sexual activity. The more sexual partners an individual has, the higher the risk of becoming infected with Chlamydia.
- Sexually active individuals should use a condom to reduce the risk of infection. Condoms offer some protection for both partners.
- A person with Chlamydia should be treated at once and sexual partner(s) should be tested and treated immediately.

GONORRHEA FACT SHEET

Causes of Gonorrhea

Gonorrhea is caused by a germ called a gonococcus which dies quickly when exposed to the air. The germ thrives well in mucous membranes that line body openings.

Characteristics of Gonorrhea

Men:

- Some men have no symptoms. Two to ten days after contact with an infected person, there may be a discharge of pus from the penis and/or a burning sensation when urinating.

Women:

- Some women have no symptoms. There may be a mild burning sensation in the genital area and/or discharge from the vagina.

Possible Consequences of Gonorrhea

If untreated, gonorrhea may infect the internal sex organs causing pain and resulting in sterility. It may spread to the joints causing painful arthritis. It may also cause serious damage to sight.

- Seek medical advice
- Gonorrhea is treated with antibiotics ALL of the medication must be taken as directed.
- Return to the doctor if the symptoms persist.
- Sexual partner(s) should be tested and treated immediately.
- It is important to abstain from sex until the doctor verifies that the infection is gone.
- All diagnosis and treatment of Gonorrhea is CONFIDENTIAL.

Prevention of Gonorrhea

- All sexually transmitted diseases may be prevented in similar ways:
- Abstain from sexual activity. The more sex partners an individual has, the higher the risk of becoming infected with Gonorrhea.
 - Sexually active individuals should use a condom to reduce the risk of infection. Condoms offer some protection for both partners.
 - A person with Gonorrhea should be treated at once and sexual partner(s) should be tested and treated immediately.

SYPHILIS FACT SHEET

Causes of Syphilis

Syphilis is caused by bacteria. The bacteria are destroyed when exposed to temperature change, light, air or soap, however, they multiply rapidly in the bloodstream. It is usually spread through sexual intercourse but can also be spread through the skin and through blood transfusions.

Characteristics of Syphilis

- No symptoms for up to three months (incubation)
- Symptoms may be mistaken in first and second stages for pimples, insect bites, herpes lesions.
- Symptoms may disappear in between stages without treatment but the disease is still active.
- There are three stages:
 - first stage** - appearance of a painless sore (cancre) in the area where the contact was made, usually in the moist, genital area but may occur on the lips, tongue or rectum
 - second stage** - begins from three weeks to six months after infection
- generalized skin rash, sore throat, fever, headache, patchy loss of hair
- third stage** - may lead to serious diseases of the heart, liver, nerves, brain or even death

Possible Consequences of Syphilis

FL96C

If left untreated syphilis can:

- lead to heart disease, paralysis, blindness, mental illness, loss of memory
- may be passed on to an unborn child, leading to possible birth defects, premature birth or death of the fetus.

Treatment of Syphilis

- Syphilis is treated with antibiotics or penicillin administered by one injection.
- Treatment cannot cure any permanent damage which has occurred.
- It is important to abstain from sex until the doctor verifies that the infection is gone.
- All diagnosis and treatment of syphilis is CONFIDENTIAL.

Prevention of Syphilis

All sexually transmitted diseases including syphilis may be prevented in similar ways:

- Abstain from sexual activity. The more sex partners an individual has, the higher the risk of becoming infected with syphilis.
- Sexually active individuals should use condoms to reduce the risk of infection. Condoms offer some protection for both partners.
- A person with syphilis should be treated at once and sexual partners) should be tested and treated immediately.

PUBIC LICE FACT SHEET

Causes of Pubic Lice

Pubic lice is a sexually transmitted disease caused by crablike insects that live on the surface of the skin. Adult lice cling to the host hairs, lay eggs and cement them to the hair shafts.

Characteristics of Pubic Lice

- usually infested around genitals, anus, armpits, beard and eyelashes
- eggs can be seen with the naked eye on the base of the hair shaft
- eggs look like flecks of dandruff
- lice are rust coloured flecks that move around
- bites appear as bluish spots
- blood spots may show up on underclothing
- intense itching in infested area during the night

Possible Consequences of Pubic Lice

- bites may become infected if scratched
- loss of sleep

Treatment of Pubic Lice

FL96D

- Pubic lice are eliminated with a gamma-hexachloride preparation in cream, lotion and shampoo available without prescription from a drug store or nursing station.
- Clothing, bedding, towels that were in contact with the infected person in the past 2 weeks must be washed in very hot water
- It is important to abstain from sexual activity until the doctor verifies that the infection is gone.
- All diagnosis and treatment of pubic lice is CONFIDENTIAL

Prevention of Pubic Lice

Pubic lice may be prevented in the following ways:

- Abstain from sexual activity. The more sex partners an individual has, the higher the risk of becoming infected with pubic lice.
- Abstain from using other peoples' towels, clothing, personal items
- A person with pubic lice should be treated at once and sexual partners) should be notified immediately.

GENITAL HERPES FACT SHEET

Causes of Genital Herpes

Genital herpes is a sexually transmitted disease caused by the Herpes Simplex Virus type 2.

Characteristics of Genital Herpes

- painful, itching blister like sores in the genital area
- painful intercourse
- burning sensation during urination
- fever, flu-like symptoms
- symptoms may disappear and reappear

Possible Complications of Genital Herpes

- genital herpes cannot be cured but it can be controlled
- increased risk of cervical cancer in women
- risk of death or brain damage of fetus in an infected woman

Treatment of Genital Herpes

- No known cure for genital herpes
- Treatment is available to help sores heal faster and to prevent or reduce frequent recurrences.
- Sores should be kept clean and dry to prevent secondary infections.
- Tight clothing should be avoided.
- It is important to abstain from sexual activity during the active stage.
- All diagnosis and treatment of genital herpes is CONFIDENTIAL.

Prevention of Genital Herpes

FL96E

All sexually transmitted diseases including genital herpes may be prevented in similar ways:

- Abstain from sexual activity. The more sex partners an individual has the higher the risk of becoming infected with genital herpes.
- It is important to abstain from sexual activity during the active stage.
- A person with genital herpes should be treated at once and sexual partner(s) should be tested and treated immediately.
- BUT use of a condom does not reduce the risk of infection as in most other STDs.

TRICHOMONIASIS FACT SHEET

Causes of Trichomoniasis

Trichomoniasis is a sexually transmitted disease caused by a protozoan parasite. It can live for a few hours on damp clothing and towels.

Characteristics of Trichomoniasis

Women:

- frothy yellowish vaginal discharge with a strong odour
- irritation and itching in the genital area

Men:

- few if any symptoms

Treatment of Trichomoniasis

- Trichomoniasis is treated with the drug Metronidasol.
- It is important to abstain from sexual activity until the doctor verifies that the infection is gone.
- All diagnosis and treatment of trichomoniasis is CONFIDENTIAL.

Prevention of Trichomoniasis

FL96F

- All sexually transmitted diseases including trichomoniasis may be prevented in similar ways:
- Abstain from sexual activity. The more sex partners an individual has, the higher the risk of becoming infected with trichomoniasis.
- Sexually active individuals should use condoms to reduce the risk of infection. Condoms offer some protection for both partners.
- Abstain from using other people's towels, clothing, personal items
- A person with trichomoniasis should be treated at once and sexual partner(s) should be tested and treated immediately.

FAMILY LIFE

GRADE: 8

LESSON: 8

THEME: ABUSE PREVENTION

CONCEPT: THERE ARE MANY TYPES OF VIOLENCE THAT MAY OCCUR WITHIN THE FAMILY

- PREPARATION:
- 1 Prepare a class set of Activity Sheets FL97, 98, 99, 101, 102
 - 2 If possible obtain brochures 'Listen To The Children' and 'Arghh' Bam Pow Ouch"', (NWT Department of Culture and Communications)
 - 3 Prepare an overhead transparency of The Cycle of Violence (Activity Sheet FL100)
 - 4 Prior to the lesson, invite the R C M P to class to talk about family violence
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VOCABULARY: violence, socio-economic, ethnic, victim, batterer

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe family violence	Students: 1. Define the term 'family violence'. 2. List some outcomes of family violence.	Background Information FL107 to FL114 It is important that teachers approach the topic of family violence with sensitivity, particularly if there is a child in the class who is, or has been, a victim of family violence. Brainstorm with students what they understand by family violence. Family violence includes child abuse (including neglect), sexual assault and spousal assault. Refer to Activity Sheet FL97. Have students read Christine's Story to stimulate responses. Some outcomes of family violence include.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. Describe the characteristics of a violent family.</p> <p>4. Read "What Kind Of Man Would Beat His Wife".</p> <p>5. Describe effects of family violence on children.</p>	<ul style="list-style-type: none"> - injury (or death) to a family member - arguments and fights within the family - the breakdown of the family - likelihood of violence being repeated in next generation - increased violence over time - fear/confusion for victims and children at the time - emotional scars long afterwards <p>There is no "typical" family.</p> <p>Family violence occurs in families:</p> <ul style="list-style-type: none"> - of all ages - from all occupations - from all ethnic groups - from all religions - from all socio-economic classes <p>Refer to Activity Sheet FL98.</p> <p>After reading the article discuss the characteristics of violent men as identified in the article. It is important to point out to students that violence is not restricted to men. Women too can abuse their partners and children.</p> <p>Refer to pamphlet 'Listen To The Children', or make this pamphlet from Activity Sheet FL99.</p> <p>Have students read the pamphlet and identify common effects:</p> <ul style="list-style-type: none"> - neglect - abuse - sexual abuse - too much emotional strain <p>Have them identify long-term effects:</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) identify factors that may lead to family violence</p>	<p>6. Brainstorm a list of factors that may lead to family violence.</p> <p>7. Describe the cycle of violence.</p>	<ul style="list-style-type: none"> - likelihood of passing violence on to next generation - problems at school - problems with relationships - poor self-esteem - <p>Some factors that may lead to family violence include:</p> <ul style="list-style-type: none"> - drug abuse e.g., alcoholism - frustration - anger - unemployment - financial problems - family changes - history of family violence <p>Discuss with the whole class.</p> <p>It is important that students understand that it is not the factors which lead to family violence but the inability of an individual to cope with these life stresses. The article "What Kind Of Man Would Beat His Wife", Activity Sheet FL98, identifies some characteristics of men who assault their partners.</p> <p>Refer to Activity Sheet FL100.</p> <p>Using the overhead transparency discuss the cycle of violence. Note:</p> <ul style="list-style-type: none"> - the length of the cycle varies from family to family depending upon how long it takes for tension to build to the explosion point - the cycle continues until or unless the underlying problems are cleared up.

"Anything that happened to my Mom was part of me."

CHRISTINE'S STORY

Christine is a young, northern-born woman with a bright smile and a quick mind. She has a good job, friends, and her own home. If you met her, you'd say she was doing great; and she is. But if you got to know her better, you'd start to recognize the shaky, hurt feelings she carries inside, the effects of growing up in a violent home.

When Christine tells you her story, she often breaks into tears; she holds her hands over her ears to block out the screams that replay in her memory.

In some ways her story is unique, but in its overall patterns, it is typical of what happens to kids in violent families. It could be so different if there were help

(Names have been changed to protect the privacy of the people involved.)

—

My grandfather used to beat my grandmother up quite steadily. She has kidney problems, arthritis, things like that that are still affecting her today from the violence that was inflicted on her when she was young. Once my grandfather beat her up so badly that he had to take her out in the bush and hide her for three months, so she could recover.

All of this my grandparents, my mother, my uncles and aunts, grew up with. To them it was a normal healthy life. This was what you did.

I didn't see too much of the violence as a young child, because in 1970s kids were protected from that sort of thing. Every time there was a fight my mom would take me to another person's home until it ended. But I always saw the after effects. The bruises, the black eyes - things like that. If I asked any questions I was never given any answers. "Oh, they had a little fight." It looked like more than a little fight, but you just accepted things. I felt mixed up.

When I was nine years old my mom moved to Edmonton and started living with a man. I'll call him Bruce. I really didn't like him. But I changed my mind because my mom loved him and it felt it was important for me to like him, so I did.

I was living in the student hostel then. But when I turned eleven, I moved back with my family and we went to another community. That was a totally different story. I started to see and hear things I never had before. Bruce was always calling my mother down; and he hit her a lot.

I remember one time that really bothered me. I don't know how it started, but they were drinking and he started to hit her. As soon as my little brother saw what was happening, he ran out of the house. It was the middle of winter and he didn't even have a jacket on, just a pair of boots. Bruce kept on hitting my mom. She ran into the spare bedroom and he threw her on the floor and punched her and grabbed her hair and kept banging her head on the edge of the dresser, and I tried to push him away and I just couldn't. And I really couldn't stand it any more.

I ran outside, I don't think I even had shoes.

I found my brother sitting under an air vent that opened into the bedroom and he was still beating her up and all we could hear were her screams. Screaming. Just screaming

We had neighbours and they never did anything.

About half an hour later we went back in and went to our bedroom because we were ordered there, and we never got to see our mom. But later my mom came into my room to ask for help. She thought she had a dislocated shoulder and she asked me to pull her arm back into the socket.

I said, "No, I'm going to hurt you." She kept saying please and I said "No, I'll hurt you more." But she talked me into it, and she was screaming again when I did it I was just hurting her.

The next day she went to the nurse and she said she had fallen down a flight of stairs. I didn't know why she was protecting Bruce, but I knew it was done because my grandfather made my grandmother hide the story, so my mom hid it too.

The next day Bruce would be really nice to her, and "Oh, I love you," and "It'll never happen again and things like that. And he not only said those promises to my mom, he also said them to us, and of course we all believed him.

But he didn't stop. I don't know how many times he beat her. He did it so often it almost seemed natural. And then he started to beat me. My mom tried asking him not to hit me or getting

him to hit her instead. But it didn't work. We both got it. Sometimes she seemed to get hit because of me.

Part of my job was keeping the house clean. More and more chores were put on me, and the more my mom objected the worse it got. I tried really hard so he couldn't find something wrong with the house or with me. When I needed glasses, I never told anybody. It was just one more problem; maybe she'd get beaten up because I needed glasses or something like that.

When I was thirteen, I took a whole bunch of aspirins to commit suicide because I really was confused and I really thought everything was my fault. So maybe if I didn't live then everything would be all right. The only one that was there for me was my mom, probably because she'd tried to commit suicide herself. I know she did. There was just no way out.

At this time my mom was also an alcoholic. It was the only way she knew how to escape. It would have helped to have had someone to talk to, but with your mother being an alcoholic, there's really not a whole lot you can talk to her about. There was just nobody else.

For a long time I didn't tell anyone. Our neighbours were the kind who thought, "Oh, these people are getting divorced, they can't handle their life situation." If I had told anybody, we would have been in that same classification A failure. No good. And I would have been a failure too.

One thing that kept me going was my "substitute families". Every town we lived in I had one place I could go where I knew I was well-liked. One place I had a special friend, an

older guy, who liked the idea of a little kid tagging along. I was like a little puppy: as soon as you showed a little bit of affection, I'd follow you around. One of my special families was having trouble dealing with a divorce. But frankly I could have dealt with divorce a lot easier than with what was happening in my family.

Of course, I wanted the violence to stop and I wanted my mom to stop drinking and all those good things, but even as a little kid you know there's no great person that's going to do all that.

So what I wanted was someone to be my friend and to show me that I was cared for.

I asked my mom one time why Bruce beat us up, and she told me he had seen his dad beat his mom really bad and he'd also been hit by his dad, so he must have thought it was all right to take your frustrations out on your wife.

So I couldn't really blame him, because of that. I just blamed him for making our own lives so miserable. Why continue it? Why the macho image?

Today, it's scary - super scary - for me to have a relationship with a man. If I could have a screening test it would be just perfect. You'd have to tell me if you'd ever seen anyone beaten in your family, and if you had, then automatically "out".

And it's hard to trust too, when for most of your life you've seen a guy break every promise and say nice things to you just to get what he wants.

And, you know, it's sometimes really hard for me to feel good

about myself, after all the things that were said to me and all the hitting. And when you're told awful stuff often enough, you start to believe it, or at least to wonder if maybe it's true. So I get scared in relationships with men, scared of being rejected. Because what if it's true? What if I really am some sort of a freak? That's a scary situation. And those feelings go back to all the abuse against me and my mom.

Kids shouldn't have to grow up like that.

from: Spousal Assault Network, Department of Culture and
Communications, Government of the Northwest Territories,
June 1986.

WHAT KIND OF MAN WOULD BEAT HIS WIFE?

Every violent man has his own story and his own personality. No two are alike. But counsellors who work with batterers find that their clients often share certain characteristics which contribute to the violence. With help many men have been able to recognize and change these harmful patterns.

Men who beat women generally don't know how to recognize or talk about their feelings. They don't like admitting to any "weak" feelings - fear, anxiety, etc. - so most feelings are expressed as anger.

They tend to value traditional ideas of what it means to be a man. They often treat their partners as if they were children

They refuse to acknowledge what they are doing to their partners. They minimize and deny the violence.

They feel that their lives are controlled by people and events outside themselves. Even the violence is not their fault: "She should have known not to bug me." "I guess I drank too much."

They are often sexually insecure and become extremely threatened by the slightest hint that their partners may be "fooling around".

They have few close friends apart from their wives or girlfriends.

They expect their partners to meet all their emotional needs. **Fl98** makes them totally dependent and terrified of losing the relationship: "If she leaves me, I'll have nothing".

They have difficulty accepting praise or appreciating their own good qualities. They may become depressed and suicidal.

They often learned to be violent as children. They don't know how to solve problems in their lives or to "let off steam" in constructive ways.

from: Spousal Assault Network, February, 1985 Dept. of Culture & Communications, Gov't of the N.W.T.

LISTEN TO THE CHILDREN

It is hard enough for most of us to acknowledge the pain of adults who are beaten by their partners. Even when there are injuries that we can see, even when we hear of deaths, we have a hundred ways of pushing the horror aside. "She had it coming." "What was the matter with him to put up with that?" "I'm not putting my nose into other people's business." etc. etc.

It is even harder for us to acknowledge the pain of the children who watch the beatings take place. Their suffering is hidden: they are less likely than the adults to have visible wounds or to talk about what is happening. Few of us have begun to think about the help that these children may need.

"When my mom and dad fight, I feel sick: I feel like running away. When I feel sad I scream into my pillow. I'll get into trouble if I make too much noise. "

Carmen, 10

A Few Disturbing Facts

It is possible for a child to grow up in a violent home without coming to any serious harm. It is possible - but it is not likely. Children who live with spousal assault *often* suffer from:

Neglect. If mother is living in fear and confusion, she can't give her best attention to her children. In addition, the children may decide not to ask for what they need because they are afraid of causing trouble at home.

Abuse. In a home where it seems normal for mother to be beaten, it may also seem natural for the children to be abused.

Either parent may be responsible for the beatings. Older children may learn from their parents' example and misuse little brothers and sisters.

Sexual abuse. According to a study done at a shelter for abused women, 30% of the children aged 11 to 18 had been sexually abused. This is a much higher rate than would be found in the general population.

Too much emotional strain. Children usually feel that they are somehow to blame for the beatings. "I keep doing things that makes my mom get beaten up": that's the kind of thing they say. They also often have to take on too much responsibility, like looking after their parents (when it ought to be the other way around) or babysitting when they're too young to do it.

Long-Term Effects

Children who grow up in violent homes will not automatically become involved in violent relationships as adults. In fact, some people are so angered by brutal childhood experiences that they decide never to let violence be part of their lives again.

But many others continue to live by the patterns they have learned in childhood. A man who saw his dad beat his mom is more likely to beat his own partner. A woman who saw her mom get beaten is more likely to put up with beatings herself.

A very high percentage (one recent study says 80%) of men who batter and women who are beaten grew up with spousal assault.

A violent childhood may also have other effects on a person's adult life. It may interfere with schooling, make the person anxious about forming relationships with the opposite sex, or make it hard for the person to feel good about him or herself.

In one way or another, growing up in a violent home can hurt a person for life.

"People don't like me. You don't like me. It's everybody. Everybody doesn't like me. "

Carmen, 10

How Can You Tell?

Children who live with spousal assault are not likely to talk openly about what is happening at home. Like their parents, they are silenced by shame and fear.

But, often, we can tell from the way children act that they are in some sort of trouble. Unfortunately, we cannot tell exactly what the trouble is. Unless a child tells you, or you have some other reliable source of information, there is no way of knowing that a child is living with spousal assault.

Here are some of the ways children may act when they are under stress. If a child develops extreme signs of stress, family violence should be considered as a **possible** cause.

For a young child, spousal assault **may** lead to bed-wetting or sleep difficulties. The child may be whiny and terribly anxious about being separated from mom. He or she may develop and grow more slowly than other kids

From 6 to 12, boys from violent homes often become scrappy, explosive, and overly aggressive. Girls are more likely to become passive and withdrawn and to need excessive

amounts of approval. They may feel sick a lot.

Some of these kids become poor attenders and do badly in school; others (trying hard to be perfect to prevent trouble at home) do excellent academic work.

The stress of adolescence is especially painful for kids from violent homes. Their symptoms **may** include drug and alcohol abuse, promiscuity, pregnancy/early marriage, crime or suicide.

"Of course, I wanted the violence to stop and I wanted my mom to stop drinking and all those good things, but even as a little kid you know there's no great person that's going to do all that.

So what I wanted was someone to be my friend and to show me that I was cared for. "

Christine, 23

How To Help

One of the best ways to help children who are living with spousal assault is to help their parents.

You can do this by making sure the mother (father) has

- a safe place to go
- people to talk to who care for her/him and want the beatings to stop
- professional counselling and drug and alcohol treatment, if s/he needs it
- help and company when s/he goes to court
- help in remaking her/his life as a single (wo)man, if that is what s/he has to do
- a "support group" that s/he can join if s/he likes
- praise and encouragement from family, neighbours and

community leaders who understand the problem and recognize that the violence has to stop.

Other services that may help include: anger-control therapy for batterers; classes on "parenting" (women who can't discipline their children are more likely to return to violent men); public information and frank talk, so that people feel more comfortable about admitting they have a problem.

There are also ways of helping the children directly.

Protection. If a child is being neglected or abused, you are required by law to inform Social Services. Children who are not being mistreated may need help with "safety plans" -how to get away and where to go, during a crisis at home.

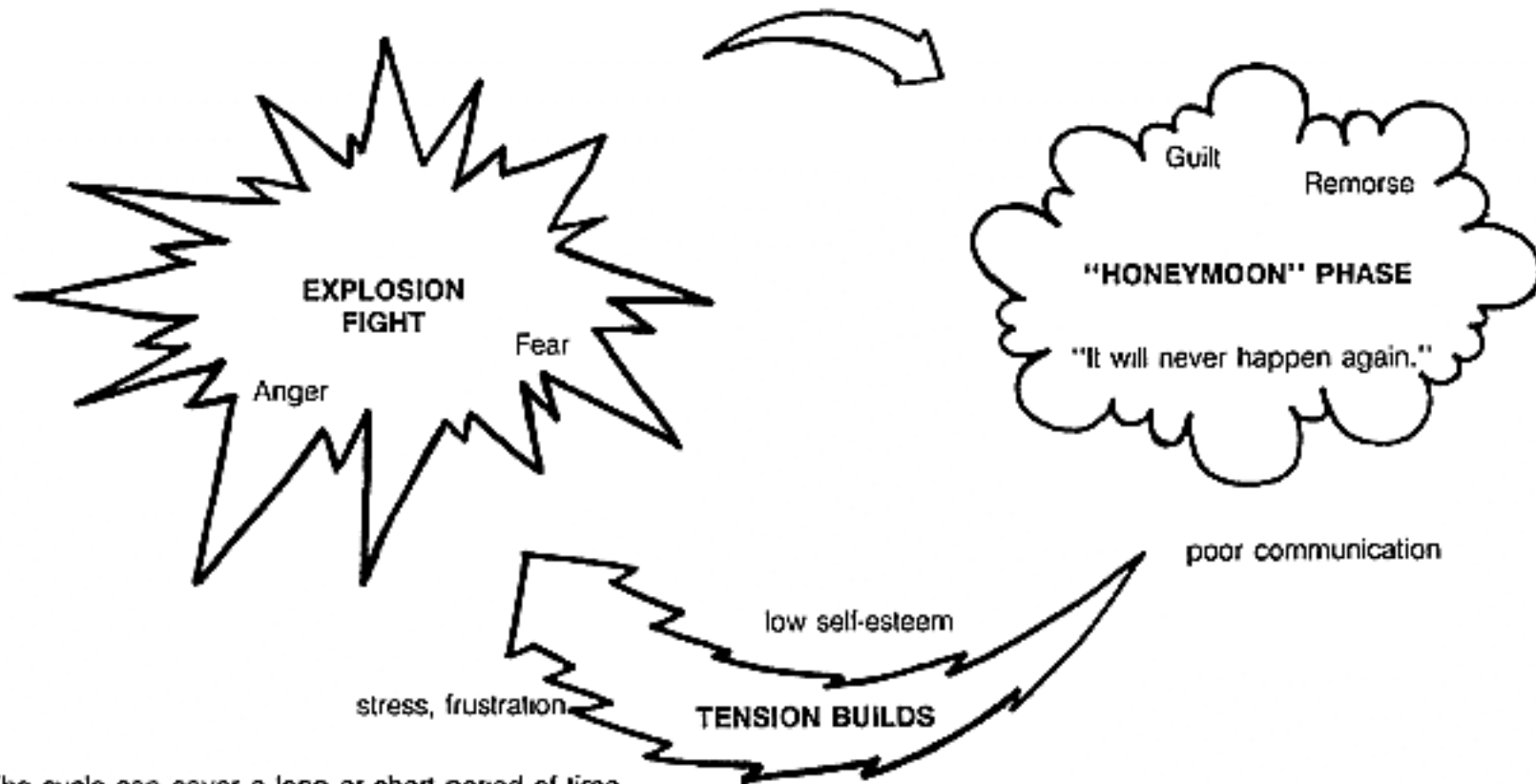
Information. Kids need to be taught the facts about spousal assault. They need to know why women stay and how the violence is passed from generation to generation. They need to know that the beatings are not their fault.

Affection. These children need friendship and encouragement - from a teacher, coach, youth group leader, relative or friend. Being liked and doing well at something will help them for life.

Myth: When the adults in the family hit each other, the kids are still O.K. They don't even really know what's going on.

Fact: Kids from violent homes know exactly what's happening. They often think it's their fault. Often they're beaten or neglected themselves. They feel angry, guilty, afraid and confused. They will likely pass the suffering on to their own children - unless the violence is stopped.

CYCLE OF VIOLENCE



- The cycle can cover a long or short period of time.
- The violence usually gets worse.

from VILLAGE TO VILLAGE, Alaska Dept. of Public Safety.

from: Spousal Assault Network, February, 1986

A FORMER BATTERER SPEAKS OUT

Q. "Was there anything your wife could have done to keep from getting beaten? Was the problem that she wasn't good enough?"

A "No. I don't think that. I think it's more along the lines that I didn't think I was good enough and I didn't believe in myself enough so that I could overcome all of my problems.

"The violence is not going to stop unless the man takes charge of himself and looks at himself and finds out why these things are happening. You can't kid yourself that if it gets better for a week, then everything will be OK. It doesn't work that way.

"At the time of my life when I was beating my wife, I didn't know anything about my feelings. You're told that boys don't get sad, boys don't cry. And you learn all that stuff. The only feeling I knew was anger. I didn't even know about all the other ones. So I had to learn all of that. I had to learn to take care of the person inside of me.

"I don't want to make it sound simple. It's not. It takes a long time. But it can be done. That's the good thing. It can be done."

from: Spousal Assault Network, September, 1986

LEARN ...

... to take a TIME-OUT!

A time-out is a simple way to prevent yourself from committing an assault. When you feel like you're getting out of control, give yourself time to cool down. You'll find it hard to do at first, but consider the alternatives! Here are a few pointers:

- First, learn to recognize when you are likely to commit an assault. Do you raise your voice? Slam doors? Yell at the children? Become silent? Drink or use drugs? Storm around the house? Throw things around? Break things? Ask questions about where your partner has been? Bring up arguments from the past?
- If you feel that you're getting out of control, tell your partner that you are angry and are going to cool off.

SAY when you will be back.

(Stay away until you're calm. Most people find it takes at least an hour.)

Do not use alcohol or drugs; do not drive a motor vehicle.

If you can, do something physically active. Don't let yourself think about whatever it was that made you mad.

If you are still angry when you go home, take another time-out.

When you get home, try to talk it out. Tell your partner how you feel. Listen to what he or she has to say to you.

LEARN ...

... to deal with stress

For many of us, violence is a way of dealing with stress. We explode, and then we feel better - for a while. In the long run, of course, violence just makes things get worse.

But there are other, healthy ways of dealing with stress that make things get better and stay better. You can prevent tension from building up by making sure you get • lots of exercise • a good diet • enough sleep • time on the land • time alone • friendship and fun • and any other simple things that make you happy.

"The biggest thing I've learned from the elders is patience. And I also learned that I can help myself. It's a simple statement but it has a lot of meaning. It means I can watch my thoughts; I can watch what I eat. I can do all of these things to help myself. "

You can also learn more about the situations in your life that cause you stress and then take action to correct them. If you have money problems, find someone to help you set up a budget. If you need to improve your education, enrol in an upgrading program. If you don't know how to discipline your kids, find an elder or a counsellor to advise you. Other people have dealt with these problems and you can, too.

from: Arghh! Bam Pow Ouch!!
Dept. of Culture and Communications
G. N. W. T.

HELP!

"There's help around us; every second of the day there's help around us."

In the N.W.T., there are a few special programs for people who want to stop abusing their families. If there's one in your community, you may want to take advantage of it. Otherwise, you will have to look for the help you need.

"Pride was a real bad problem, and the first time I told somebody about beating my wife it was hard. But it wasn't hard enough that I couldn't do it. There were things inside of me that I wanted to get free of. I had to go and talk to somebody. "

Here are some people to try:

- an addictions counsellor or alcohol treatment program. If you get violent when you are drunk, you probably have an alcohol problem as well as a violence problem. You have to get help with the alcohol problem first. Alcoholics Anonymous or AI-Anon may also be very helpful.
- your Social Worker, clergyman or other counsellor. A good counsellor or therapy program will help you learn about your feelings, so your anger doesn't build up into a violent rage
- elders, friends, relatives. People who used to abuse their partners but have stopped may be especially helpful to you.
- an adult educator or Life Skills Coach

FAMILY LIFE

GRADE: 8

LESSON: 9

THEME: LIFESTYLE

CONCEPT: POSITIVE LIFESTYLE PRACTICES PROMOTE HEALTH

PREPARATION: 1. Prepare a class set of Towards Healthy Sexuality and Family Relationships (Activity Sheet FL103)

VOCABULARY: positive behaviours, sexuality

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>Students will be able to:</p> <p>i) identify positive lifestyle practices that promote a young person's healthy sexuality and family relationships</p>	<p>Students:</p> <p>1. Brainstorm positive behaviours that promote a healthy sexuality and family relationships.</p>	<p>Background Information. -</p> <p>Review briefly each lesson in this Grade 8 unit.</p> <p>Highlight positive behaviours from each lesson and prepare a list.</p> <p>Some examples are:</p> <p>Lesson 1 - Family Patterns family members support, nurture, care for and love one another regardless of the type of family structure.</p> <p>Lesson 2 - Relationships the characteristics that promote a committed and intimate relationship.</p> <p>Lesson 4: Be able to explain human development/reproduction to someone else.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) design a personal program to promote a healthy sexuality and/or family relationships</p> <p>iii) evaluate the effectiveness of the program</p>	<p>2. Design a personal program to promote a healthy sexuality and/or family relationships.</p> <p>3. Practice his/her personal program for a given period of time.</p> <p>4. Describe the degree of success with his/her program.</p>	<p>Lesson 5 - Abstinence and Assertiveness: practise assertive responses to sexual pressure.</p> <p>Lesson 6- Be knowledgeable about birth control methods.</p> <p>Lesson 7 - STD- practise behaviours that eliminate or reduce sexual disease.</p> <p>Lesson 8 - Family Violence ways to cope with family violence.</p> <p>Refer to Activity Sheet FL103.</p> <p>Have students select a behaviour that promotes the development of a healthy sexuality and/or family relationships, and complete the first page of Activity Sheet FL103.</p> <p>Refer to Activity Sheet FL103.</p> <p>Decide on a time period for the personal program. Have students keep a daily record of their progress using the chart "How I Am Doing".</p> <p>Refer to Activity Sheet FL103.</p> <p>Have students evaluate how successful they were in working towards their goal and record the evaluation in the section "How Did I Do?"</p> <p>Successes can be shared among friends, in small groups, or as a class depending upon the goals set and whether or not students are comfortable with such sharing.</p>

How I am doing:

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
							Week 1
							Week 2
							Week 3
							Week 4

How did I do? (Summary of my daily comments, my successes in working towards my goal)

GRADE 8

TEACHER BACKGROUND INFORMATION

FAMILY LIFE

THE TERMINOLOGY OF THE FAMILY LIFE UNIT

Some students may have difficulty understanding or participating in the discussions because they have different words to describe the concept. Many students will know only the "common" or "slang" terminology. In the Family Life classes, students will be learning and using the medical terminology.

Medical Terminology	Common	Slang
urinating	peeing	pissing

Students may use the "common" or "slang" term initially, because they are comfortable using it, and/or do not know the medical term. Once the medical term has been taught in class, teachers should ensure that students refer to the concepts using the correct medical terminology.

TERMS RELATED TO THE MALE REPRODUCTIVE SYSTEM

sperm: the male reproductive cell, it generally lives for 1 to 3 days, males do not begin to produce sperm until puberty

scrotum: the outer sac or bag which holds the testicles

testicles: two glands located inside the scrotum, these are where sperm are produced, it is common for each testicle to be slightly different in size

vas deferens: the tube which leads from each testicle to the urethra; sperm travels along this tube from the testicle to the urethra

prostate gland: a large gland which surrounds the male urethra in front of the bladder, it secretes fluids which lubricate the sperm

urethra: a tube inside the penis which carries both urine and semen to the outside of the body; semen and urine do not travel down the urethra at the same time

Cowper's glands: these glands secrete a small amount of fluid into the urethra just before the sperm reach this point

penis: an external body organ through which urine and sperm leave the body

ejaculation: the discharging of semen from the body through the penis

erection: the penis grows larger, becomes stiff and hard and sticks out from the body. This happens because blood flows into the loose skin of the penis. It can result from sexual stimulation (e.g., a sexual thought, seeing an attractive person, or from rubbing the penis) or spontaneously without any apparent reason. Erections are a natural occurrence which tend to happen more frequently during puberty.

wet dreams: ejaculations which occur at night as a result of a dream

masturbation: the rubbing or stroking by a person of his/her own sexual parts. Masturbation does not cause physical harm. It is normal if a person chooses to masturbate. It is also normal if a person chooses not to masturbate.

epididymus: where sperm cells are stored before travelling along the vas deferens

seminal vesicle: produces fluid which provides nourishment and lubrication for the sperm

TERMS RELATED TO THE FEMALE REPRODUCTIVE SYSTEMS

- egg (ovum):** the female reproductive cell, it generally lives for 2 to 3 days, females are born with eggs, eggs are stored in the ovaries, at puberty the ovaries start to release one egg a month, ovum - singular, ova – plural
- vulva:** the area situated between the legs which protects the openings of the vagina and the urethra, on either side of the vulva are soft folds of tissue called labia; this does not include the anus
- vagina.** the opening through which blood and tissue leave the body at menstruation; the opening through which the male penis enters during sexual intercourse, the opening through which a baby is born
- cervix:** the neck of the uterus, opening between uterus and vagina
- uterus:** a muscular pear-shaped organ, where the fertilized egg grows and develops into a fetus, each month the lining of the uterus thickens to receive an egg, if the egg is not fertilized, the lining of the uterus leaves the body during menstruation
- ovaries:** the organs where the eggs are stored and develop, once a month, an egg matures and is released from one of the ovaries; the ovaries contain thousands of tiny, undeveloped egg sacs
- Fallopian tubes:** two tubes which connect the ovaries and the uterus The released egg travels from the ovaries along the Fallopian tubes; hairs on the walls of the tubes help the egg to move along, the sperm fertilizes the egg in the Fallopian tubes
- ovulation:** the point in the menstrual cycle when an ovum or egg cell is released from an ovary; occurs 14 to 16 days after the first day of menstruation

MENSTRUATION

Menstruation is a natural occurrence in a female's life However, if girls have not been prepared for it, it can be a frightening and worrying experience It is a signal that her body is preparing itself physically to reproduce The onset of menstruation varies from person to person -it may begin at nine years of age or at fifteen The average age, however, is twelve to thirteen years It continues until menopause, usually around age forty to fifty Once a girl starts to menstruate, it may take several years before her menstrual cycle becomes regular

The Main Events

The length of the menstrual cycle may vary from three to six weeks Usually every four weeks a female's body prepares itself for a possible pregnancy through the action of the female sex hormones An egg matures in one of the ovaries and the lining of the uterus begins to thicken, preparing to receive a fertilized egg This lining is rich in blood and will bring nutrients to the developing baby About halfway through the menstrual cycle (day 14) the ripened egg is released from the ovary (this is called ovulation) and travels along the Fallopian tube If the egg is fertilized by a sperm within two to three days, a baby begins to develop It develops for nine months in the uterus During pregnancy, menstruation does not normally occur

If the egg is not fertilized, it dissolves. The lining of the uterus is not needed to nourish and protect a baby, and so it is shed and leaves the body through the vagina. The flow of blood and tissue is called menstruation, a menstrual period, or a monthly period

The menstrual cycle begins on the first day of menstruation and ends the day before the next menstrual period begins It is usually about twentyeight days A menstrual period generally lasts four or five days, but may vary from three to seven

No one can tell exactly when a girl will begin to menstruate Some girls experience a slight vaginal discharge several months before their first period

Only a small amount of blood leaves the body each month. The blood flow is usually heavier at the beginning of menstruation, than near the end

Menstrual Hygiene

The two main types of menstrual protection which are used to absorb the blood are sanitary napkins (pads) and tampons. Pads are worn externally, usually held in place on the undergarments by an adhesive strip. Tampons are inserted into the vagina. Health professionals do not recommend the use of tampons by young girls.

Toxic Shock Syndrome

Toxic Shock Syndrome has been linked with the use of tampons during menstruation. It is a serious illness which may result in death and which most often affects young women between the ages of 15 and 25.

Symptoms include

- high fever
- diarrhea
- vomiting
- headache
- muscular pain and weakness

In a very short space of time,

- the person's blood pressure falls
- a rash appears
- skin starts to peel from the hands and feet

Preventive behaviours related to Toxic Shock Syndrome

Preventive behaviours include

- changing tampons frequently,
- using tampons with applicators,
- washing hands before inserting the tampon,
- keeping the vulva clean,
- stop using tampons if you think you may have toxic shock syndrome,
- immediately contact the doctor or community health nurse;
- avoid using tampons if you have, or have had, toxic shock syndrome.

During menstruation it is particularly important to maintain personal hygiene. When menstrual blood collects on the pad and contacts the air, bacteria grow causing an odour. Some important points to remember.

- sanitary pads should be changed at least four times daily
- females should wash the vulva regularly from front to back
- sanitary pads should be wrapped and disposed of in the garbage

Menstrual Discomfort

Most females do not experience discomfort during menstruation. However, some do experience.

- nausea
- cramps
- headaches
- a bloated feeling
- tenseness
- tiredness

These are thought to be related to hormonal action. Rest, warm baths, mild exercise and/or massaging the lower abdomen may help. If there are severe symptoms or if symptoms persist, a doctor or nurse should be consulted.

Most girls continue to participate in sports activities during menstruation.

History of Menstrual Aids

In some tribes, menstruating women still go to live in special huts apart from the rest of the community. A grass mat at their feet collects the menstrual flow. After each period the mat is burned.

Inuit women used moss wrapped in a clean, cloth rag as a sanitary pad. They would collect the moss in the summertime and store it for use in the winter. They disposed of these pads by burning them. Similarly, in many tribes of Africa, menstruating women for centuries have used "bandages" made out of grass or some kind of vegetable fibre. These bandages were burned after use.

Depending on the availability of materials, women began to use wads of cloth thick enough to absorb the menstrual fluids. These cloths required soaking, washing and drying during the time of their use.

By the turn of the 20th century packaged linen cloths, very much like diapers, were used. These were made specifically for sanitary protection, being shaped in a more comfortable style. They still needed soaking, washing and drying and still presented problems of absorbency and discomfort.

It was around 1918 that disposable sanitary pads or napkins were first introduced. Made of cotton, cellulose or a combination of both and wrapped in gauze for use with pins and belts, this type of protection has been in use ever since.

The tampon is the newest commercial form of menstrual protection, having been developed by a doctor more than forty years ago. However, the use of tampons is not a new idea. In ancient times in some parts of the world women used rolls of soft wood internally. In other parts of the world women used rolls of grass and roots.

The Cultural Importance of Menstruation

In many cultures a girl is treated differently when she has begun to menstruate. She may be treated in a more grown up way by her family and friends.

In some cultures the beginning of menstruation is designated as a time of celebration. Feasts or special ceremonies to celebrate womanhood are held. The girl is given adult clothing to wear, she is expected to do women's work and perhaps marry.

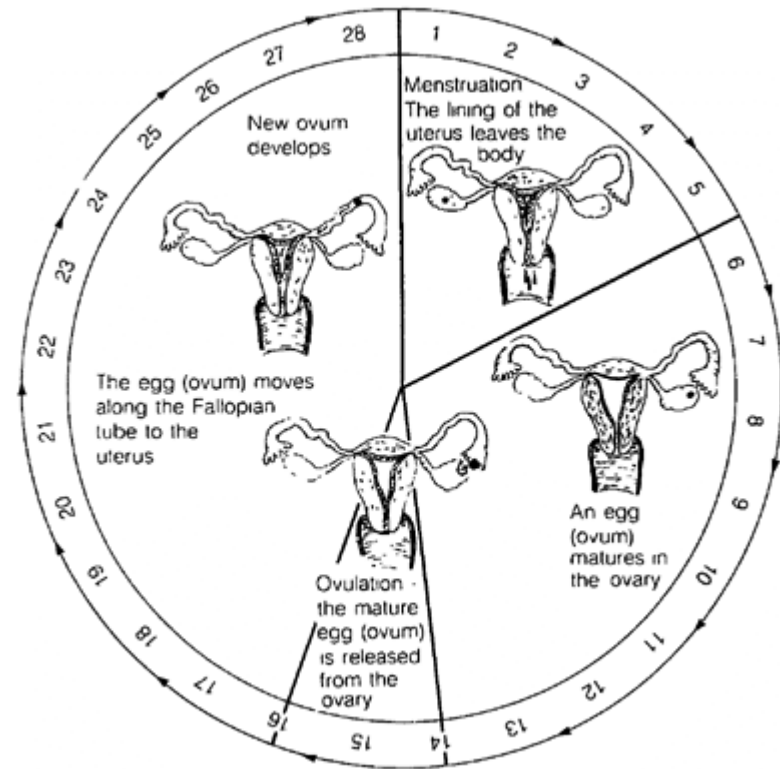
In traditional Inuit culture, a girl who had begun to menstruate was no longer spoken to as a child and was given increased responsibilities and privileges. In traditional Dene culture, a girl who had begun to menstruate had to live in a tent away from the community to practise the skills her mother had taught her. She was helped in this passage to womanhood by an elderly man, usually her grandfather, who would cook for her and serve her food. It was believed that if she did these things for herself it would increase the heaviness of the menstrual flow. After her first period had passed she was welcomed back to the community and honoured by a special feast.

In today's society many of these traditions have been lost or are simply not practised any longer. A girl's feelings about menstruating may vary depending on how much she knows about it and the accuracy of her information.

THE REPRODUCTIVE PROCESSES

- Sex cell development:** The female reproductive cell, the ovum, develops in one of the ovaries and is released once a month
The male reproductive cell, the sperm, develops in the testicles, and is released during sexual stimulation
- The pathway of the sperm:** The sperm travels from the testicles along the vas deferens to the urethra, to the outside of the body
- The pathway of the ovum:** The ovum travels from the ovary along the Fallopian tube to the uterus
- Sexual intercourse:** In order for new life to begin, the ovum has to join with a sperm. The erect penis enters the vagina. Millions of sperm are deposited into the vagina. They travel into the uterus and along the Fallopian tubes.
- Fertilization (Conception):** When a sperm cell and an egg cell join together, fertilization takes place.
- Implantation:** Shortly after fertilization, the cell divides and continues to divide until 64 cells are produced. This cluster of cells attaches itself to the wall of the uterus, where it will be nourished and protected.
- Gestation (Pregnancy):** The time during which the fetus develops in the uterus for approximately 40 weeks. This is also called pregnancy.
- Birth:** At the end of that time, the baby is ready to leave the uterus, through the cervix and vagina into the world.
- Fetal development:** The growth of the unborn baby in the uterus.

OVULATION



SEXUAL DECISION-MAKING

There are many pressures on young people to become sexually active. These pressures may come from their peers, from the media and from society in general. Many young people who are already sexually active may not really want to be, but have been unable to resist those pressures.

Reasons why young people may become sexually involved
<ul style="list-style-type: none">- pressure from boy/girl friend- desire to be part of the group- force, fear, threat- societal expectations- curiosity- to express love/caring- for pleasure- desire to appear grown-up- incest, rape
Reasons why young people may postpone sexual involvement
<ul style="list-style-type: none">- moral reasons- parental expectations- fear of pregnancy or sexually transmitted diseases- either or both partners not ready for sexual involvement- fear of damage to reputation- decision to wait until commitment to relationship is made

Everyone, at different times in his/her life, has to make decisions related to sexuality. Although people share many similarities in this area, e.g., everyone wants to love and be loved, they also have different needs and values. Deciding whether or not to be sexually active is only one aspect, however. Young people who decide not to be sexually active must have the necessary assertiveness skills to allow them to say "No".

Abstinence is recommended by health professionals as the most responsible choice, from a health point of view, for young people. Early participation in sexual activity may have serious health risks and consequences - physical, emotional and social - for a young person.

Advantages of abstinence for young people
<ul style="list-style-type: none">- freedom from fear of pregnancy and sexually transmitted diseases- freedom from guilt- satisfaction of being in control of one's own life- time to develop commitment to relationship
Disadvantages of abstinence for young people
<ul style="list-style-type: none">- continued pressure from partner and/or group- possible termination of relationship- risk of health problems (especially mental, social)

Adolescent pregnancy

If a young girl becomes pregnant, there are health risks for both mother and child

The School Health Program looks at adolescent pregnancy as it relates to the overall health of the parents - in particular, the mother - and the child

Health Risks and Consequences for the Mother

- higher risk of pregnancy complications and birth difficulties e.g , premature baby, long labour
- difficulties because of poor diet, poor prenatal care, incomplete physical growth of mother
- medical risks such as haemorrhage, high blood pressure, anaemia, toxemia
- may have to drop out of school
- may have little money, may need assistance
- mental and emotional health problems e g , loneliness, isolation, low self-esteem, guilt
- problems about what kind of job, if any, is available to her
- pressure to marry
- higher risk of divorce if married at a young age
- poor housing because of little money
- problems handling pregnancy, a relationship and growing up at the same time

Health Risks and Consequences for the Fetus/Child

- higher rate of infant mortality, deformities, low birth-weight, lower intellectual potential
- complications related to tobacco and alcohol use e g , fetal alcohol syndrome
- less stimulation for child for growth and development
- increased likelihood of childhood diseases e g , respiratory problems
- increased risks of child abuse

SEXUALLY TRANSMITTED DISEASES (STDs)

Sexually transmitted diseases are diseases which are spread by sexual contact with an infected person. There are many kinds of sexually transmitted diseases. Only the more common ones are dealt with in detail in the School Health Program. However, many aspects of the more common STDs are applicable to all e.g., method of transmission, and ways of preventing the spread of STDs

CHLAMYDIA

Causes	Characteristics	Consequences	Treatment	Prevention
<ul style="list-style-type: none"> - germ called ureaplasma - sometimes unknown - organism 	<ul style="list-style-type: none"> - discharge from the penis - burning or itching around the opening of the penis - rectal discharge - often no symptoms - vaginal discharge - pain, itching, burning around vagina 	<ul style="list-style-type: none"> - may spread through reproductive system - may give abdominal pain, fever, nausea, headache, vomiting - may cause scarring in the reproductive system may cause sterility - may create health problems in the unborn baby - may cause inflammation of the joints 	<ul style="list-style-type: none"> - seeking medical advice - take prescribed antibiotics as instructed - return to doctor/nurse if symptoms persist - testing and treatment of sexual partner(s) - abstain from sexual activity until free from infection - confidential 	<ul style="list-style-type: none"> - sexual abstinence - if sexually active, use a condom - if infected, get treatment - ask partner(s) to be tested and treated - if sexually active, having only one sexual partner who is free from infection

GONORRHEA

Causes	Characteristics	Consequences	Treatment	Prevention
<ul style="list-style-type: none"> - a germ called gonococcus - germ thrives in mucous membranes - germ dies quickly when exposed to air 	<ul style="list-style-type: none"> - often no symptoms - discharge from penis - burning feeling when urinating - mild burning feeling in the female genital area - discharge from the vagina 	<ul style="list-style-type: none"> - infection in reproductive system - pain in internal sex organs - may cause sterility - may cause inflammation of the joints - may cause damage to vision 	<ul style="list-style-type: none"> - seeking medical advice - take prescribed antibiotics as instructed - return to doctor/nurse if symptoms persist - testing and treatment of sexual partner(s) - abstain from sexual activity until free from infection - confidential 	<ul style="list-style-type: none"> - sexual abstinence - if sexually active, use a condom - if infected, get treatment - name sexual contact(s) - if sexually active, having only one sexual partner who is free from infection

SYPHILIS

Causes	Characteristics	Consequences	Treatment	Prevention
<ul style="list-style-type: none"> - the bacteria are called 'treponema pallidum' - thrive in warm moist conditions 	<ul style="list-style-type: none"> - often no symptoms - small pimple may appear (10-90 days after sexual contact) (1st stage) - extremely contagious - if untreated, redness and pimples may appear all over the body (2nd stage) - white spots in the mouth - sore throat - hair loss - aching bones - general fatigue and aches and pains 	<ul style="list-style-type: none"> - most dangerous STD - if untreated, may damage vital organs - if untreated, may lead to paralysis, blindness and death 	<ul style="list-style-type: none"> - seek medical treatment - take prescribed antibiotics as instructed - return to doctor/nurse if symptoms persist - testing and treatment of sexual partner(s) - abstain from sexual activity until free from infection - confidential 	<ul style="list-style-type: none"> - sexual abstinence - if sexually active, use a condom - if you think you have syphilis, get treatment - name sexual contact(s) - ask partner(s) to be tested and treated

TRICHOMONIASIS

Causes	Characteristics	Consequences	Treatment	Prevention
<ul style="list-style-type: none"> - a micro-organism called trichomonad - may survive for several hours on a moist object e.g. a towel, therefore not always sexually transmitted 	<ul style="list-style-type: none"> - severe itching in genital area - unpleasant odours - severe discharge - male may not show any symptoms, but can still transmit the disease 		<ul style="list-style-type: none"> - ointment - oral medication as prescribed - return to doctor/nurse if symptoms persist - testing and treatment of sexual partners) - abstain from sexual activity until free from infection - confidential 	<ul style="list-style-type: none"> - sexual abstinence - if sexually active, use a condom - if you think you have trichomoniasis, get treatment - ask partner(s) to be tested and treated

GENITAL HERPES

Causes	Characteristics	Consequences	Treatment	Prevention
<ul style="list-style-type: none"> - virus is from same family as the "cold sore" - most common STD - tiredness, stress or poor diet aid the development of herpes 	<ul style="list-style-type: none"> - more common in females than males - small, painful red pimples usually in the genital area 	<ul style="list-style-type: none"> - women may develop cervical cancer 	<ul style="list-style-type: none"> - ointment or cream as prescribed - return to doctor/nurse if symptoms persist - testing and treatment of sexual partner(s) - abstain from sexual activity until free from infection - confidential 	<ul style="list-style-type: none"> - sexual abstinence - if sexually active use a condom - if you think you have genital herpes, get treatment - ask partner(s) to be tested and treated

PUBIC LICE (CRABS)

Causes	Characteristics	Consequences	Treatment	Prevention
<ul style="list-style-type: none"> - feed from blood vessels in the skin - spread by sexual contact, but also transmitted by sheets, toilet seats, etc 	<ul style="list-style-type: none"> - look like miniature crabs - cause severe itching 		<ul style="list-style-type: none"> - medicated ointment/cream/shampoo from the nursing station or drugstore 	<ul style="list-style-type: none"> - general personal hygiene

* Under the N.W.T. Public Health Act, nurses/doctors are required to report the following STDs to the Chief Medical Health Officer for the N.W.T. - syphilis, gonorrhoea, AIDS/AIDS infection, chlamydia

BIRTH CONTROL METHODS FOR YOUNG PEOPLE

The decision by a young person to become sexually active is often made on the spur of the moment. Although they may be worried about becoming pregnant, the majority of sexually active young people do not use effective birth control methods for a number of reasons:

- the circumstances in which the decision to have intercourse is made, - in general, the disapproval by society of young peoples' sexual activity, and, hence, of birth control for them,
- guilt, fear of being 'found out';
- embarrassment in both obtaining and using contraceptives.

Young people are forced to make many decisions related to their own sexuality, particularly during their adolescent years. These decisions carry many responsibilities and consequences. The decision to become sexually active carries a responsibility by both males and females to use effective birth control methods. The consequence of not accepting this responsibility is often experienced the hard way - if they become teenage parents. Both the decision to abstain from sexual activity and the decision to use contraceptives require strong assertiveness skills on the part of those following through on the decision.

Method	Availability	Effectiveness	Advantages	Disadvantages
sexual abstinence	<ul style="list-style-type: none"> - requires mutual consent of both partners - accepted by many young people 	<ul style="list-style-type: none"> - 100% effective 	<ul style="list-style-type: none"> - freedom from fear of pregnancy and STDs - freedom from guilt - satisfaction of being in control of one's life - time to develop commitment to relationship - respect for self is maintained 	<ul style="list-style-type: none"> - continued pressure from partner and/or peer group - possible termination of relationship - risk of health problems (especially mental and social) - may be difficult to be assertive
the pill	<ul style="list-style-type: none"> - on prescription from doctors or qualified nurses - a medical examination is required first 	<ul style="list-style-type: none"> - 96% - 99% effective 	<ul style="list-style-type: none"> - freedom from fear of pregnancy - reduces amount of menstrual flow, may reduce cramping - reversible - decreased chance of some health problems e.g., anemia - allows for spontaneity in sexual activity 	<ul style="list-style-type: none"> - minor side effects e.g., headache, weight gain, nausea, depression - possible increased chance of some serious health problems e.g., blood clot, stroke, etc. - if on the pill, there may be increased pressure to have intercourse
condom	<ul style="list-style-type: none"> - free from nursing stations - can be bought in stores 	<ul style="list-style-type: none"> - 80 - 90% on its own - 99% with spermicide foam 	<ul style="list-style-type: none"> - also protects against STDs - usually no side effects - easy to obtain, carry around and use 	<ul style="list-style-type: none"> - may produce an allergic reaction - condom must not be damaged (note expiry date) - requires planning - obtaining a condom may cause embarrassment - may have a negative image

Method	Availability	Effectiveness	Advantages	Disadvantages
spermicide	- can be bought in stores	- 50-80% alone - 99% with condoms	- helps protect a little against STDs	- directions must be followed carefully - may not be available in all communities - more foam must be applied if more than 15 minutes elapses before intercourse - may produce an allergic reaction
IUD (intra-uterine device)	- requires services of doctor or nurse (with appropriate training)	- 97-99%	- allows for spontaneity in sexual activity - is effective over an extended period of time	- may be some health risks e.g., Pelvic Inflammatory Disease - may be some side effects e.g., cramping, heavier bleeding, etc - may be displaced - not generally recommended for young girls because of health risks
diaphragm	- must be fitted by a doctor or nurse	- highly effective when used with spermicide	- almost no medical risks - helps protect against STDs - easy to carry around	- must fit properly - must be instructed in its use - may become displaced - must be left in place for 6-8 hours after intercourse - does not permit spontaneity (although it may be inserted up to 6 hours before – spermicide should be reapplied if more than 2 hours has elapsed)
natural family planning	- free, requires some prior knowledge	- when used in combination, the three methods of natural family planning are about 88% effective	- no side effects - become knowledgeable about own body and cycle	- may be difficult to follow if cycle is irregular - not reliable for young people, because many young girls do not have regular cycles - must take temperature every day for several months to establish a pattern - requires consistency in recording information - may be frustrating during time when intercourse cannot take place
withdrawal	- free	- high failure rate - 25-75% effective	- allows for spontaneity in sexual activity	- frustrating - messy - creates anxiety about its effectiveness

SPOUSAL ASSAULT

There are different ways to be battered, different styles that can be used to make another person feel shamed, humiliated, and worthless. Battering can be physical, emotional, psychological or spiritual. Or any combination of those.

Facts

Most victims of spousal assault are women - 95%.

In Canada, at least one woman in ten is beaten. In the North, the figure is likely higher - estimates place it closer to one in four.

Boys who see violence at home are three times more likely than others to beat their spouses.

Many women are given tranquilizers and other drugs when their real problem is abuse.

If nothing is done, the beatings get worse over time and often lead to serious disability and death.

Battered women are caught in a "cycle of violence" and may need years of help and support before they can stop the assaults or get away.

Violence is learned and can be unlearned - with professional help.

In homes where the mother is beaten 87% of the children are also seriously abused or neglected.

The Cycle of Violence

People find it hard to break out of violent relationships for many reasons. One factor is a pattern of feelings and actions that has been called "the cycle of violence".

Women often find that knowing this cycle makes it easier for them to understand why they are letting themselves be abused. They can see that it was not just "Love" that kept them there but a confusing merry-go-round of feelings. Knowing the cycle also helps them predict when an assault is likely to happen so they can keep themselves safe.

Men find the cycle helps them understand why they keep repeating a behaviour they have promised (often sincerely) to stop. They can begin to recognize the sources of stress in their lives, identify signs of increasing tension in themselves, and plan ways of avoiding violence as they approach the "explosion".

It can take two years, two weeks or two days to go around the cycle. If the underlying problems are not cleared, the family goes through it again.

Tension build-up

Everyone is under stress every day, on the job, with children, with their partner. If a family doesn't have good communication and problem-solving skills, and a healthy way of life, the tensions will gradually build.

Explosion

When the tension reaches a certain point, there will be an explosion or fight. This is usually when physical violence occurs.

Remorse, or honeymoon

After the explosion, there will be a period of great remorse and apology for what happened. Everyone is sorry about the violence and promises never to do it again. This is usually a happy and hopeful time for the couple.

One reason the cycle is so hard to break is that the honeymoon period creates the illusion that everything is okay.

from Spousal Assault Network, G.N.W.T., Feb. '86.

Adapted from
"Village to Village"

Alaska State
Dept of Public Safety, 1983

N.W.T. Transition Houses

1. MacAteer House
Y.W.C.A. Yellowknife
2. Sutherland House
Tawow Society, Fort Smith
3. Nutaraq Place
Agvvik Society, Iqaluit

Community Crisis Shelters

1. Tuk Crisis Centre
Tuk Crisis Committee, Tuktoyaktuk
2. Rankin Inlet Shelter
Kataujaq Society, Rankin Inlet
3. Spence Bay Shelter
Spence Bay
4. Hay River Shelter
Women's Centre, Hay River
5. St. Michael's Crisis Shelter
Katimavik Centre
Cambridge Bay

Treatment Resources

1. N.W.T. Family Counselling Centre
Yellowknife, N.W.T.
2. Inuvik Branch - Mental Health Association
Family Counselling Centre
Inuvik, N.W.T.

SPOUSAL ASSAULT NETWORK

Both current. and back issues of this quarterly newsletter can be obtained from

Public Affairs Officer
Department of Culture and Communications
Government of the Northwest Territories
Box 1320
Yellowknife, N.W.T.
X1A 2L9
(403) 873-7615

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CHILD ABUSE

The U S National Committee for Prevention of Child Abuse (1977) defines child abuse as:

"a non-accidental injury or pattern of injuries to a child."

Except in the case of sexual abuse by a stranger, child abuse is not usually a single act, but, rather, a pattern of behaviour.

Child abuse often occurs within a 'trust relationship i.e., the abuser has some responsibility to, or relationship with, the victim (family member, babysitter etc) or has a professional relationship with the victim such as a teacher.

What is Child Abuse?

Child abuse is a global term and takes many forms.

1. Physical Abuse

This can be defined as:

"any non-accidental infliction of physical injury upon a child" by a caretaker.

This may be the most easily detected form of child abuse, as scars, bruises, broken bones can be seen. However, psychological scarring also occurs, and does not disappear as quickly as the bruises.

2. Child Sexual Abuse

The British Columbia Ministry of Human Resources defines child sexual abuse as:

"the sexual exploitation of a child who is not developmentally capable of understanding or resisting the contact, or a child or adolescent who may be psychologically or socially dependent upon the perpetrator."

It includes a range of behaviours, from exposing of private parts, forced participation in masturbation and fondling to full intercourse.

3. Emotional Abuse or Maltreatment

This can be defined as all acts of omission or commission which result in

"the absence of a nurturing environment for the child."

Acts of omission include ignoring or passively rejecting the child, or withholding affection or praise. Acts of commission include constant yelling, demeaning remarks, threatening and verbally rejecting the child. This is probably the most widespread form of child abuse but the most difficult to identify or prove. Emotional abuse is inevitably present with the other three forms of abuse.

4. Neglect

This occurs when caregivers fail to provide a child with the basic necessities of life e.g., food, clothing, shelter, medical care, safety, nurturing, etc. This form of abuse is usually not intentional. It can be the result of ignorance of what is appropriate care, an inability to plan ahead, unrealistic expectations of what the child can do for himself, or the consequence of parents incapacitated through illness, injury or handicap.

The effects of child abuse are cumulative. The longer the abuse continues, the more serious it becomes, and the more serious are the child's injuries.

Indicators of Child Abuse

Signs of child abuse do not usually appear in isolation, but rather as a syndrome. It is most important to recognize that the behavioural signs are indicative of stress in a child's life and should be investigated further. However, they are not all-conclusive in indicating abuse.

Type of Abuse	Physical Indicators	Behavioural Indicators
Physical	<p>Unexplained bruises and welts</p> <ul style="list-style-type: none"> - on face, lips, or mouth - on torso, back, buttocks, or thighs - in various stages of healing - clustered or forming patterns - shaped like recognizable object (e g , belt buckle) - appearing regularly after absences, weekends, or vacation periods <p>Unexplained burns</p> <ul style="list-style-type: none"> - by cigars or cigarettes, especially on soles, palms, back, or buttocks - by immersion in hot liquid, especially on hands, feet, buttocks, or genitalia - shaped in a recognizable form (e g , electric range coils, electric iron) - by rope on arms, legs, neck, or torso <p>Unexplained fractures</p> <ul style="list-style-type: none"> - of skull, nose, or facial bones - in various stages of healing - in multiple locations <p>Unexplained lacerations or abrasions</p> <ul style="list-style-type: none"> - on mouth, lips, gums, or eyes - on external genitalia 	<p>Wary of adult contacts</p> <p>Apprehensive when other children cry</p> <p>Extreme aggressiveness or extreme withdrawal</p> <p>Fear of parents</p> <p>Fear of going home</p> <p>Reporting of injury by parents or others</p>
Sexual	<p>Difficulty in walking or sitting</p> <p>Torn, stained, or bloody underclothes</p> <p>Pain or itching in genital area</p> <p>Bruises or bleeding m external genitalia, vaginal, or anal areas</p> <p>Venereal disease symptoms, especially in pre-teens</p> <p>Pregnancy</p>	<p>Unwillingness to change clothing or to participate in physical education classes</p> <p>Withdrawal, fantasy, or infantile behaviour</p> <p>Bizarre, sophisticated, or unusual sexual behaviour or knowledge</p> <p>Poor peer relationships</p> <p>Chronic delinquency</p> <p>Reporting of sexual assaults</p>

Type of Abuse	Physical Indicators	Behavioural Indicators
Emotional	Speech disorders Lag in physical development Severe allergies, asthma, or ulcers Alcohol or drug abuse	Habit disorders (e g , thumb sucking, lip biting, rocking) Antisocial or destructive conduct Psychoneurotic traits (e g , hysteria, obsessions, compulsions, phobias, hypochondria) Behaviour extremes of compliance or aggression Inappropriate adult or infantile behaviour Mental and emotional developmental lags Suicide threats or attempts
Neglect	Consistent hunger Poor hygiene Inappropriate dress Unattended physical problems or medical needs Alcohol or drug abuse	Begging for or stealing food Early arrivals at and late departures from school Constant fatigue or listlessness Chronic delinquency, especially thefts Reporting of no caretaker at home

(Adapted from *The Educator's Role In the Prevention and Treatment of Child Abuse and Neglect* Washington. D.C.: U.S. Department of Health and Human Services, 1984)

SEXUAL ASSAULT

In January 1983, a new federal law dealing with assault and sexual offences came into force.

Sexual assault is forced sexual activity without the consent of one of the people involved. Examples of sexual assault include:

- obscene phone calls
- Kissing
- fondling
- sexual intercourse
- incest
- indecent exposure
- sexual harassment (gestures, whistling, etc)
- child molestation
- gross indecency

The final decision on whether a sexual assault has been committed rests with the judge.

There are consequences for both the victim and the offender. Some possible consequences include:

Victim	Offender
<ul style="list-style-type: none"> - feelings of guilt, anxiety, anger - feelings of guilt, shame, responsibility - fear of another attack - fear of being unable to cope with a sexual relationship - some physical symptoms - fear of infection and pregnancy - disturbances in sleep patterns/nightmares - humiliation - sense of powerlessness - confused/disoriented 	<ul style="list-style-type: none"> - imprisonment - social isolation from family, friends, community - further loss of self-esteem - loss of job - publication of name in media - feelings of guilt, shame

PREVENTIVE BEHAVIOURS RELATED TO SEXUAL ABUSE

Preventive behaviours include

- walking in well-lit areas or roads
- walking in pairs or groups
- letting family members know where you will be when away from home
- not hitchhiking or taking rides with strangers
- planning to be met by family member if it is late and you are alone
- saying No to situations that may lead to sexual assault
- having family, friend and community supports to talk with if a potentially dangerous situation exists
- trusting your instincts

Behaviours to avoid sexual assault in the form of incest include

- talking to trusted people in the community who can help (e g , teacher, nurse, priest)
- not going home if the person suspects there's likely to be an assault (e g , if the offender has been drinking)

**DEPARTMENT OF EDUCATION GUIDELINES FOR EDUCATION
PERSONNEL REPORTING SUSPECTED CHILD ABUSE**

Any person employed by the Department of Education, a Board of Education, or a Divisional Board of Education in the Northwest Territories who suspects child abuse shall:

- 1 Immediately report orally the details of the suspected abuse to the local or regional representative of the Department of Social Services.
- 2 Inform the principal of the school of the report.
- 3 Follow-up the oral report to the local or regional representative of the Department of Social Services, as soon as possible, with a written report to the Superintendent of Child Welfare in Yellowknife.
- 4 Upon receiving a report from an employee, the principal shall immediately inform the Regional Superintendent of Education that a report of suspected child abuse has been made.
- 5 Staff shall not contact the child's family or the suspected perpetrator or anyone else to inform or further investigate the circumstances of the suspected abuse. This is the responsibility of the Department of Social Services and the R.C.M.P.
- 6 Any information, oral or written, about child abuse cases is confidential. All written records or reports must be treated confidentially and should not be placed in the child's record or cumulative file. Information necessary in the conduct of the investigation or subsequent treatment of the child or the offender must be shared with the authorized agencies.
- 7 The above procedures will also be followed by adult educators with regard to children who are or, in the absence of evidence to the contrary, appear to be under the age of 18 years of age. However, adult educators are not required to inform the principal of the school.

Supt. of Child Welfare
Department of Social Services
Box 1320
Yellowknife, X1A 2L9
(403-873-7709)

GRADE 8

NUTRITION

NUTRITION

GRADE: 8

LESSON: 1

THEME: ENERGY BALANCE

CONCEPT: EACH PERSON HAS DIFFERENT ENERGY NEEDS

- PREPARATION:
1. Prepare a class set of the Energy Needs worksheet (Activity Sheet N58A)
 2. Prepare a class set of the Energy Poem (Activity Sheet N58B)
 3. Prepare an overhead transparency of Activity Sheet N59
 4. Prepare a class set of the High/Low - Do You Know? worksheet (Activity Sheet N60)
-

VOCABULARY: energy, metabolism, kilocalorie, moderate, strenuous, nutritious

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) define energy, metabolism and kilocalorie	Students: 1. Explain why we eat food.	Background information: Page N84 to N89 We eat food to live. The nutrients in food sustain growth and good health and give people the energy to work and play. Have students think about how they feel when they don't eat. They might feel: <ul style="list-style-type: none">- tired- listless- lazy- irritable- unable to concentrate

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify the factors that determine our energy needs energy needs	<p>2. Define the terms energy, metabolism and kilocalorie.</p> <p>3. Explain how energy needs are determined.</p> <p>4. Complete the Energy Needs worksheet.</p>	<p>Use a dictionary and general discussion to define the terms. Energy is power or strength in use (the ability to do work). "Work" means all physical movement. Metabolism is the process in which the body breaks down (burns) food to release energy and then uses the energy to build and repair body tissue. A kilocalorie is a measurement of energy. Students know that the food they eat contains nutrients. They have learned six major nutrients:</p> <ul style="list-style-type: none"> - protein - fat - minerals (iron and calcium) - carbohydrates - vitamins (A, B, C) - water <p>Three of these nutrients also provide energy. Energy is taken into the body in foods containing protein, carbohydrates and fats. It is measured in kilocalories (kcal)*. Energy is put out by the body when we work (any physical activity). We commonly say, "We are burning calories." *Canada's Food Guide now uses "kilocalories" to replace the commonly used term "calories", i.e., the amount of energy needed for physical activity (work and leisure).</p> <p>Refer to Activity Sheet N58A.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES										
	<p>5. Make a list of factors that determine the energy needs for basic body functioning and for physical activity.</p>	<p>Use student responses to Activity Sheet N58A to identify factors that determine these needs. Develop experience charts as shown.</p> <table border="1"> <thead> <tr> <th colspan="2">Basic Body Functions</th> </tr> <tr> <th>Factors</th> <th>Needs</th> </tr> </thead> <tbody> <tr> <td>Age</td> <td>- during rapid growth periods, energy needs increase e.g., infants, adolescents</td> </tr> <tr> <td>Sex</td> <td>- different body compositions have different energy needs e.g., males have greater system of muscles</td> </tr> <tr> <td>Body size</td> <td>- the larger the body size, the greater the energy needs</td> </tr> </tbody> </table>	Basic Body Functions		Factors	Needs	Age	- during rapid growth periods, energy needs increase e.g., infants, adolescents	Sex	- different body compositions have different energy needs e.g., males have greater system of muscles	Body size	- the larger the body size, the greater the energy needs
Basic Body Functions												
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Body size	- the larger the body size, the greater the energy needs											

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
iii) identify the energy used for different activities	6. List a variety of activities that they do daily.		
		Physical Activities	
		Factors	Needs
		Fitness and Recreation activities	<ul style="list-style-type: none"> - activities designed for specific reasons e.g., cardiovascular fitness, to lose weight, etc. - some activities and sports require more energy than others, e.g., playing cards requires less energy than dancing; watching TV less than walking
		Work activities	<ul style="list-style-type: none"> - some jobs require more energy than others, e.g., loading trucks requires more energy than typing
Daily activities	<ul style="list-style-type: none"> - daily choices affect energy needs, e.g., walking to school vs driving, playing hockey or watching it 		
		Brainstorm with students all the activities they have participated in from the time they got up to the time they went to bed e.g., <ul style="list-style-type: none"> - got up - washed face, etc. - walked to school. 	

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
iv) classify foods based on stored energy	7. Classify the activities into three groups based on energy used -light, moderate, strenuous.	Record the student responses on an experience chart as illustrated.		
		Very Light to Light	Moderate	Strenuous to Very Strenuous
		<ul style="list-style-type: none"> - washed face, etc. - casual walking (e.g.,to school) - watching TV - talking with friends - driving a snowmobile - light housework 	<ul style="list-style-type: none"> - fast pace walking - climbing stairs - bicycling - skating - snowshoeing 	<ul style="list-style-type: none"> - running - skiing - swimming - rowing a boat - chopping wood - shovelling snow
	8. Say the Energy Poem.	Refer to Activity Sheet N5813.		
	9. Compare low and high energy foods.	<p>Refer to Activity Sheet N59. Low energy foods are usually more nutritious and provide many of the nutrients which our bodies need. High energy foods usually contain large amounts of sugar and/or fat and salt. Use the overhead transparency to discuss high and low energy foods.</p>		
	10. Complete the "High/Low - Do You Know?" worksheet.	<p>Refer to Activity Sheet N60. Refer to Activity Sheet N59 as an answer guide.</p>		

ENERGY NEEDS

Who needs more energy (or who needs to eat more kcalories)?

Read about each pair of people below.

Put a in the box for the person you think needs more energy.

Put a in the box for the person you think needs less energy.

Carla is 12 years old.

Carla's grandmother is 83.

Tony is a man.

Toni is a woman.

Jill wears size 28 jeans.

Brenda wears size 32 jeans.

Jason goes cross-country skiing every Saturday.

James spends Saturdays working on his model planes.

Elaine's father is a trapper.

Sandra's father is a cook at a hotel.

George clears his snow from his steps and porch.

Joe hires someone to shovel his snow.

ENERGY



Climbing stairs
Running fast
Playing ball
I can't last!
No energy!



Skiing along
Walking about
Riding my bike
I'm tired out!
No energy!

Sitting in class
In a lazy state
Ate no breakfast
Can't concentrate!
No energy!






Eat some food
Nutritious is best
Gives you health
Gives you zest!
AM - energy!

Helen Balanoff



LOW AND HIGH ENERGY FOODS

	Low Energy Foods		High Energy Foods	
Foods Which Belong to a Food Group	High in nutrients, Low in sugar/fat/salt 	skim milk, 2% milk, plain yogurt, lowfat cheese, cottage cheese	High in nutrients, High in sugar/fat/salt 	whole milk, ice cream, flavoured yogurt, cream, cheese
		caribou, moose, chicken, fish, eggs, dried beans and peas, lean meats, organ meats		sausages, peanut butter, nuts
		unsweetened fruit juice, fresh berries, fruits, vegetables, plain frozen fruits and vegetables, fruits canned in "own juice"		fruits canned in "heavy syrup", frozen vegetables in sauces, dried fruit, sweetened fruit juice
		bannock, whole grain muffins, bread, (unsweetened) cereals, plain popcorn, pilot biscuits		
Foods Which Do Not Belong to a Food Group		water broth	Low in nutrients High in sugar or fat or salt 	sweetened cereals, cake, doughnuts, cookies, pastries
				soft drinks, chips, chocolate bars, candies, sugar, butter or margarine, cream, cream cheese, sour cream, buttered popcorn

HIGH/LOW - DO YOU KNOW?

From the food items listed below, decide which are high energy and which are low energy foods. Write the name of each food in the appropriate column.



	Low Energy	High Energy
<p>Milk and Milk Substitutes</p> <ul style="list-style-type: none"> - powdered skim milk, whole milk, cream - milkshake, ice cream - fruit flavoured yogurt, plain yogurt - cheese, low fat cheese <p>Meat, Fish, Birds and Eggs</p> <ul style="list-style-type: none"> - eggs, fish - pork sausages, peanut butter, caribou - dried beans, nuts, chicken - hot dogs, rabbit <p>Bannock, Bread and Cereals</p> <ul style="list-style-type: none"> - bannock, cinnamon buns - fried rice, bran muffins, unsweetened cereal - cookies, pilot biscuits, soda crackers <p>Fruit and Vegetables</p> <ul style="list-style-type: none"> - cranberries, pears canned in their own juice - peaches in heavy syrup, dried fruit, unsweetened fruit juice - boiled potatoes, fried potatoes, creamed corn <p>Other</p> <ul style="list-style-type: none"> - donuts, luncheon meat, cake, bologna 		

NUTRITION

GRADE: 8

LESSON: 2

THEME: ENERGY BALANCE

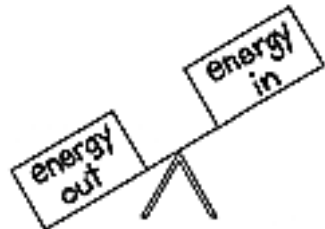
CONCEPT: ENERGY BALANCE IS WHEN ENERGY INTAKE EQUALS ENERGY OUTPUT

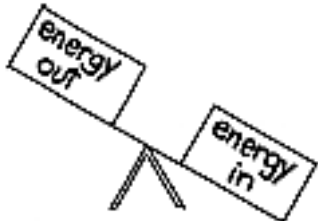
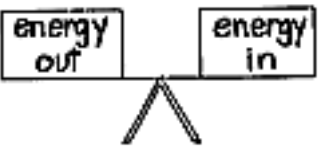
PREPARATION:

1. Materials for bulletin board display
2. Prepare a class set of Energy Content of Common Foods (Activity Sheet N61)
3. Prepare a class set of A Day's Food Intake worksheet (Activity Sheet N62A)
4. Prepare a class set of A Day's Activities worksheet (Activity Sheet N62B)
5. Prepare a class set of the Activities Guide Resource Sheet (Activity Sheet N62C)

VOCABULARY: energy intake, energy output, energy balance

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES								
Students will be able to: i) explain how energy balance occurs	Students: 1. Explain what is meant by energy intake.	Background information: Page N84 to N89 Refer to Activity Sheet N61. Prior to class, identify two students to help with this activity. Ask the two students to name everything they ate for breakfast. For example: <table><tr><td>Student # 1</td><td>Student # 2</td></tr><tr><td>Corn Flakes and milk</td><td>Bannock with jam</td></tr><tr><td>Orange juice</td><td>Tea.</td></tr><tr><td>Bannock (plain)</td><td></td></tr></table>	Student # 1	Student # 2	Corn Flakes and milk	Bannock with jam	Orange juice	Tea.	Bannock (plain)	
Student # 1	Student # 2									
Corn Flakes and milk	Bannock with jam									
Orange juice	Tea.									
Bannock (plain)										

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Explain what is meant by energy output.</p> <p>3. Explain what is meant by energy balance.</p>	<p>Have students refer to Activity Sheet N61 to calculate the number of kilocalories each student ate. Compare the tables. Define energy intake as the number of kilocalories in the food we eat. We usually refer to daily energy intake - i.e., the total number of kilocalories we eat in a 24 hour period.</p> <p>Energy output is what we commonly call "burning kilocalories" or "working off lunch". Our bodies put out energy during basic body conditioning (breathing, blood circulation, maintaining body temperature and growth) and during physical activity.</p> <p>Make a simple balance to demonstrate energy balance. Use the balance and scenarios.</p> <p>Scenario 1 Rhoda is very active, involved in every sport in the community. She often skips meals because she is "too busy".</p> 

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
		<p>Scenario 2 Robert is stuck in the house with a broken leg. He's bored because he can't get out to do his usual activities. He spends a lot of time watching TV and eating.</p>  <p>Scenario 3 Patricia had been overweight as a child. When she finally lost her "baby fat" as a teenager she was very careful to eat nutritious foods, avoid a lot of fattening foods and to exercise regularly.</p>  <p>Energy balance is when energy intake (kcal) and energy output (activity) match. Ask students what will happen to Rhoda, Robert and Patricia if they keep eating like they are. Rhoda will lose weight. Robert will gain. Patricia's weight will stay the same.</p>

OBJECTIVES

STUDENT ACTIVITIES

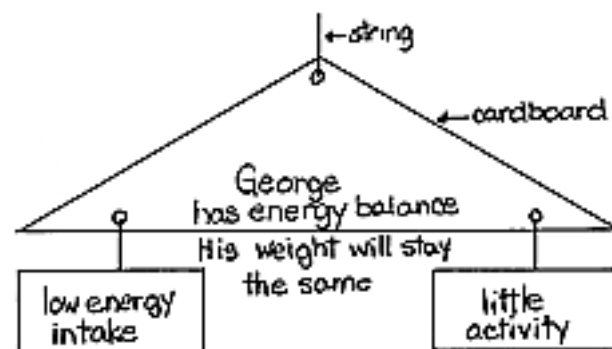
TEACHER NOTES

4. Make a bulletin board display of energy balance.

Divide students into four groups

- high energy intake plus strenuous activities (energy balance)
- low energy intake plus light activities (energy balance)
- high energy intake plus light activities (weight gain)
- low energy intake plus strenuous activities (weight loss)

Use food pictures from magazines and pictures of daily living activities.



i) estimate their energy intake and energy output for one day to determine energy balance

5. Estimate their daily food intake.

Refer to Activity Sheet N62A.
Have students estimate their daily food intake. Have them record all the food they eat in one day - food items and number of servings. Have them classify the food into high energy and low energy foods.

6. Estimate daily energy output.

Refer to Activity Sheets N62B and C.
Have students record all daily activities to the nearest half hour. Have students classify them into light, moderate or strenuous. Total the number of hours for each category.

OBJECTIVES	STUDENT ACTIVITIES	
	7. Compare their food intake with activities pattern to determine balance.	TEACHER NOTES
		It is desirable that the two patterns match, e.g., a student with a pattern of low energy intake would have a similar pattern of low activity level.

ENERGY CONTENT OF COMMON FOODS

Vegetables	Kilocalories	Dairy Products & Spreads	Kilocalories
Asparagus, 4 average	15	Butter, 15 mL	100
Beans, baked, 125 mL	131	Cheese, cheddar, 45 gms	181
Beans, green, 250 mL	38	Cheese, cottage, 125 mL	119
Beets, 125 mL	28	Cheese, cream, 15 mL	53
Broccoli, 125 mL	27	Cheese, process, 45 gm	169
Cabbage, 250 mL	18	Cheese, swiss, 45 gm	169
Carrots, 125 mL	37	Coffee creamer, 15 ml-	20
Cauliflower, 250 mL	76	Cream, sour, 15 mL	23
Corn, creamed 125 mL	92	Cream, table, 15 mL	27
Corn, canned 125 mL	70	Cream, whipped, 15 mL	49
Mushrooms, 250 mL	40	Topping, whipped, 15 mL	10
Onions, 1 average	57	Margarine, soft, 15 mL	100
Peas, 125 mL	71	Mayonnaise, 15 mL	102
Potato, boded, 1 medium	116	Milk, whole, 250 mL	159
Potato, chips, 10	105	Milk, 2%, 250 mL	128
Potato, french fried, 10	158	Milk, skim, 250 mL	90
Potato, sweet, 1 medium	117	Milk, evaporated, 62.5 mL	89
Spinach, 125 mL	28	Milkshake, 250 mL	231
Squash, baked, 125 mL	41	Peanut butter, 15 mL	95
Tomato, 1 medium	23	Ice cream, 125 mL	142
Salad dressing, 15 mL	64	Ice milk, 125 mL	129
Vegetable oil, 15 mL	124	Sherbert, 125 mL	143
Lettuce, 1 leaf, 15 mL	3	Eggs, boiled, 1 large	79
		Eggs, fried, 1 large	83
Soups and beverages	Kilocalories	Yogurt, plain, 250 mL	158
Consomme, 250 mL	30	Yogurt, flavored, 250 mL	262
Mushroom, creamed, 250 mL	215		
Noodle, 250 mL	56	Fish and Poultry	Kilocalories
Onion, 250 mL	29	Cod, haddock, sole, 88 gm	150
Pea, 250 mL	200	Crab, lobster, 150 mL	87
Tomato, 250 mL	90	Halibut, 92 gm	157
Vegetable, 250 mL	77	Herring, kippers, 1 fillet	116
Beer, 341 mL	150	Oysters, 9 small	59
Liquor, 50 mL	109	Salmon, canned, 150 mL	193
Wine, table, 100 mL	72	Shrimp, 90 gm	104
Tomato juice, 125 mL	25	Tuna, canned, 85 gm	167
Coffee, black, 250 mL	0	Chicken, fried, 90 gm	234
Tea, black, 250 mL	0	Chicken, roasted, 90 gm	151
Soft drinks, 280 mL	120	Chicken, livers, 90 gm	141
		Turkey, roasted, 86 gm	161
		Ptarmigan, 90 gm	159

ENERGY CONTENT OF COMMON FOODS

Fruit	Kilocalories	Desserts & Sweets	Kilocalories
Apple, 1 average	81	Arrowroot cookies, 2	57
Apple juice, 125 mL	60	Cake, no icing	313
Apricots, dried, 10 halves	83	Chocolate chip cookies, 2	104
Banana, 1 medium	105	Chocolate eclair, 1	239
Cantaloupe, 1/2	93	Cheesecake, 1 slice	278
Orange juice, 125 mL	55	Cupcake, iced	116
Grapes, 10	15	Doughnut, cake, average	168
Grapefruit, 1/2 medium	37	Gelatin, flavoured, 125 mL	198
Orange, 1 medium	62	Oatmeal cookies, 1	59
Peach, canned, 250 mL	200	Pie, fruit, 2 crust, 1 /6	410
Pear, 1 medium	37	Pudding, instant, 125 mL	171
Prunes, dried, 10	201	Candy bar, average	270
Raisins, 125 mL	261	Hard candy, 30 gm	116
Strawberries, 250 mL	57	Honey, 15 mL	64
Watermelon, 1/2 slice	59	Marmalade jam, 15 mL	54
		Sugar, white, 5 mL	17
Cereals and Bread	Kilocalories	Syrup, corn, 15 mL	61
Bran, 100%, 250 mL	180	Syrup, maple, 15 mL	61
Corn flakes, 200 mL	70	Meat	Kilocalories
Cream of wheat, 125 mL	68	Beef, corned, 4 slices	226
Oatmeal, 125 mL	77	Beef, ground, 88 gm patty	269
Wheat, shredded, 1	95	Beef, roast, 2 slices (88 gm)	177
Wheat, puffed, 200 mL	50	Beef, steak, 88 gm	188
Wheat, flakes, 200 mL	97	Hamburger, with bun	445
Bread, rye, 1 slice	61	Hot dog, with bun	267
Bread, white, 1 slice	76	Kidney, beef, 150 mL	128
Bread, whole wheat, 1 slice	61	Lamb, chops, 87 gm	164
Flour, white, 625 mL	121	Lamb, leg, 87 gm	162
Cracker, soda, 4 squares	48	Liver, beef, 87 gm	187
Muffin, bran, 1	104	Pork, bacon, 2 strips, fried	75
Macaroni, spaghetti, 250 mL	164	Pork, chop, 1	159
Rice, white, 125 mL	101	Pork, ham, 2 slices	128
Pancake, 12.5 cm diameter, 1	61	Pork, spare ribs, 70 gm	235
Waffle, 17.5 cm diameter, 1	206	Pork, sausage, 1	55
		Bologna, 22 gm, 1 slice	70
		Salami, cooked, 1 slice	6
		Veal, cutlet, 92 gm	215
		Caribou, 90 gm	157
		Moose, 90 gm	158
		Seal, 90 gm	165

A DAY'S FOOD INTAKE

	Foods Eaten	Number of Servings	Energy in Foods	
			Low	High
Morning Meal				
Snack				
Noon Meal				
Snack				
Evening Meal				
Snack				
TOTALS				

A DAY'S ACTIVITIES

Activity Category

		Time Spent to Nearest 1/2 Hour	Very Light to Light	Moderate	Strenuous to Very Strenuous
(example: washing, dressing, breakfast)		(1/2 hour)	{ }		
Morning					
Afternoon					
Evening					
Sleeping Hours					
		Total Hours			

ACTIVITIES GUIDE

ENERGY OUTPUT

Very Light to Light	Moderate	Strenuous to Very Strenuous
<ul style="list-style-type: none"> - sleeping - sitting or standing still - personal grooming - in class - watching TV/movies - listening to music - talking with friends - doing homework - evening babysitting - eating meals - slow to normal pace walking - doing light housework - sewing, typing - light work - sports with light activity - dancing - daytime babysitting - driving a skidoo - driving a boat 	<ul style="list-style-type: none"> - normal to fast pace walking - energetic house/garden work - active sports (cycling, skating, PE classes) - snowshoeing - climbing stairs 	<ul style="list-style-type: none"> - competitive volleyball, hockey, etc. - vigorous skating - jogging - cross-country skiing - running fast - running on the spot - wrestling - vigorous rowing - chopping wood - vigorous dancing

NUTRITION

GRADE: 8

LESSON: 3

THEME: FOOD CONSUMERISM

CONCEPT: DIETS CAN BE ANALYZED TO DETERMINE THEIR NUTRITIONAL ADEQUACY AND SUITABILITY

PREPARATION:

1. Copy of NWT Food Guide
2. Prepare a class set of the Diet Evaluations sheet (Activity Sheet N63)
3. Prepare a class set of The Diets worksheet (Activity Sheet N64)

VOCABULARY: diet, food

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) evaluate the nutritional effectiveness and suitability of a variety of diets	Students: 1. Explain what is meant by the term "a diet". 2. Describe briefly some common diets.	Background information: Page N88 to N89 Use a dictionary and general discussion to explain what students commonly understand by "a diet". "A diet" is food intake. However, it is generally used to describe a special food intake, such as "a special diet" for health reasons. e.g., for diabetics or a decrease in food intake for the purpose of losing weight. Divide students into small groups.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. List nutritional guidelines which can be used to evaluate diets to determine nutritional adequacy and suitability.</p> <p>4. Evaluate diet plans using nutritional guidelines.</p>	<p>Discuss some common diets students have heard of or read about. Provide groups with the following discussion questions:</p> <ul style="list-style-type: none"> - What is a "fad" diet? - Why do lots of people go on diets? - Can a diet be harmful to a person's health? Under what circumstances? - Why do people often give up on diets? <p>Have each group report back to the class.</p> <p>Refer to Activity Sheet N63 and NWT Food Guide. Brainstorm with students some guidelines that people can use to decide if a diet is nutritionally adequate. Record responses on an experience chart. Compare with the list on the Diet Evaluation sheet (N63).</p> <p>Refer to Activity Sheet N64. Divide the class into small groups. Have students either bring diet plans to school or use the diet plans on the Diets worksheet. Have each group evaluate one of the diets using the criteria on the Diet Evaluation Sheet (N63). They should assume they are for adults. Discuss with the whole class.</p>

DIET EVALUATION

A healthful diet will score a yes for each point below.

DOES THE DIET:	Yes	No
1. Include some foods you usually eat and enjoy?		
2. Recommend the daily number of servings based on the NWT Food Guide?		
3. Recommend serving sizes of foods to fit the NWT Food Guide?		
4. Include a variety of foods from all four food groups daily?		
5. Recommend food for essential nutrients and not vitamin supplements?		
6. Recommend nutritious snacks that are low in salts, sugar and fats?		
7. Include whole grain foods for fibre?		
8. Recommend foods which don't belong to any food group in moderation?		
9. Recommend increasing physical activity?		
10. Recommend seeing a doctor or nurse before starting the diet?		
11. Recommend losing weight gradually 0.5 - 1 kg (1 - 2 lbs.) a week?		

DIETS

	Diet # 1	Diet # 2	Diet # 3	Diet # 4				
Morning Meal	1/2 grapefruit 1/2 slice toast tea (no milk)	1/2 glass fruit juice 2 boiled eggs 1 slice whole wheat toast	dried fish (1/2 serving) bannock (1 piece) tea, orange	1/2 cup brown rice 1 glass water				
Snack	2 slices cheddar cheese	1 serving, fresh fruit or vegetable	dried meat, 1/2 serving					
Noon Meal	small glass orange juice 1 slice roast beef 1/2 tomato 1 apple, orange	1/2 glass, tomato juice cheese sandwich, milk lettuce and cucumber 1 tub yogurt	1 slice caribou on bannock glass of milk apple	1 cup brown rice 1 glass water				
Snack	carrot or celery stick		pilot biscuit and cheese					
Evening Meal	50 gms fish 1/2 cup peas 1 bun 1/2 cup yogurt	2 slices roast beef 1 small boiled potato 1/2 cup beans fresh fruit salad	caribou stew, 1 serving rice, 1/2 cup wild greens berries, 1 cup	1 cup brown rice 1 cup vegetables				
Snack			tea					
How many servings from each food group?	Milk	Meat	Milk	Meat	Milk	Meat	Milk	Meat
	Bread	Fruit & Veg.	Bread	Fruit & Veg.	Bread	Fruit & Veg.	Bread	Fruit & Veg.
	No food group:		No food group:		No food group:		No food group:	

NUTRITION

GRADE: 8

LESSON: 4

THEME: LIFESTYLE

CONCEPT: POSITIVE NUTRITION PRACTICES PROMOTE HEALTH AND WEIGHT CONTROL

PREPARATION:

1. Prepare enough copies of Helping Cathy Win at Losing for each group (Activity Sheet N65A - N65B Answer Guide)
2. Prepare a class set of the Winning at Losing worksheet (Activity Sheet N65C)
3. Prepare a class set of the Energy Content of Common Foods and the Energy Output Table (Activity Sheet N65D and 65E)
4. Prepare a class set of the Winning at Gaining worksheet (Activity Sheet N66)

VOCABULARY: weight control, supplement

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify the importance of weight control	Students: 1. Explain what is meant by weight control. 2. Explain why weight control is important.	Background information: Page N88 to N89 Weight control involves understanding energy balance. It includes understanding the concepts of weight loss, weight gain and weight maintenance. Brainstorm with students why they think it is important for people to control their weight.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) identify ways of promoting successful weight control</p>	<p>3. Make a list of tips which would help people control their weight.</p>	<p>Weight control is important:</p> <ul style="list-style-type: none"> - to look and feel healthy - to reduce the risk of health problems (high blood pressure, diabetes, heart disease, breathing difficulties, kidney and gallbladder disease) - to avoid excessive weight loss or gain - to decrease wear and tear on a person's skeletal system, joints and posture due to excessive weight gain - for ease of physical activity (excessive weight makes physical activity difficult) - to decrease wear and tear on the heart <p>Refer to Activity Sheet N65A. Refer to Activity Sheet N65B for answers. Divide students into groups. Have each group use the worksheet to help them make a list of ways which help people control their weight. Suggestions might include:</p> <ul style="list-style-type: none"> - eating in one particular place at home, e.g., dining room - eating at home, instead of at a restaurant - avoiding foods that are low in nutrients and high in sugar, fat or salt - choosing low energy foods for meals and snacks - participating in regular physical activity - not shopping when you are hungry - shopping with a grocery list and sticking to it - eating a nutritious meal before going to work or school - weighing yourself regularly - monitoring weight changes and doing something to control weight immediately - eating at regular intervals so that you don't fill up on junk food because you're hungry. <p>Discuss.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
	<p>4. Design a poster which encourages weight control.</p> <p>5. Brainstorm ways that will promote weight loss for someone who is overweight and weight gain for someone who is underweight.</p>	<p>Either individually or in pairs, have students design a weight control poster which uses some of the suggestions from the previous activity.</p> <p>Divide students into two groups. Have one group brainstorm ways that will promote weight loss and the other ways that will promote weight gain.</p>	
		<p>Weight Loss</p> <ul style="list-style-type: none"> - eat food slowly - eat smaller servings - avoid second helpings - increase physical activity - eat less fat - eat less sugar - follow the recommended number of daily servings from each food group - learn energy values of common foods - learn energy output of activities - no nap after eating - see a doctor or nurse for advice if 	<p>Weight Gain</p> <ul style="list-style-type: none"> - eat frequent small servings - decrease excessive physical activity - select foods with higher energy values - follow the recommended number of daily servings from each food group - nap after eating - see a doctor or nurse for advice if more than 10% underweight

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>iii) design a day's energy intake and energy output</p>	<p>6. Plan nutritious snacks to supplement a diet and physical activities to achieve a recommended weight loss.</p> <p>7. Plan nutritious snacks to supplement a diet to achieve a recommended weight gain.</p>	<p>Refer to Activity Sheets N65C, 65D and 65E. In small groups, have students read the scenario. Using the Food Energy Guide tables, have them plan nutritious snacks which will raise John's energy intake to the required amount. Then using the Energy Output Table, have them plan some physical activities to raise his energy output to the required level. Discuss as a class.</p> <p>Refer to Activity Sheet N66. Students will need the Food Energy Guide Table (Activity Sheet N65B) from the previous activity. In small groups, have students read the scenario, then plan nutritious snacks that will raise Rita's energy intake to the required amount. Discuss as a class.</p>

HELPING CATHY WIN AT LOSING

Have two students act out Cathy and her friend. The other students in the group have to guess what techniques Cathy is using to help her control her weight.

Cathy finally decided to get rid of that extra 5 kg she put on over Christmas. See if you can guess some of the things she's doing to help control her weight.

Co-worker: Hey Cathy, do you want to go out for lunch?
Cathy: Thanks, but I'm going to eat at home.

Friend: I'm glad you were free to come to the Bingo though.
Cathy: Yeah, me too, it's been ages since I've been to a Bingo, and I feel really lucky tonight.
Friend: I'm going to buy chips and a pop. Do you want some? Cathy: No thanks.

Cathy: Thanks for picking me up. I didn't feel like walking home in the rain.

Cathy's Friend: Do you want to pick anything up at the store? Cathy: No, I don't have my list with me and I'm hungry. Let's go home and eat.

Sears Office: Good morning, Sears.

Cathy: Good morning. I'd like to order a bathroom scale. It's catalogue number ABC XYZ . . .

Friend: What are you doing tonight Cathy?

Cathy: It's volleyball night. I'm trying to play twice a week.

Cathy: Oh darn, we're out of cereal.

Husband: Oh well, you're trying to lose weight anyway aren't you?

Cathy: Yes, but I don't want to skip breakfast.

Friend at Work: Is it your turn to bring snacks for coffee break?

Cathy: Yes, I've got cheese and crackers.

Friend: I'm going to watch the hockey game while I eat. Do you want to join me?

Cathy: I'll join you after supper.

HELPING CATHY WIN AT LOSING (TEACHER ANSWER GUIDE)

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Cathy: I'll join you after supper.

It's harder to eat less in a restaurant. There's lots of food. It looks good, smells good and is ready now. At home . . .

Avoid high energy snacks. Choose low energy snacks.

Make a list before and stick to it. Never shop when you're hungry.

Weigh yourself regularly.

Regular physical activity.

Eat a nutritious morning meal. Eat regularly. Don't wait until you're starving.

Choose nutritious snacks.

Eat in the same place. Don't do anything else while eating (it's easy to overeat because your mind is elsewhere).

WINNING AT LOSING

John, a teenager is overweight. His doctor has recommended a daily diet of 1800 kilocalories (kcal). His doctor has given him his meals. Plan some snacks for the day that total 300 kcal and keep John to the recommended daily servings from each food group.

Meals (1500 kcal)	Snacks	
	Food/Amount	Energy Value (kcal)
Breakfast grapefruit (1/2) boiled egg (1) 2 slices 100% whole wheat toast		
Lunch hamburger with bun (1) tomato (1/2) lettuce 2% milk (250 ml)		
Dinner roast chicken - no skin (90 g) boiled potato (1) spinach (125 ml) carrots (125 ml) 2% milk (250 ml) grapes (10)		

* You do not need to work out John's meals. The doctor has done that.

WINNING AT LOSING

His doctor has also told him to increase his daily activities to burn 500 kcal more a day.

2. Plan some enjoyable activities that John might like to do that total 500 kcal expenditure.

Activities	Time Spent	Energy Burned
	Total:	Total:

ENERGY CONTENT OF COMMON FOODS

<p>Vegetables</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right;">Kilocalories</th> </tr> </thead> <tbody> <tr><td>Asparagus, 4 average</td><td style="text-align: right;">15</td></tr> <tr><td>Beans, baked, 125 mL</td><td style="text-align: right;">131</td></tr> <tr><td>Beans, green, 250 mL</td><td style="text-align: right;">38</td></tr> <tr><td>Beets, 125 mL</td><td style="text-align: right;">28</td></tr> <tr><td>Broccoli, 125 mL</td><td style="text-align: right;">27</td></tr> <tr><td>Cabbage, 250 mL</td><td style="text-align: right;">18</td></tr> <tr><td>Carrots, 125 mL</td><td style="text-align: right;">37</td></tr> <tr><td>Cauliflower, 250 mL</td><td style="text-align: right;">76</td></tr> <tr><td>Corn, creamed 125 mL</td><td style="text-align: right;">92</td></tr> <tr><td>Corn, canned 125 mL</td><td style="text-align: right;">70</td></tr> <tr><td>Mushrooms, 250 mL</td><td style="text-align: right;">40</td></tr> <tr><td>Onions, 1 average</td><td style="text-align: right;">57</td></tr> <tr><td>Peas, 125 mL</td><td style="text-align: right;">71</td></tr> <tr><td>Potato, boded, 1 medium</td><td style="text-align: right;">116</td></tr> <tr><td>Potato, chips, 10</td><td style="text-align: right;">105</td></tr> <tr><td>Potato, french fried, 10</td><td style="text-align: right;">158</td></tr> <tr><td>Potato, sweet, 1 medium</td><td style="text-align: right;">117</td></tr> <tr><td>Spinach, 125 mL</td><td style="text-align: right;">28</td></tr> <tr><td>Squash, baked, 125 mL</td><td style="text-align: right;">41</td></tr> <tr><td>Tomato, 1 medium</td><td style="text-align: right;">23</td></tr> <tr><td>Salad dressing, 15 mL</td><td style="text-align: right;">64</td></tr> <tr><td>Vegetable oil, 15 mL</td><td style="text-align: right;">124</td></tr> <tr><td>Lettuce, 1 leaf, 15 mL</td><td style="text-align: right;">3</td></tr> </tbody> </table> <p>Soups and beverages</p> <table style="width: 100%; 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ENERGY CONTENT OF COMMON FOODS

Fruit	Kilocalories	Desserts & Sweets	Kilocalories
Apple, 1 average	81	Arrowroot cookies, 2	57
Apple juice, 125 mL	60	Cake, no icing	313
Apricots, dried, 10 halves	83	Chocolate chip cookies, 2	104
Banana, 1 medium	105	Chocolate eclair, 1	239
Cantaloupe, 1/2	93	Cheesecake, 1 slice	278
Orange juice, 125 mL	55	Cupcake, iced	116
Grapes, 10	15	Doughnut, cake, average	168
Grapefruit, 1/2 medium	37	Gelatin, flavoured, 125 mL	198
Orange, 1 medium	62	Oatmeal cookies, 1	59
Peach, canned, 250 mL	200	Pie, fruit, 2 crust, 1 /6	410
Pear, 1 medium	37	Pudding, instant, 125 mL	171
Prunes, dried, 10	201	Candy bar, average	270
Raisins, 125 mL	261	Hard candy, 30 gm	116
Strawberries, 250 mL	57	Honey, 15 mL	64
Watermelon, 1/2 slice	59	Marmalade jam, 15 mL	54
		Sugar, white, 5 mL	17
Cereals and Bread	Kilocalories	Syrup, corn, 15 mL	61
Bran, 100%, 250 mL	180	Syrup, maple, 15 mL	61
Corn flakes, 200 mL	70	Meat	Kilocalories
Cream of wheat, 125 mL	68	Beef, corned, 4 slices	226
Oatmeal, 125 mL	77	Beef, ground, 88 gm patty	269
Wheat, shredded, 1	95	Beef, roast, 2 slices (88 gm)	177
Wheat, puffed, 200 mL	50	Beef, steak, 88 gm	188
Wheat, flakes, 200 mL	97	Hamburger, with bun	445
Bread, rye, 1 slice	61	Hot dog, with bun	267
Bread, white, 1 slice	76	Kidney, beef, 150 mL	128
Bread, whole wheat, 1 slice	61	Lamb, chops, 87 gm	164
Flour, white, 625 mL	121	Lamb, leg, 87 gm	162
Cracker, soda, 4 squares	48	Liver, beef, 87 gm	187
Muffin, bran, 1	104	Pork, bacon, 2 strips, fried	75
Macaroni, spaghetti, 250 mL	164	Pork, chop, 1	159
Rice, white, 125 mL	101	Pork, ham, 2 slices	128
Pancake, 12.5 cm diameter, 1	61	Pork, spare ribs, 70 gm	235
Waffle, 17.5 cm diameter, 1	206	Pork, sausage, 1	55
		Bologna, 22 gm, 1 slice	70
		Salami, cooked, 1 slice	6
		Veal, cutlet, 92 gm	215
		Caribou, 90 gm	157
		Moose, 90 gm	158
		Seal, 90 gm	165

ENERGY OUTPUT

ACTIVITY	ENERGY USED IN 30 MINUTES (based on youth's weight of 52 kg (117 lbs.)) kcal
Volleyball (moderate)	133
Badminton (moderate)	133
Basketball (moderate)	163
Bike riding (slow)	116
Bike riding (fast)	250
Dancing (moderate)	97
Jogging (light)	250
Ping pong	90
Running (fast 9 minute mile)	386
Skiing (cross-country)	224
Swimming (crawl - 20 yd./min.)	114
Walking (brisk)	121
Walking upstairs	404
Walking downstairs	155
Skating (moderate)	132
Soccer	208
Chopping wood	170
Housework	94
Shovelling snow	181

WINNING AT GAINING

Rita, a teenager is worried about becoming fat. She doesn't eat breakfast or regular meals with the family. Rita's mother is worried because Rita has lost a lot of weight. She makes an appointment for Rita to see the doctor. The doctor gives her a diet to follow and also tells her to eat another 500 kcal of nutritious snacks a day. Help Rita plan what she will eat for snacks.

Meals (1500 kcal)	Nutritious Snacks (500 kcal)	
	Food/Amount	Energy Value (kcal)
Breakfast grapefruit (1/2) boiled egg (1) 2 slices 100% whole wheat toast		
Lunch Lean group beef (45 g) hamburger with bun (1) tomato (1/2) lettuce 2% milk (250 ml)		
Dinner roast chicken - no skin (90 g) boiled potato (1) spinach (125 ml) carrots (125 ml) 2% milk (250 ml) grapes (10)		

* You do not need to work out Rita's meals. The doctor has done that.

GRADE 8

TEACHER BACKGROUND INFORMATION

NUTRITION

FOOD

Food is life. People, animals and plants need food to grow and remain healthy. The substances in food that help people grow and stay healthy are called nutrients.

NUTRIENTS

We need over 50 nutrients for good health. These nutrients have their own jobs to do, but often depend on each other. Because foods are different they give us different nutrients. No one food can provide all the nutrients we need. This means we must eat a variety of foods every day.

From food we also get energy to carry out daily activities. The energy comes from fats, carbohydrates and protein. If food gives more energy than needed, the extra energy is stored as fat.

If not enough energy comes from food, then the body loses weight. So, food energy must be balanced with activity to control body weight.

Although there are more than 50 nutrients essential for health and growth, there are only six major groups of nutrients:

Nutrient:	Function:
1. Protein	builds and repairs body tissue, e.g., muscles, skin
2. Fat	insulates and protects supplies energy
3. Carbohydrates	carries vitamins A, D, E and K important source of energy

4. Vitamins
Vitamin A: good night vision, healthy skin
Vitamin C: healthy gums, teeth & blood vessels
fights infection
B vitamins: help the body use energy
(Riboflavin)
(Thiamin)
(Niacin)
5. Minerals
Calcium: strong bones & teeth
Iron: good blood
6. Water
regulates body functions

What Foods Do We Eat To Get All These Nutrients?

Traditionally, people in the North ate a healthy diet. The hunting and fishing lifestyle was active and healthy. There were times of little food, but generally people were able to feed themselves well. People wasted very little of their food sources. For example, they would eat all of an animal they killed; the eyes, brains, lips, stomach contents, etc. That way they were able to get all the nutrients they needed. Today, lifestyle and food sources in the North have changed. Both store and country foods are needed for good health and nutrition. The stores have many nutritious foods, but also some that aren't so nutritious. People need to choose foods carefully for best nutrition and value for their money.

Here's a list of foods, from the country and the store, that will give people the nutrients that they need everyday.

Nutrient	Country Food Source	Store Food Source
Protein	Wild game (all parts of the animal), wild birds, wild bird eggs, animal blood, fish, fish eggs, organ meats (liver, kidney, heart)	Beef, pork, chicken, turkey, organ meats, fish, dried beans and peas, cheese, eggs, nuts/seeds, peanut butter
Carbohydrate	Bannock, wild berries and greens, seaweed, animal stomach contents	Bread, whole grain cereals, enriched pasta (macaroni noodles, etc.), rice, dried beans and peas, macaroni dinner, crackers, pilot biscuits
Fat	Wild birds, wild game fat, muktuk, animal intestines	Beef, pork, luncheon meats, bologna, sausages, bacon, nuts/seeds, wieners, lard, butter, margarine
Calcium	Animal stomach contents, fish heads and bones, seaweed/kelp, wild dark green vegetables, bones, wild milk	Milk, cheese, yogurt, sunflower seeds, broccoli, dried beans/peas, canned fish with bones ((salmon, sardines)
Iron	Game, wild birds, organ meats, seaweed, animal blood, wild greens	Organ meats, red meats, pumpkin seeds, green leafy vegetables, enriched cereal products, enriched pasta (macaroni, noodles, etc.)
Vitamin C	Wild greens, wild berries, seaweed	Potatoes, cabbage, broccoli, turnip, canned tomatoes, alfalfa and bean sprouts, oranges, orange and grapefruit juice, vitaminized apple juice
Vitamin A	Seal, wild birds, muktuk, animal stomach contents, seaweed, animal and fish liver, wild greens and berries	Broccoli, spinach, milk, butter, liver, carrots, squash
Vitamin D	Fish liver oils	Vitamin D fortified milk
Thiamin	Seal, wild birds, organ meats, muktuk, seaweed, bannock, wild greens	Dried beans/peas, pork, organ meats, nuts/seeds, enriched bread/cereals, enriched pasta (macaroni, noodles, etc.)
Riboflavin	Game, wild birds, stomach contents, organ meats, wild bird, eggs, seaweed, bannock	Milk products, organ meats, enriched breads, cereals, enriched pasta (macaroni, noodles, etc.)

Nutrient	Country Food Source	Store Food Source
Niacin	Animal stomach contents, seaweed, bannock, organ meats, wild game, wild birds	Organ meats, enriched breads and cereals, enriched breads and cereals, enriched pasta (macaroni, noodles, etc.)

As shown in the above list, some foods provide more than one nutrient. Example: Wild game provides protein, fat, iron, vitamin A, thiamin and riboflavin. Also, some foods are the main source of more than one nutrient. Example: fortified milk is a main source of calcium, and it is also a main source of Vitamin D.

The Food Guide (Canada's Food Guide or the N.W.T. Food Guide), puts food together into four food groups, based on the leader nutrients they provide. By selecting foods from EACH group daily we can be sure of getting all the nutrients we need.

Here's a summary of what each group provides us with:

Milk and milk substitutes group (includes soft bones)	Calcium, riboflavin, vitamins A and D, protein, fat, carbohydrate
Meat, fish, birds and eggs group	Protein, iron, fat, vitamin A, thiamin, riboflavin, niacin
Bannock, bread and cereal group	Carbohydrate, thiamin, riboflavin, niacin, iron, fibre, protein
Fruit and vegetables group (includes intestines and stomach contents)	Vitamins A and C, carbohydrate, fibre, iron.

The food groups are colour coded to help people plan a healthy diet

Blue	Milk and milk substitutes
Red	Meat, fish, bird, eggs and all edible parts
Green	Fruit and vegetables
Orange	Bannock, bread and cereal

This allows people to quickly identify a food with its food group, e.g., "Milk belongs to the blue group."

THE FOUR FOOD GROUPS

The following foods belong to the four food groups of the N.W.T. Food Guide. Each food belongs to a particular food group because it is a good source of the group's leader nutrient(s). Foods marked with an asterisk are illustrated in the Guide.

Milk and Milk Substitutes

almonds (3/a cup)
breast milk
broccoli
 (2 med. stalks)
canned fish with
 bones (salmon)
cheese *
 natural *
 processed *
cottage cheese
cream soup
custard
fish bones
 & head *
ice cream
milk *
 evaporated *
 homogenized
 powdered *
 2% UHT *
milk pudding
sardines
seaweed *
soft animal
 bones *
yogurt *

Meat, Fish, Bird, Eggs and all edible parts

baked beans *
bear
beef
canned fish
caribou *
chicken *
dried beans
 & peas
dried meat/fish *
duck *
fish
fish eggs
hamburger
heart
kidney
liver
moose
muskox
muskrat *
nuts
peanut butter
porcupine
pork/ham
ptarmigan
rabbit *
seal *
tongue
turkey
walrus
whale

Fruit and Vegetables

animal fat *
animal stomach
 & intestine
 contents
bananas *
berries *
broccoli
brussel sprouts
cabbage
carrots *
cauliflower
cherries
dandelion greens
dried fruit
fiddlehead greens
fireweed
oranges *
peaches
pears
plums
potatoes *
tomatoes
turnip
unsweetened fruit
 juice *
vegetables
 canned *
 frozen *
wild greens *
wild rhubarb
willow buds

Bannock, Bread and Cereal

animal brains
bannock*
bone marrow
bread *
flour *
liver
macaroni *
muffins
muktuk
oatmeal *
pancakes
pilot biscuits *
rice *
soda crackers *
spaghetti *
whole wheat
wild rice

N.W.T. FOOD GUIDE

Eat foods from each group every day for health.



SERVING SIZE:

Specific serving sizes are applied to foods within each food group to ensure a certain amount of nutrient is provided by each serving, for example:

Milk and Milk Substitutes:

Each of the following serving examples yields approximately 300mg of calcium:

250 ml (1 cup) of milk
175 ml (3/4 cup) of yogurt

45 gm (1 1/2 oz.) of cheese
200 ml of almonds
2 medium stalks of broccoli

Meat, Fish, Bird, Egg and All Edible Parts:

Each of the following serving examples yields approximately 12 to 22 gm of protein:

60 to 90 gm (2 - 3 oz.) cooked meat, fish, poultry
60 ml (4 tablespoons) peanut butter
250 ml (1 cup) cooked dried peas, beans or lentils
125 ml (1/2 cup) nuts or seeds
60 gm (2 oz.) cheddar cheese
125 ml (1/2 cup) cottage cheese
2 eggs

Fruits and Vegetables:

Each of the following serving examples yields approximately 200 to 400 RE of vitamin A or 20 to 40 mg of vitamin C:

125 ml (1/2 cup) vegetables, berries or fruits (fresh, frozen, or canned)
125 ml (1/2 cup) juice (fresh, frozen or canned)

Bannock, Bread and Cereals:

Each of the following serving examples yields approximately 15 gm of carbohydrates:

1 slice of bread
1 piece of bannock
125 ml (1/2 cup) cooked cereal
175 ml (3/4 cup) ready to eat cereal
1 roll or muffin
125 to 175 ml (1/2 - 3/4 cup) cooked rice, macaroni, spaghetti or noodles
1/2 hamburger bun

Note: Preschooler and child serving sizes are smaller.

NUMBER OF SERVINGS:

Nutrient requirements are influenced particularly by age, sex, growth rate and activity. For this reason the number of recommended servings varies, e.g.:

Milk and Milk Substitutes: children: two - three servings adolescent: three - four servings adult: two servings pregnant or lactating woman: three - four servings To ensure the development of strong bones and teeth a growing child requires two - three servings of milk a day, whereas an adult requires two servings for body maintenance.

Meat, Fish, Bird, Eggs and All Edible Parts:
all ages: two servings

Fruit and Vegetables:
all ages: four - five servings

Bannock, Bread and Cereal:
three - five servings or more, depending on levels of physical activity

It is not necessary to have all servings of a food at any one time. It is the day's total intake from each food group that is important. A child may prefer to have two servings of milk in four half cup portions throughout the day.

The N.W.T. Food Guide recommends types and amounts of foods to eat to be healthy. Eating the recommended number and size of servings from each food group ensures a balanced diet. The range in the number of servings represents the change in nutrient requirements that occurs throughout the lifecycle. The recommended serving size for each food within a group may vary as each item contains different amounts of leader nutrients.

PRINCIPLES OF HEALTHY EATING

In addition to indicating what to eat, the N.W.T. Food Guide promotes three principles for healthy eating: variety, balance and limit.

Variety: A variety of foods ensures that all nutrients will be obtained. Variety also makes meals more appealing and stimulates eating. No one food or food group provides all the necessary nutrients needed for health. To obtain all the required nutrients, the N.W.T. Food Guide recommends eating a variety of foods from each food group. Variety can be achieved by selecting different foods within each food group at meal and snack times.

Balance: Many of today's illnesses stem from an imbalance between how much we eat and how much we exercise. To maintain a healthy weight, we should eat a diet containing a moderate amount of energy, and exercise regularly. Energy is used daily for body maintenance, repair, growth and physical activity. The amount of energy needed varies with age, sex, level of physical activity and body size. An active person needs more food energy than someone who sits most of the day. If you eat more than the body needs, you could gain weight. Obesity is a major problem in the N.W.T. and is associated with health problems such as diabetes and heart disease.

Limit: Not all food contributes to the maintenance of our health. Foods that contain a lot of sugar, salt and fat should be eaten only occasionally. Foods which are high in energy are those which are high in sugar and fat content. Alcohol is also very high in calories.

Low energy foods are usually more nutritious, contain fewer calories and provide many of the important nutrients our bodies need for daily functioning. High energy foods contain large amounts of sugar, and/or fat and usually salt, with few of the required nutrients our bodies need. It is important to choose foods wisely - choose nutritious low energy foods.

MAKE ENERGY-WISE CHOICES

Food Group	Nutritious - Low Energy Foods	High Energy Foods
Milk and milk products (Blue Group)	Skim milk, 2% milk, plain yogurt, lowfat cheese, cottage cheese.	Whole milk, ice cream, flavoured yogurt, cream, cheese.
Meat, fish, birds and eggs (Red Group)	Caribou, moose, chicken, fish, eggs, dried beans and peas, lean meats, organ meats.	Canned luncheon meats, sausages, bologna, peanut butter, nuts, wieners.
Fruits and vegetables (Green Group)	Unsweetened fruit juice, fresh berries, fruits, vegetables, plain frozen fruits . and vegetables, fruits canned in "own juice".	Fruits canned in "heavy syrup", frozen vegetables in sauces, dried fruit, sweetened fruit juice.
Bannock, bread and cereal (Orange Group)	Bannock, whole grain muffins, bread, (unsweetened) cereals, pilot biscuit, plain popcorn.	Sweetened cereals, cake, doughnuts, cookies, pastries.
Foods that do not belong to a food group.	Water, clear soups.	Soft drinks, chips, chocolate bars, candies, sugar, butter or margarine, cream, cream cheese, sour cream, buttered popcorn.

MEAL NAMES AND TIMES

Canada's Food Guide does not state a specific number of meals a day. For good nutrition and vigour, food intake should be spread throughout the day. "Three meals a day" is perfectly acceptable, but there is no scientific reason to make it a rigid rule. The number and timing of meals and snacks depends on personal preference - meal frequency is a lifestyle decision.

Students may eat at different times depending on the circumstances within the home.

In homes where one or more adults work (in the wage economy), and where there are school age children it is likely that students will eat a:

- morning meal - or breakfast
- noon meal - or lunch
- evening meal - or supper/dinner
- snacks

(The terms morning meal, noon meal and evening meal are English translations of the corresponding terms in Inuinaktun, and are similar in other native languages.)

However some students may eat at other times. In some homes, food is always available and people eat continuously throughout the day, without having main meals. Not everyone eats main meals before school, at noon hour and after school/work.

What is important is that people follow the N.W.T. Food Guide, in terms of recommended numbers of daily servings and sizes of these servings. If people snack continuously, it is important that these snacks be nutritious, and include varied food items from each food group. It is also important that students start the day with nutritious food. This gives them the energy they need for work and play and aids their concentration.

WHY IT IS IMPORTANT TO START THE DAY WITH NUTRITIOUS FOOD

Many reasons are often given for skipping a morning meal. However, this is the most important food of the day. It ensures quick energy to start the day and lasting energy to carry out morning activities.

It can be any combination of foods, either solid or liquid, that supplies the nutrients needed by our bodies.

People who do not start the day with nutritious food usually fall victim to hunger pangs around coffee break time and opt for nutritionally-poor snacks such as doughnuts. They may soon get into the habit of eating high-calorie snacks, a practice which can lead to being overweight. Children who do not start the day with nutritious food have poor listening skills and are unable to concentrate on their work for long periods of time.

Nutritionally adequate food has the staying power to prevent hunger until the next meal, thus discouraging midmorning snacks and lunchtime extras. A nutritious morning meal consists of food from at least three of the four food groups.

Ref.: Nutrition Communications, Kellogg Salada Canada Inc.

NON-NUTRITIOUS FOODS

Not all available foods can be classified into the four food groups. Such foods contain too few nutrients and/or too much sugar, salt and fat which can contribute to poor health. Other than providing energy (calories or joules), these foods have very few nutrients to help our bodies grow and be healthy.

The following two types of food do not belong in any group of the N.W.T. Food Guide:

1. Foods with very few nutrients, e.g., ordinary and diet soft drinks and gum, which are usually fabricated, i.e., they do not come directly from nature and often contain unnecessary additives; these foods do little to build a strong body.

2. Foods such as potato chips, processed meats and chocolate bars which suffer nutritionally because processing removes many useful nutrients and leaves only those nutrients, e.g., sugar, fat and salt, which can be unhealthy when consumed in excess; they do little to build or maintain a strong body, and often contribute to tooth decay, obesity or high blood pressure.

The following foods in particular are often considered healthy when in fact they contain large amounts of sugar, fat or salt. They do not belong to any food group:

- whipping cream, cereal cream and sour cream, although they are dairy products, they do not belong to the Milk Group because they contain very little calcium or protein and are high in fat; - non-dairy beverage whiteners, e.g., Coffeemate, even though they look like milk in coffee and tea, do not belong to the Milk Group because they contain no milk, but mostly sugar and oils; - canned meats, e.g., Kwik, Spam, bologna, side bacon and wieners do not belong to the Meat Group because they contain very little protein and Iron and are high in salt and fat; - fruit drinks, fruit pop, Fruit Roll-ups, fruit jam, jelly and Jello do not belong to the Fruits and Vegetables Group because they are all high in sugar and contain very few vitamins; - doughnuts, sweet buns, cookies and cakes have all the nutrients of the flour or cereal used in their baking, however they also contain extra fat and sugar. Sweetened cereals are sometimes enriched, and therefore contain nutrients, however they have a high sugar content. ,

These foods are sometimes referred to as "extras". The

N.W.T. School Health Program has avoided use of this term and instead labelled them as foods which do not belong to

any food group.

SNACKS

In the **N.W.T. School Health Program** "snacks" refer to foods eaten between main meals. They may be either nutritious (belonging to one of the four food groups) or non-nutritious (not belonging to a food group), depending on the food eaten. Snacking habits vary greatly among families and cultures. In some families food may be more or less continuously available for eating between meals. In others, eating between meals may be discouraged. The teacher should be sensitive to this and try to determine what snacking habits his/her students have.

It is important, however, that all snacks are nutritious and are included as part of the recommended daily servings.

IMPACT OF SNACKING ON NUTRITIOUS MEALS

Nutritious meals are defined as those where there is at least one serving from each of the four food groups. The exception is breakfast which requires servings from only three food groups.

This concept of nutritious meals is based on the practice of very little snacking. If, in fact, students snack a lot (on nutritious foods) then they would not eat servings from each food group at each meal. Students should look at their daily food intake to determine if they are eating nutritiously.

Recommended daily servings are:

Milk and milk substitutes - 4 servings

Meat, fish, birds and eggs - 2 servings

Bannock, bread and cereal - 3 - 5 servings

Fruit and vegetables - 4 - 5 servings

Again, it is important to emphasize the need for nutritious food to start the day.

SNACK GUIDE

Food Group	Eat Anytime!	Eat Only With Meals and Brush Teeth Afterwards	Don't Snack on Regularly	Avoid These Snacks!
Milk and milk substitutes (Blue Group)	Plain milk, plain yogurt, cheese, soft ends of bones, soft fish bones	Milk puddings, ice cream, milkshakes, sweetened yogurt, strawberry milk, chocolate milk		
Meat, fish, birds and eggs (Red Group)	Country meats, store meats, dried meat, fish, wild birds, fish eggs, nuts and seeds, hardcooked eggs, peanut butter			
Fruits and vegetables (Green Group)	Raw berries, fruits, vegetables, salads, vegetable soup, seaweed, unsweetened fruit and vegetable juice, animal stomach contents	Raisins, dried fruit, sweetened fruit, sweetened fruit juice, unsweetened fruit leather		
Bannock, bread and cereal (Orange Group)	Bannock, enriched and whole grain breads and muffins, crackers, unsweetened cereals, plain popcorn	Granola bars, homemade; low sugar, granola, whole grain cookies		Presweetened cereal
Other foods (foods in more than one group and foods not in the Food Guide)	Pizza, clear soups, sandwiches (meat, cheese, eggs or peanut butter) hamburgers		Pretzels, buttered/ salted popcorn, potato chips, cheesies, sugarfree soft drinks, sugarfree gum	Regular soft drinks (pop), honey, jam, jellies, chocolate bars, cookies, candies, regular gum, breath mints, popsicles, sweet buns, doughnuts. "Drink" crystals (Tang), fruit roll-ups

A VARIETY OF HEALTHY SNACK FOODS

FRUITS AND VEGETABLES



Unsweetened fruit or vegetable juice (if be on the label); raw fruit and vegetable pieces; canned fruits that are unsweetened or packed in their own juices; fruit juice popsicles; wild berries; wild vegetables.

MILK AND MILK PRODUCTS



Homo milk, evaporated, UHT; 2% of skim milk, or reconstituted skim milk powder or a combination; low fat cheese; cheese or cottage cheese; plain yogurt; plain yogurt with fresh fruit or juice added; soft ends of bones to chew on.



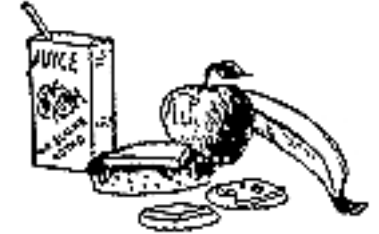
BREAD AND CEREALS

Bannock; crackers, pilot biscuits, etc.; unsweetened dried cereals; cooked cereals; whole wheat bread or toast; enriched white bread or toast; fruit or whole grain muffins or loaf; homemade cookies - oatmeal, peanut butter.

MEAT AND ALTERNATIVES



Wild game - raw, fresh, frozen, cooked or smoked; fish - canned, dried, frozen or smoked; hard cooked egg; peanut butter; nuts and seeds - sunflower and pumpkin; cheese; meat - sliced, cold, cooked, canned, dried, smoked.



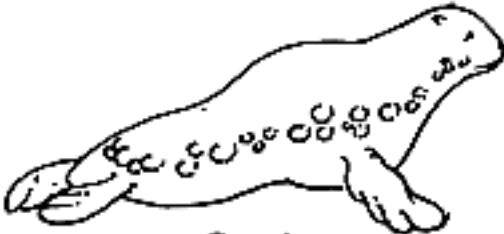
COMBINATION SNACKS

Bannock with peanut butter, cheese, berries, raisins, etc.; celery sticks with peanut butter or cheese; mini pizza (English muffin or roll with tomato or spaghetti sauce and cheese); peanut butter on toast or bread; cheese on toast or bread; cheese and crackers; cheese and fruit; raw fruits or vegetables with a yogurt dip; cereal with milk and fruit.

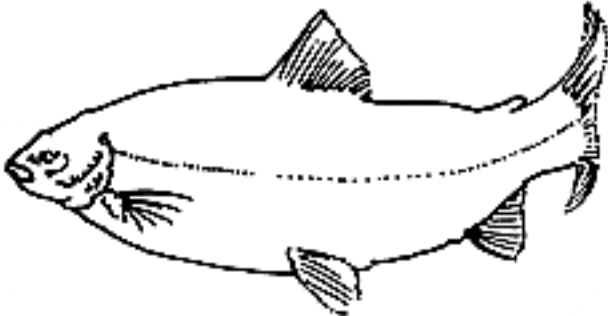
Snacks can be served with unsweetened fruit juice or milk as a beverage. To quench thirst, water is the best!

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Seal



Fish



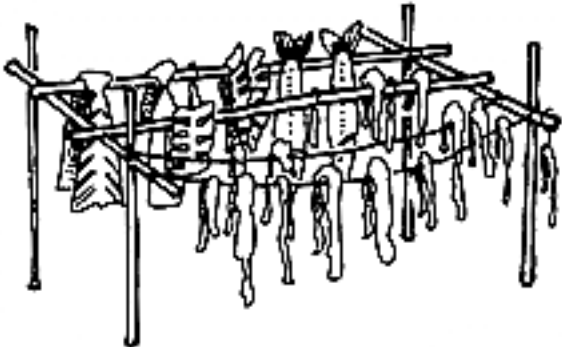
Rabbit



Whale

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Dried Meat and Fish



Caribou



Muskrat

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

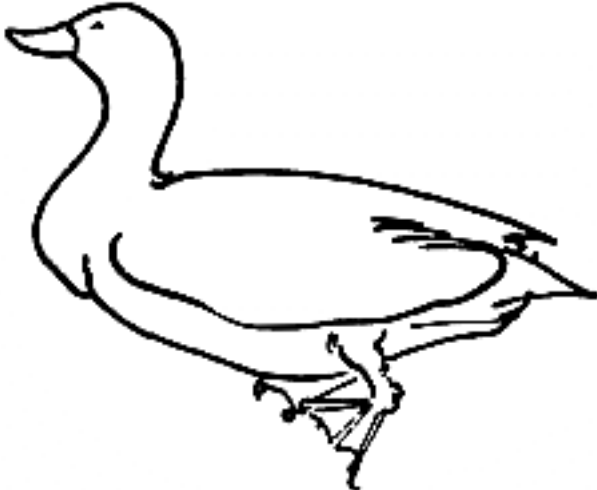
Leader Nutrients: Protein, Iron



Ptarmigan



Eggs



Duck

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



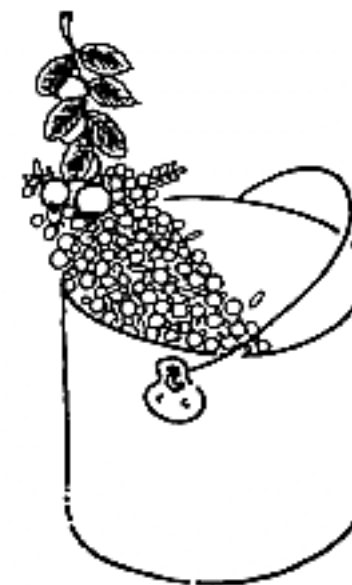
Seaweed



Clover



Dock



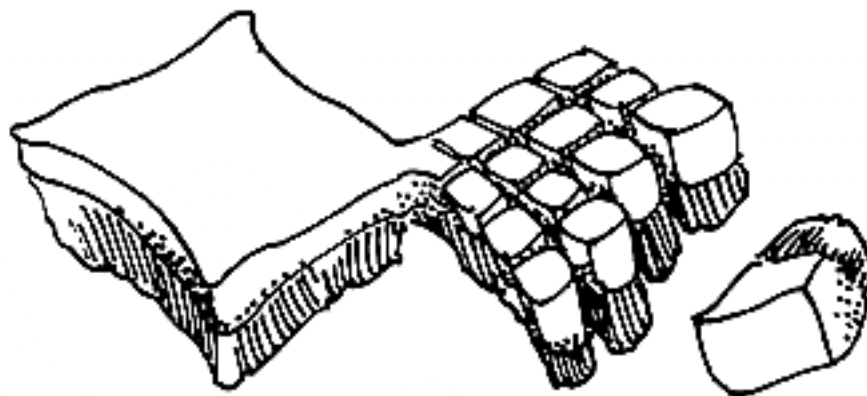
Berries

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



Seal Fat

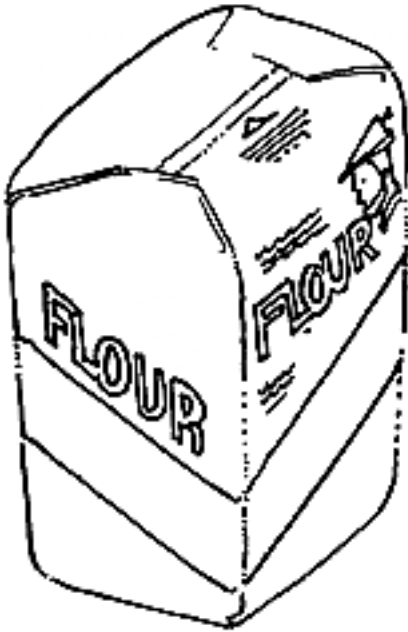


Muktuk

Even though these foods come from animals they are part of the Fruit and Vegetables Group because of their high vitamin content.

COUNTRY FOODS FROM THE BANNOCK, BREAD AND CEREAL GROUP

Leader Nutrient: Carbohydrates for Energy



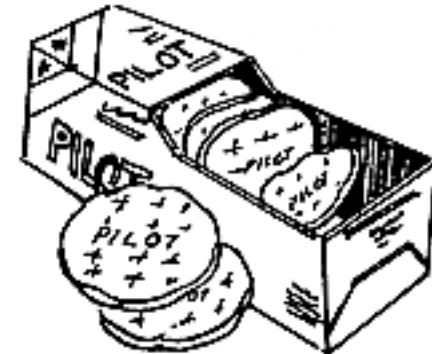
Flour



Oats



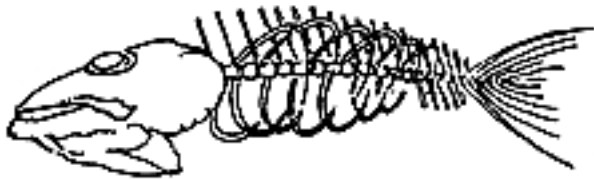
Bannock



Pilot Biscuits

COUNTRY FOODS FROM THE MILK AND MILK SUBSTITUTES GROUP

Leader Nutrient: Calcium



Fish Head and Bones



Leg Bone



Rib Bones

Even though these foods may seem like meat sources, they are part of the Milk and Milk Substitute Group because of their high calcium content.

TIPS ON NUTRITIOUS PURCHASES IN ISOLATED COMMUNITIES

How to remain healthy without fresh foods.

FRUIT AND VEGETABLES

1. Frozen, canned or dried fruits and vegetables are good sources of vitamin A and C.
2. The following vegetables are rich in vitamin A and C: carrots, broccoli, brussel sprouts, cauliflower, cabbage, potatoes, tomatoes, tomato juice, spinach, sweet potatoes, green peppers, strawberries, apricots, apple and orange juices.
3. Cost. Most canned vegetables and fruits cost the same price per serving as frozen ones. Food price comparisons should always be done per serving i.e., approximately 100 gm or 1/2 cup (125 ml). It is worthwhile to calculate, compare and save.
4. Frozen vegetables. Most frozen vegetables are very rich in vitamin C, e.g., a serving (1/2 cup) of frozen broccoli, cauliflower, brussel sprouts, or green pepper contains more vitamin C than an orange.
5. Frozen french fries. Frozen have the highest vitamin C content of all the frozen, canned or dried potato products. To avoid too many calories, french fries should be baked instead of deep fried; any additions such as gravy should be avoided.
6. Frozen vegetables are economical. Frozen vegetables are often more economical than fresh because there are no inedible parts or food lost during preparation.
7. Plain frozen vegetables are economical. Frozen vegetables with sauce or other additions are usually twice as expensive as plain, frozen vegetables.
8. Carrots. The prices and nutrition per serving of frozen carrots are comparable with canned carrots.
9. Unsweetened frozen strawberries and frozen fruit juices are the most nutritious buy and the most economical choice of all frozen fruits and fruit juices.
10. Canned and dried fruits are good sources of vitamin A. The best choices are apricots, peaches, tangerines, prunes and raisins.

11. Dried fruits can be eaten as such, or for variety, they can be rehydrated in water or fruit juices; e.g., prunes rehydrated in apple juice are excellent.
12. Wild berries usually abound in northern communities. Three rosehip berries have more vitamin C than one orange. Fresh, dried or frozen berries have a higher vitamin C content than berries in jam or jellies and are better for you.
13. Fresh produce. When fresh produce is available in isolated communities you get the most nutrition out of your food dollar by selecting cabbage, carrots, turnips, potatoes, tomatoes, oranges and bananas; e.g., have a coleslaw salad made with shredded cabbage and carrots; it is an excellent source of vitamin A and vitamin C.
14. Garden produce. Many vegetables can be successfully grown north of the 60th parallel either outdoors in greenhouses or in hydroponic gardens.
15. Decorate food with sprouts. Fresh sprouts can be an interesting alternative to canned or frozen vegetables. Growing sprouts is year-round, instant gardening with minimum equipment, space and effort.

MILK AND MILK SUBSTITUTES

16. Fresh milk and milk products are often rare in isolated communities but powdered and evaporated milk and processed cheese are usually available.
17. Milk and milk products are important food sources of calcium, protein and vitamins (riboflavin, vitamin A, vitamin B12 and vitamin D).
18. Add powdered milk to cooking. One simple and inexpensive way to increase the protein and calcium content of food is to use powdered milk in baked goods, meat loaves, casseroles, macaroni and cooked cereals. A 1/4 cup of dry powder is equivalent to one cup of milk.
19. Evaporated milk makes delicious chowder, home made yogurt, milk desserts (pudding), etc.
20. Reconstituted powdered milk. Powdered milk is acceptable to many people when reconstituted according to the directions and refrigerated for 24 hours.

N.B.: Dairy substitutes - Any dairy substitutes such as coffee whitener and whipped toppings are made from non-dairy foods and should not be used to replace milk.

MEAT, FISH, BIRDS AND EGGS

21. Alternates. Alternates are foods that are rich in protein and iron and can replace meat e.g., eggs, cheese, peanut butter, nuts, seeds, dry peas, beans.
22. Meat, fish, birds and eggs are good sources of protein, iron, niacin, thiamin, riboflavin, vitamin A, vitamin B12 and fat.
23. Frozen meat and fish. Plain frozen meat and fish are much cheaper than prepared items e.g., frozen fish in sauce or TV dinners are twice or three times the price of the equivalent plain items.
24. Canned fish and meat are often less expensive than frozen fish and meat. The best buy for nutrition and cost is canned fish, especially mackerel and sardines. Canned fish can be served in sandwiches, chowders, casseroles, pies, etc.
25. Processed meat can be prepared in many ways. Shop carefully for processed meats. They can be very expensive when bought pre-sliced. Buy them in bulk and slice the meat yourself.
26. Canned beans and canned meat stews contain less protein than canned fish or meat, but lower prices and practicality made them popular items among consumers. Canned stews and beans can be used occasionally in the family's diet.
27. Canned noodles and dinners and ravioli, spaghetti provide very little protein on their own and must be supplemented by either meat, eggs or cheese if they are to be served as a main dish.
28. Use dry peas and beans in cooking. Dry peas and beans are economical sources of protein and can extend soups and stews.

BANNOCK, BREAD AND CEREAL

29. Dry goods are usually well stocked in food stores in isolated communities.
30. Flour, cereals, rice and noodles provide energy, vitamins B

and some protein.

31. Enriched flour. In Canada white flour must be enriched with iron, thiamin, riboflavin and niacin. Therefore, all baked goods contain these nutrients whether homemade or commercially prepared.
32. Home baking. Selecting enriched or whole grain flour will make homemade baked goods very nutritious. Many wholesome products can be added to home baked products to increase their nutritional value; e.g., powdered milk, wild berries, dried fruits, peanut butter, cheese or fish eggs in bannock.
33. Calcium enriched flour. Flour can also be enriched with calcium. Flour packaged by the Hudson Bay Co. is enriched with calcium and is therefore available to northern communities which have a Bay store.
34. Whole grain cereals, cooked, without sugar. Whole grained cereals are better than refined cereals. Cereals which require cooking are better than ready to eat; e.g., oatmeal is better than Corn Flakes. If choosing ready-to-eat cereals, avoid the sugar coated ones. If in doubt, read the label e.g., Corn Flakes are better than Sugar. Frosted Flakes.
35. Noodles, e.g., macaroni, spaghetti. Most of these products are enriched with B vitamins and iron. The label will tell you which ones are enriched. Enriched noodles, provide better nutrition for your food dollar. Noodles keep indefinitely when stored in the original packages in a dry place.
36. Noodles alone are not a meal. To make a nutritious meal, noodles need to be accompanied by other foods; e.g., macaroni and cheese should be served with meat, fish, hard boiled eggs, or additional cheese.
37. Brown or converted rice. The best rice for price and nutrition is brown rice or parboiled or converted rice. Plain rice, e.g., Uncle Ben's Converted, is cheaper and contains less salt than seasoned rice (Spanish Rice).
38. Bread, bannock, cereals, noodles, rice are good and less expensive than many other foods. Eat them instead of junk food.
39. Other foods. Commercial snack foods like chips, chocolate, pop are high in sugar, oil, salt and calories and are not nutritious. They should be avoided.

HOW TO READ FOOD LABELS

1. An extremely important part of wise food shopping is reading and understanding the information given on food labels.
2. By doing so you can compare foods for quality, price, ingredients, and nutritive values and buy the ones that suit your needs.
3. All food labels must have the name of the food, the net quantity, and the name and address of the manufacturer, packer, or distributor, should the consumer want to contact him.
4. If the food is sold in different forms (for example, green beans can be sold whole or cut), the label must specify what form is in the container.
5. If there is a picture of the food as well, it must depict the food either as it is or as it could look when served.
6. The net quantity is given as a weight or a count if the food is solid. It is given by volume if the food is liquid. If the food is packed in a liquid, the net weight includes the liquid (the weight of the food without the liquid is the drained weight).
7. The list of ingredients must be on all pre-packaged food products.
8. The list of ingredients is one of the most important pieces of information provided by the food label.
9. The ingredients are listed in descending order. The one which weighs the most comes first and so on. It can also be given in percentages, again in descending order. This helps tell you if canned "meat stew" actually has more vegetables than meat or which cereal has the most sugar.
10. While reading the list of ingredients be especially concerned with the amounts of sugar, salt (sodium), and fats. Most nutritionists recommend limited intake of these three ingredients. Unfortunately, most processed foods contain them.
11. How to store the product. Food labels include information on how and where to store the product (if it should not be kept at room temperature).
12. There are two types of Dating systems - coded and open. Coded dates are numbers and letters that, because they are part of a code, can be read only by those who understand the code. These coded dates are often used by supermarkets for rotating their stock. Open dating, on the other hand, is an easily

understood statement of a date that indicates the age of the product to the consumer. The date is accompanied by an explanation of what it means, such as "packaged on" or "best before" this date. If you are unsure of what the date means, ask the store manager. Although a date can appear on any type of food product, they are most often found on perishable foods such as dairy products, baked goods and meats.

13. Best before date. After that date, the product may still be edible, but is not in top form. The Best Before date is not an expiry date. Most products don't have to be thrown away after the best before date except for baby food and infant formula.
14. Artificial flavour. If there is artificial flavouring in the product, the food label will tell you. A picture of a peach or some other natural food on the label does not necessarily mean that the product contains that natural food.
15. Fortified products. Fortification with added vitamins or minerals (nutrients) means that vitamins or minerals are added to a food product that does not normally contain them, or contains it in a relatively small quantity. This is legislated by Health and Welfare Canada - Health Protection Branch; e.g., milk is usually fortified with Vitamin D.
16. Enriched with vitamins and minerals. This means that some of the nutrients that were lost during the processing of a food have been put back into it. Nutrients are added to staple foods that supplied significant amounts of these substances before processing. For example, B vitamins and iron are added to white flour.
17. Substitute foods, such as simulated meat or poultry products, must be nutritionally similar to the foods they are intended to replace.
18. Meal replacements, such as instant breakfasts or weight reduction diet products, must supply essential nutrients in amounts similar to those provided by a meal.
19. Calorie-reduced means that the food has half as many calories as the food it replaces.
20. Carbohydrate-reduced means that the food product has no more than half the normal carbohydrate content.
21. Sugar-free or sugarless means that a carbohydrate-reduced food contains no more than one calorie per 100 grams or 100 millilitres.

22. Caffeine-free means that the product has no caffeine; e.g., caffeine-free coffee, caffeine-free cola.

23. Natural. A term to be especially wary of is "natural". It is used liberally in food advertising, and the tendency is for the price of the food to increase with the use of this particular designation. In Canada, the term has not been officially defined and regulated as to its use. Therefore, natural has no specific meaning on a food label.

24. With the advent of computerized checkout systems, many labels have the universal price code symbol printed on them. This symbol is a pattern formed by numbers and lines of varying weights and lengths that, when passed over the machine, identifies the products to the computer. The computer then registers the price of the food and updates the inventory of the stock of that item. The customer in turn receives a register tape on which all of the items are printed out with their names and prices. Because the prices are stored in the computer, the main worry among consumers is that the stores, hoping to cut costs and workloads, will do away with the practice of pricing individual packages. This would make it difficult, if not impossible, for the consumer to compare prices while shopping.

Material for Teacher Background Information is adapted from NWT Food Guide (Teaching Guide): Regional Nutritionist, Medical Services Branch, NWT Region Nutrition Month Kits (1985 - 1988): Nutrition Liaison Committee of the NWT, Medical Services Branch, NWT Region.

COMMON FOOD ADDITIVES

Preservatives	Enriching Additives	Fortified Additives	Emulsifiers (thickening agent)	Leavening Agents
acetic acid adipic acid amylases *artificial coloring artificial flavoring (Vitamin C) ascorbic acid ascorbyl palmitate benzoic acid (sodium benzoate) **butylated hydroxyanisole (B.H.A.) **butylated hydroxytoluene (B.H.T.) caffeine lactic acid (calcium lactate) sorbic acid (calcium, sodium or potassium sorbate) chewing gum base citric acid casein corn syrup sugar (sucrose, dextrose, invert sugar) monosodium glutamate (MSG) group meat tenderizers fumanc acid glycine hydrogenated vegetable oil (shortening) imitation beef and chicken flavors lactic acid (calcium lactate) malt flour modified starch oxysteann saccharin salt silicone dioxide *sodium nitrate *sodium nitrite sorbital sugar sulphur dioxide sodium bisulfite tannin, tannic acid vanilla (ethylvanilla)	ascorbic acid niacin (Vitamin B3) riboflavin (Vitamin B2) Thiamin (Vitamin B11)	beta carotene calcium phosphates ergosterol (Vitamin D) ferrous gluconate reduced iron riboflavin thiamin	agar propylene glycol alginate *carrageenan corn syrup dextrin gelatin glycerine (glycerol) hydroxylated lecithin karaya gum lecithin furcelleran locust bean gum modified starch mono and diglycendes pectin polysorbate 60,65,80 sorbitan monostearate larch gum	gluconic acid

Note:

* Additives with one asterisk refer to those additives that may be harmful and some are thought to be carcinogenic. * * The necessity of these additives is questionable.

LIFECYCLE NUTRIENT NEEDS

The quantity of nutrients needed depends upon a person's age, sex, weight, special physiological needs and activity level. The N.W.T. or CANADA'S FOOD GUIDE can assist Canadians in choosing foods to satisfy these varying nutrient needs as recommended in the Recommended Nutrient Intakes for Canadians.

The basic number of servings from the FOOD GUIDE provides 4000 - 6000 kJ (1000 - 1400 kcal). However, most people need a greater energy intake daily to maintain energy balance. There are two ways to get that additional energy:

- by increasing the number and size of servings from the food groups
- by adding other foods and beverages that are not included in the FOOD GUIDE

These sources of energy increase the FOOD GUIDE's flexibility and the variety in foods which Canadians can enjoy in their meals and snacks.

PREGNANT AND LACTATING WOMEN

Adequate nutrition during pregnancy is essential for the health of the child and the mother. During pregnancy maternal and fetal tissues grow at a rapid rate, and during lactation there is daily production of milk. These physiological functions require increased intakes of many nutrients.

Energy needs increase by about 400kJ (100 kcal) a day in the first trimester of pregnancy, and 1300 kJ (300kcal) a day in the second and third trimesters. During lactation an additional 1700 kJ (400 kcal) are recommended. Pregnancy is not the time for weight reduction diets. Inadequate food intake could deprive the fetus of essential nutrients and energy. Weight gain during pregnancy should be gradual and monitored by the medical doctor.

Quality and quantity of food eaten are especially important during pregnancy and lactation. For example, by increasing MILK AND MILK SUBSTITUTES to three or four servings daily, a pregnant or lactating woman can get the additional protein, vitamin D, calcium and phosphorus she needs. Five servings from the **BANNOCK, BREAD AND CEREAL** group will contribute to the need for more thiamin, riboflavin, niacin, iron and energy.

Pregnant and lactating women need to include choices from the FRUIT AND VEGETABLES group that are rich in vitamin A, vitamin C and folacin. Green leafy vegetables, asparagus, mushrooms, broccoli, lima beans, lemons, bananas, strawberries and cantaloupe are wise choices for supplying folacin.

Whole grain **BANNOCK, BREAD AND CEREALS** and FRUIT AND VEGETABLES help prevent constipation, a common problem during pregnancy. Small frequent meals and nutritious between-meal snacks reduce nausea and heartburn.

Women in the childbearing years, whether or not they are pregnant, have the most difficulty meeting their requirements for iron. They need to take special care to include iron-rich choices in their daily food patterns: foods such as egg yolks, dried peas and beans, nuts, dark green vegetables and red meats. Liver is a wise choice from the MEAT, FISH, BIRD, EGGS group because of its iron content as well as the amount of protein, vitamin A, folacin, thiamin, riboflavin and niacin it supplies.

SAMPLE MEAL PATTERNS FOR WOMEN BASED ON CANADA'S FOOD GUIDE

A 30-year old woman might have	A 30-year old pregnant woman* might have:
2 servings 2% milk	4 servings 2% milk
3 slices bread	4 slices bread
1 serving cereal	1 serving cereal
2 servings fruits	2 servings fruits
3 servings vegetables	3 servings vegetables
2 servings meat, fish, poultry or alternates	2 servings meat, fish, poultry or alternates

*for normal pregnancies

INFANTS

Specific recommendations for infants are not included in CANADA'S FOOD GUIDE because the quality and kind of food appropriate for an infant change rapidly during the first two years.

Human breast milk is optimal in nutritional content and digestibility for young infants, especially during the first six months after birth. It has the added advantage of containing antibodies which help in combating infectious diseases. Also, infants are less likely to be allergic to human milk than to cow's milk.

Breast-feeding enhances bonding between mother and child. It promotes a special closeness, both emotionally and physically, which helps to build a secure and loving relationship.

If a mother is unable to breast-feed, she can use one of the many commercial infant formulas available. Whole cow's milk should not be used for infants under six months of age. Health professionals recommend not using partly skimmed (2%) or skimmed milk before twelve to eighteen months. Some health professionals recommend not using skimmed milk before two years of age.

Nutritionists, dietitians or medical doctors can advise mothers on their infants' feeding programs, and can provide pamphlets on infant feeding techniques and the introduction of solid foods.

PRE-SCHOOLERS AND CHILDREN

Children need to establish patterns of good nutrition, normal weight and an active lifestyle which will last them a lifetime. Experience and example are the two major influences on a child's habits. Parents have a special responsibility to set a positive example in their own eating habits and to provide children with a wide variety of foods from the four food groups.

It is important to respect the size of a child's appetite. At certain times, especially during the pre-school years, the child is not growing quickly - energy needs lessen. Constant coaxing to eat "just a few bites more" can contribute to the serious and often lifelong problem of obesity.

This is the time when the portion of food served at a particular meal may be less than the serving size recommended in CANADA'S FOOD GUIDE. But the GUIDE is still useful for pre-schoolers. The meal pattern only needs changing. Preschoolers often need small between-meal snacks from CANADA'S FOOD GUIDE. Snacks which are high in sugar or fat content can interfere with a child's appetite for more nutritious foods, and can contribute to dental caries.

ADOLESCENTS

Nutrient needs are highest during the adolescent years because of the demands of growth and maturation. Teenagers need calcium, particularly for skeletal development. Three to four servings of MILK AND MILK PRODUCTS for this age group are recommended.

An adolescent's lifestyle may include frequent snacking. By having available plenty of food choices from the NWT or CANADA'S FOOD GUIDE, and by setting a good example themselves, parents can encourage nutritious snacking habits. Schools, recreation centres and other institutions can reinforce good food habits by making wise food choices available.

A physically-active teenager has an increased energy requirement, while the energy needs of an inactive student are considerably less. Concern over body image can lead to inappropriate food patterns. Unfortunately, many adolescent girls choose diets which are low in calcium and iron. They may also need some assistance in planning nutritious weight control diets to prevent overweight or underweight.

The pregnant adolescent must meet the nutritional needs of her own growth as well as the nutritional demands of pregnancy. She will need to follow carefully the advice given for pregnant and lactating women, and will also require additional servings from the MILK AND MILK PRODUCTS group to meet her own protein and calcium requirements.

COMPARISON OF MEAL PATTERNS FOR CHILDREN AND TEENAGERS

A 15-year-old boy has greater nutrient requirements than a 9-year-old girl. To meet those extra needs, the boy can choose more servings within the ranges in the FOOD GUIDE. With the patterns below, both the boy and the girl meet or exceed the nutrient recommendations of the Recommended Nutrient Intakes for Canadians in all respects, except energy. To satisfy energy requirements, they will need additional foods of their own preference.

A 9-year old girl might have: A 15-year-old boy might have:

3 servings 2% milk
2 slices bread
1 serving cereal
2 servings fruits
2 servings vegetables
2 servings meat, fish, poultry
or alternates

4 servings 2% milk
4 slices bread
1 serving cereal
2 servings fruits
2 servings vegetables
2 servings meat, fish, poultry
or alternates

ADULTS

If a person's eating habits remain constant during the adult years, he/she will probably gain weight gradually because the body's metabolic rate slows down by two or three per cent every decade. As well, many people let their activity level drop as they get older.

A person who gains "only" 1 kg (2.2 pounds) a year starting at age 20 will accumulate 20 kg (44 pounds) by age 40. The prevention of obesity is a most important challenge during the adult years. A combination of sensible food selection and physical activity are the answers to weight control.

Although energy requirements decrease with age, an adult's needs for most other nutrients remain unchanged. Therefore, food selection must take into account the nutrient density of foods; that is, the ratio of nutrient to energy content. Wise choices are those foods that contain a high proportion of nutrients compared to energy content. This is possible within the framework of the NWT and **CANADA'S FOOD GUIDE**. In each food group, food choices range in energy content while still supplying nutrients.

As children grow up and leave home, adults often find that they have more time to enjoy relaxing meals. At the same time, they can experiment with new recipes and cooking methods now that they are shopping and preparing meals for just one or two.

OLDER ADULTS

Food choices for older adults are affected by a number of factors. Disability and illness, depression and loneliness, reduced income and possible changes in living environment can lead to inappropriate food practices. A number of problems experienced by this age group - lack of energy, bone fragility, constipation ---- are aggravated by poor food habits. The NWT or CANADA'S FOOD GUIDE also provides a framework for wise food choices for this age group.

Because physical activity may be further reduced in older adults, energy requirements are less. However, nutrient needs do not decrease. Wise food choices for this age group are those of higher nutrient density, namely foods providing nutrients without being high in energy content. A reduction in the use of additional foods and beverages is advisable.

Unfortunately, some older adults let dental problems and rising food costs interfere with their food intake, especially of FRUIT AND VEGETABLES. This can lead to inadequate intakes of vitamin A, vitamin C, thiamin, folacin and fibre. Carefully prepared and cooked fruits and vegetables and juices can provide these nutrients.

Osteoporosis, a condition of decreased bone density and weakened bone structure, is a serious problem, particularly in older women. One probable cause is inadequate calcium and vitamin D intake over a period of years. Continued emphasis on MILK AND MILK SUBSTITUTES is needed in the senior years.

In cases where depression and loneliness are affecting food intake, a change in social environment may be the solution. Sharing meals with friends, participating in community meal programs or simply watching television while eating can make mealtimes more enjoyable.

WEIGHT CONTROL

Obesity is a major problem in Canada and is associated with health problems such as diabetes and heart disease. Obesity results when energy intake exceeds energy expenditure; that is, when a person eats too much or is inactive or both.

At the same time, an increasing number of Canadians are too concerned about their body size. In an effort to lose pounds some are following nutritionally inadequate diets. Others are maintaining body weights too low for optimum health.

Energy intake and energy output are both important parts of the energy balance equation. Both are measured in kilojoules.

1 kilocalorie = 4.184 kilojoules
(1 kilocalorie is what was commonly referred to as a calorie)

Body weight remains constant when energy intake equals energy expenditure. To lose weight, a person needs to increase physical activity, reduce daily energy intake, or both. In order to gain weight, energy intake must exceed energy expenditure.

Energy Intake: Because the energy content of individual foods within each food group varies greatly, it is possible to select foods either high or low in energy and still enjoy a varied diet within the framework of the NWT and CANADA'S FOOD GUIDE.

People wishing to reduce their energy consumption need to frequently choose foods that are lower in energy, and avoid the foods highest in energy. In addition, they should minimize their use of additional foods and beverages that are not in the FOOD GUIDE. It is especially important to moderate the use of alcohol, fats and sugars for the prevention and control of obesity.

Energy Output: The energy needed to maintain basic functions such as breathing, blood circulation, normal body temperature and growth depends upon fixed factors such as age, sex, body build and physiological state. People can do little about these basic needs; however, they can decide to increase their energy needs for physical activity.

Physical activity includes work activity, both on and off the job, and leisure activity. The degree of activity a person does depends on major decisions such as choice of profession (a lumberjack usually has more opportunities for vigorous exercise than a bus driver), and choice of recreational activities (it requires less energy to play cards than it does to crosscountry ski).

Energy expenditure hinges on a multitude of day-to-day choices, whether to walk to the local store or take the car; use the stairs or the elevator; rake the leaves oneself or hire a neighbourhood youngster to do it; go out for a bicycle ride after supper or watch a TV show. How physically active a person's life is depends as much on attitude as it does on opportunity.

Exercise is an excellent way to alter energy output to match or exceed intake.

Regular exercise has additional benefits. The physically active person has better cardiovascular fitness, decreased fatigue, increased stamina and firmer muscles. Also, an active person can enjoy that feeling of well-being not always experienced by a sedentary person.

Even the person wishing to gain weight requires regular but not excessive exercise. It will help in maintaining a normal appetite and in ensuring that weight gain is muscle tissue, not just fat.

Energy Adjustments; There are tables suggesting ideal weight for height, but usually the mirror test is all that is needed. An honest evaluation of body appearance, without clothes, using a full-length mirror will tell a person whether there is too much or too little body fat. A gradual weight loss or gain of 0.5 to 1 kg (1 to 2 pounds) per week is advisable, with a realistic short-term goal of 3 to 5 kg (6 to 10 pounds) over a period of a month.

Fad Diets: Any diet which omits one or more food groups or concentrates on just a few selections is dangerous to health. Weight loss achieved on such diets is frequently temporary, either because the person returns to previous food habits or because the weight loss is largely loss of fluids.

Books, magazines and weight-loss clubs sometimes seem to offer easy answers. The best way to assess any diet is to compare it with CANADA'S FOOD GUIDE.

NUTRITION PROBLEMS WITH WHICH STUDENTS MAY BE FAMILIAR

Problem	Cause	Brief Description
anemia	diet low in iron or the inability to use iron	mainly seen in girls, women of menstruating age or pregnant women
anorexia nervosa	loss of one's appetite due to extreme anxiety or seeing oneself as too fat	<ul style="list-style-type: none"> - malnutrition results - mainly seen in teenage girls - seek medical attention
bulimia	extreme anxiety	<ul style="list-style-type: none"> - extreme binge eating, followed by self-induced vomiting or prolonged overuse of laxatives to purge the body - seek medical attention
diabetes	genetic and/or environmental predisposition; possible virus	<ul style="list-style-type: none"> - inability to make or utilize insulin to break down blood sugar - a controlled diet and/or insulin injections may be necessary
hypertension	<ul style="list-style-type: none"> - overweight - too much salt in diet - smoking - family history - lifestyle 	<ul style="list-style-type: none"> - blood vessels narrow causing the heart to beat harder - over time, the extra pressure can cause heart and blood vessel damage
malnutrition	<ul style="list-style-type: none"> - poor or inadequate diet - some medical factors 	<ul style="list-style-type: none"> - body requires foods from the four food groups every day - the body, through disease may lose the ability to utilize certain foods
obesity	<ul style="list-style-type: none"> - energy consumed by the body is more than the energy required for activity - many contributing factors; poor diet, lack of regular exercise, heredity, lifestyle 	<ul style="list-style-type: none"> - may affect physical and mental health - associated with increase in incidence of diabetes and heart disease - mental problems due to poor body image - 15% or more over optimum weight
overweight	same as obesity	<ul style="list-style-type: none"> - not as severe as obesity - 10% over optimum weight

GRADE 8

DENTAL HEALTH

DENTAL HEALTH

GRADE: 8

LESSON: 1

THEME: FACTORS AFFECTING
DENTAL HEALTH

CONCEPT: FOODS EATEN AFFECT A PERSON'S DENTAL HEALTH

PREPARATION: 1. Labels, packaging and food samples of a variety of foods
2. Materials for Tooth Mat Game (Activity Sheet D54)

VOCABULARY: caution




OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify go, caution and stop foods related to dental health	Students: 1. Explain what is meant by go, caution and stop foods related to dental health	Background Information Page DH45 to 46 Based on student knowledge of nutritious foods and dentally safe foods, develop the following chart.

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

2. Prepare a wall chart of storebought and country foods that match the go, caution, stop foods OR.
3. Play The Tooth Mat Game.

	Definition	Examples
Go Foods 	<ul style="list-style-type: none"> - dentally and nutritionally safe - low in sugar - not sticky - high in nutrients 	<ul style="list-style-type: none"> - cheese - apples - unsweetened fruit juice - bannock
Caution Foods 	<ul style="list-style-type: none"> - dentally poor foods that are nutritious - or dentally safe foods that are low in nutrients 	<ul style="list-style-type: none"> - dried fruit - ice cream - popcorn - chips - sugar free pop
Stop Foods 	<ul style="list-style-type: none"> - dentally and nutritionally poor - high in sugar - sticky - low in nutrients 	<ul style="list-style-type: none"> - chocolate bars - cake - pop - jello

Use real foods, store-bought wrappers and boxes and country food models.

Refer to Activity Sheet D54.

If grade 8 students think this game is too childish, have them organize the game for a group of grade 6 students.




TOOTH MAT GAME

Directions:

1. Enlarge shield to make a mat to place on the floor.
2. Put food wrappers and food samples into a large grocery bag.
3. Students take turns selecting and placing food items in the appropriate category.
4. Discuss and make any corrections.



Examples of foods to include:

<p style="text-align: center;">Go </p>	<p style="text-align: center;">Caution </p>	<p style="text-align: center;">Stop </p>
<p>raw or cooked vegetables raw fruits unsweetened juices/fruits meat, cheese, eggs bran muffin whole grain bread bannock nuts, seeds milk</p>	<p>sweetened juice and fruits chocolate milk pudding sweetened yogurt milkshakes ice cream oatmeal cookie plain popcorn diet soft drink sugarless gum raisins dried fruits granola bars pretzels plain potato chips french fries cheesies</p>	<p>sweetened drink mixes chocolate cookies cake and pastries sugar chocolate bars sodas sherbert jelly, honey, jam candies, pop fruit roll-ups bubble gum drink crystals</p>

DENTAL HEALTH

GRADE: 8

LESSON: 2

THEME: DENTAL SERVICES AND
PRODUCTS

CONCEPT: PREVENTIVE DENTAL PROCEDURES BY PROFESSIONALS PROMOTE DENTAL HEALTH




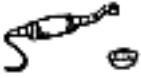


PREPARATION: 1. Invite a dental health worker to discuss and demonstrate some common professional preventive procedures
2. Prepare a class set of What The Pros Do (Activity Sheet D55A - Teacher Answer Guide D55B)

VOCABULARY: professional, procedure, scaling, sealant, diagnosis, explorer, ultraviolet light, fluoride enamel crystals

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify professional preventive procedures that promote dental health	Students: 1. Explain common preventive procedures performed by dental health professionals. 2. Complete What The Pros Do worksheet.	Background Information Page DH42 to 43 Prior to class invite a dental health worker to discuss some professional preventive procedures or have students visit the dental clinic. Show instruments and materials used and demonstrate procedures as appropriate in a classroom setting. Preventive procedures include check-up, x-rays, scaling, professional cleaning, sealant, fluoride treatments. If students have not had a dental check-up, scaling and fluoride treatment in the past six months, encourage them to schedule appointments. Refer to Activity Sheet D55A and D55B (Teacher Answer Guide). Have students work in small groups to complete the activity sheet based on information presented in Student Activity 1.







WHAT THE PROS DO

Complete the chart describing professional dental health procedures.

PROFESSIONAL PREVENTIVE PROCEDURES		
Procedure	Instruments	Brief Description
1. Check-up		
2. X-rays		
3. Scaling (cleaning)		
4. Professional Toothpaste		
5. Sealant		
6. Fluoride		

WHAT THE PROS DO

(Teacher Answer Guide)

PROFESSIONAL PREVENTIVE PROCEDURES		
Procedure	Instruments	Brief Description
1. Check-up	 <ul style="list-style-type: none"> - dental mouth mirror - explorer 	<ul style="list-style-type: none"> - checks for dental cavities - checks for gum disease
2. X-rays	 <ul style="list-style-type: none"> - x-ray machine - x-ray film 	<ul style="list-style-type: none"> - takes photo of inside the tooth and under the gums to help diagnosis of dental disease
3. Scaling (cleaning)	 <ul style="list-style-type: none"> - dental mirror - scaling instrument 	<ul style="list-style-type: none"> - scrapes off hardened plaque (calculus) from tooth surface to help gums heal
4. Professional Toothpaste	 <ul style="list-style-type: none"> - rubber cup - electric handpiece for rubber cup - thick, gritty toothpaste 	<ul style="list-style-type: none"> - removes all plaque leaving tooth surfaces sparkling clean and smooth
5. Sealant	 <ul style="list-style-type: none"> - ultraviolet light - sealant coating - thin paintbrush 	<ul style="list-style-type: none"> - prevents cavities in natural grooves on the surfaces of the tooth'
6. Fluoride	 <ul style="list-style-type: none"> - rubber tray - cup - cotton swab 	<ul style="list-style-type: none"> - creates fluoride enamel crystals which prevent or resist acid attack from plaque

* must be applied on permanent teeth as soon as they erupt

DENTAL HEALTH

GRADE: 8

LESSON: 3


THEME: DENTAL SERVICES AND
PRODUCTS

CONCEPT: DENTAL HEALTH PRODUCTS PROMOTE DENTAL HEALTH

PREPARATION: 1. Prepare a class set of Fluoride Brochure (Activity Sheets D56A, D56B)
2. Prepare a class set of Dental Health Products Scavenger Hunt (Activity Sheet D57)

VOCABULARY: CDA (Canadian Dental Association), systemic fluoride, topical fluoride, internal, fragility, dose, texture, dilution, consume

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify the importance of fluoride in promoting healthy teeth	Students: 1. Read Fluoride Brochure. 2. Discuss the importance of fluoride in promoting healthy teeth.	Background Information Page DH36 to 39, DH48 Refer to Activity Sheets D56A, D56B. Divide students into small groups to develop written answers to the following questions. 1) Why is fluoride important for dental health 2) How does fluoride work 3) Does your community have fluoridated water? If not, why not? 4) Name four ways to provide fluoride, in addition to drinking fluoridated water Have 2 groups work together to check for accuracy and completeness.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify some common dental health products	<p>3. Define systemic fluoride and topical fluoride, and name sources of each.</p> <p>4. Record dental products available in local stores.</p> <p>5. Participate in a dental health products scavenger hunt.</p>	<p>Systemic fluoride is obtained internally as part of the diet. Sources include</p> <ul style="list-style-type: none"> - fluoridated water - fluoride tablets - fluoride drops - certain foods <p>Topical fluoride is applied to the outside of the tooth Sources include</p> <ul style="list-style-type: none"> - fluoride toothpaste - fluoride rinses and gels - fluoride treatments by a dental health worker <p>Have each student identify and state the ways s/he personally ingests or applies fluoride.</p> <p>Have students visit a local store and identify available dental health products approved by the Canadian Dental Association These products bear the C DA seal.</p>  <p>Ask students to discover what factor the CDA products have in common. (The answer is that they all contain fluoride.) Refer to Activity Sheet D57</p> <p>Student responses will vary according to local availability of various brands of dental health products</p>

FLUORIDE BROCHURE Side 1

Directions: Photocopy D56A and D56B using double sided copying Then cut and fold to make a pamphlet.

Other alternatives

People who live in communities which have fluoridated water do not need other forms of fluoride. People who live in communities without fluoridated water can obtain fluoride in other ways. However, to be effective against dental decay, fluoride must be provided on a daily basis over the entire period of tooth formation - from birth to about age 14.

Fluoride added to milk has produced some modest reductions in tooth decay. However its effectiveness is limited because

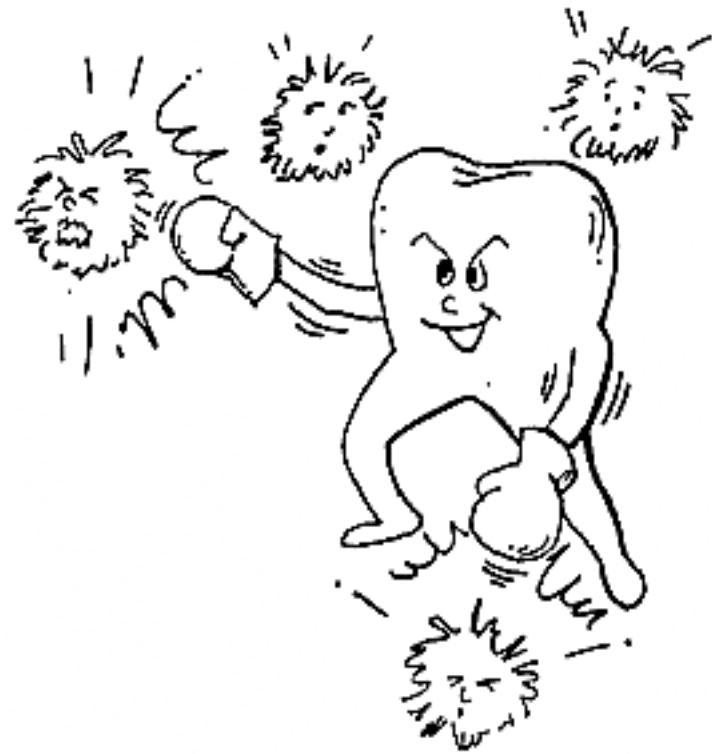
- there are wide variations in the amount of milk that people drink
- some families may not be able to afford a lot of milk
- teenagers often do not drink much milk

Fluoride tablets and drops are effective when used on a daily basis for the first 14 or more years of life. However, when such programs have been instituted in Canada and the United States, users tended to "get lazy" after a year or two and stop taking the tablets or drops.

Fluoride treatments of teeth by a dental health worker, and the daily use of fluoride toothpaste or mouthwash, combined with proper brushing and flossing, are recommended for people who live in communities which do not have fluoridated water supplies.

Adapted from: Facts Favour Fluoridation, Canadian Dental Association, 1979 and Water Fluoridation in the Northwest Territories, Department of Municipal and Community Affairs, G N W T

FLUORIDE



FLUORIDE BROCHURE

Side 2

Many people in the Northwest Territories suffer from tooth decay. The rate of tooth decay in the N.W.T. is almost four times greater than in southern Canada.

Tooth decay is unusually high among native people, particularly children. The high rate of tooth decay is the result, in part, of the change from a high protein traditional diet (meat and fish) to processed food and a high carbohydrate diet (e.g., foods with sugar).

Water fluoridation, along with good nutrition, proper dental care and good dental hygiene practices, is an excellent way of reducing tooth decay.

What is fluoride?

Fluoride is a natural chemical which is produced by combining the natural element fluorine with other elements.

Low levels of fluoride are found naturally in most community water supplies. It is also found in some foods including spinach, fish and other seafoods. Tea also contains high levels of fluoride.

What does it do?

Fluoride prevents tooth decay by strengthening enamel during tooth formation and fighting tooth decay in formed teeth.

Studies conducted in North American cities over the past 20 years show that children raised in communities where fluoride has been added to the water, have 40-60% fewer cavities.

Fluoride helps children grow stronger teeth. Adults who consume fluoride tend to keep their own teeth longer. It also strengthens bones and reduces bone fragility disease in elderly people.

Fluoride is so effective in reducing dental decay that the emphasis has shifted from repairing dental problems to preventing them. Of course fluoride does not replace proper nutrition, brushing and flossing, or dental visits.

What is water fluoridation?

Water fluoridation is the process of adding fluoride to water supplies. Fluoride does not change the taste of water.

Adding fluoride to drinking water usually does not cause health problems. However, high doses of fluoride taken while teeth are forming can permanently change the colour and texture of the teeth. The addition of fluoride to drinking water is controlled so high doses are not added.

Not all communities can have fluoridated drinking water. It depends upon the water supply system of the community. It is easier to add fluoride to water in communities which have a water treatment plant and piped water distribution. The fluoride is added in the water treatment plant. This method is used in the Yellowknife, Inuvik, Iqaluit and Fort Smith water treatment plants.

It is more difficult to safely add fluoride to community water supplies in communities which have trucked water. Safe and properly controlled fluoridation is possible only where reservoirs designed for year round storage are used. Experts can add just the right amount of fluoride while the reservoir is being filled.

Water fluoridation generally is not recommended in communities with small water storage facilities or communities with no storage facilities as it is difficult to ensure proper mixing and dilution of the fluoride.



DENTAL HEALTH PRODUCTS SCAVENGER HUNT

Answer the following questions by visiting a local store Name of store: _____

1) List 6 brands of toothpaste which are CDA approved _____

2) How many of these dental health products can you find?

	List brands available	CDA Approved
Rinses	1. 2.	
Fluoride tablets	1. 2.	
Fluoride drops	1. 2.	
Vitamins with fluoride	1. 2.	
Waxed dental floss	1. 2.	
Unwaxed dental floss	1. 2.	
Flavoured dental floss	1. 2.	
Soft, round bristle toothbrush	1. 2.	
Waterpiks	1. 2.	

DENTAL HEALTH

GRADE: 8

LESSON: 4

THEME: LIFESTYLE

CONCEPT: THE PREVENTION OF DENTAL HEALTH PROBLEMS IS A PERSONAL RESPONSIBILITY

- PREPARATION:
1. Prepare a class set of Chomp, Chew, Slurp, Bite, Munch (Activity Sheet D58)
 2. Prepare a class set of Action Plan For Better Dental Health (Activity Sheet D59)
 3. Prepare a class set of Progress (Activity Sheet D60)
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VOCABULARY:

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) assess dental and nutritional adequacy of foods consumed in a given time period	Students: 1. Record all foods consumed for three days 2. Analyze which foods are go, caution and stop foods.	Background Information Page DH45 to 48 Refer to Activity Sheet D58. Have students record all foods eaten in three days, as well as the time and place the foods were eaten. Time could include descriptions such as "after school" or "before bed" Location should be specific - "in front of T V ", "at the game hall", etc. This is a review of Lesson 1.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) design a personal action plan to promote dental health</p> <p>iii) evaluate the effectiveness of the action plan</p>	<p>3. Identify an undesirable eating behaviour.</p> <p>4. Develop and implement a personal action plan to reduce or eliminate the undesirable eating behaviour.</p> <p>5. Describe the degree of success of the action plan for a given period of time.</p>	<p>Have students work in groups of two or three.</p> <p>By analyzing the information recorded on Activity Sheet D58 have students identify an undesirable eating behaviour - i.e., one where they are eating stop or caution foods.</p> <p>e.g., I don't eat anything at noon hour and then eat 2 chocolate bars after school because I'm hungry</p> <p>I often eat popcorn when I watch T.V.</p> <p>My breakfast is usually sweetened cereal and tea with sugar.</p> <p>Refer to Activity Sheet D59.</p> <p>Teachers should work individually with students to ensure that goals are specific, measurable and realistic.</p> <p>e.g., I'm going to eat a sandwich and milk every day for lunch.</p> <p>NOT I'm going to eat lunch, which is not specific and measurable.</p> <p>Refer to Activity Sheet D60.</p> <p>Have students record their progress for a given period of time. This can be done either individually or in small groups to provide support.</p>

ACTION PLAN FOR BETTER DENTAL HEALTH

Select one thing that you can do personally to improve your dental health.

MY GOAL
WHY I CHOSE THIS GOAL:

STEPS TO REACH MY GOAL (what I have to do to reach my goal)	1	SUPPORT I NEED TO REACH MY GOAL
	2	
	3	
	4	
	5	

PROGRESS

(Chart your daily progress)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
WEEK 1							
WEEK 2							
WEEK 3							
WEEK 4							

HOW DID I DO?

(Summarize your progress and assess how well you did.)

GRADE 8

TEACHER BACKGROUND INFORMATION

DENTAL HEALTH

DENTAL DECAY

The strange thing about dental decay is that it is so prevalent when so much is known about its causes and prevention.

There is no doubt that dental decay is a bacterial disease and is specifically related to the activity of dental or bacterial plaque which forms on teeth. If the teeth are thoroughly cleaned, this bacterial film or plaque will reform within 24-36 hours. The plaque progressively thickens if left undisturbed for several days, and in some areas of the mouth may become covered by food debris. Much of this food debris can be removed by rigorous mouth rinsing with water, but the plaque itself is only removed by brushing and flossing. The particularly damaging property of dental plaque is the ability of the bacteria to thrive on dietary sugar and to rapidly produce acids which can dissolve the tooth material.

It is apparent that diet is an important factor in decay. The typical Canadian diet is high in refined carbohydrates, and is highly conducive to dental decay. Sticky candies or confections which adhere to the teeth or hard candies which are kept in the mouth for long periods of time are particularly damaging since they provide sugar to the plaque, and hence destructive acids, for a prolonged period of time. It is the food remaining in the mouth that is important to plaque activity. Hence, regular and thorough removal of food and plaque could theoretically eliminate the decay producing activity of the diet. In reality, it would be dangerous to rely completely on oral hygiene for the prevention of dental decay.

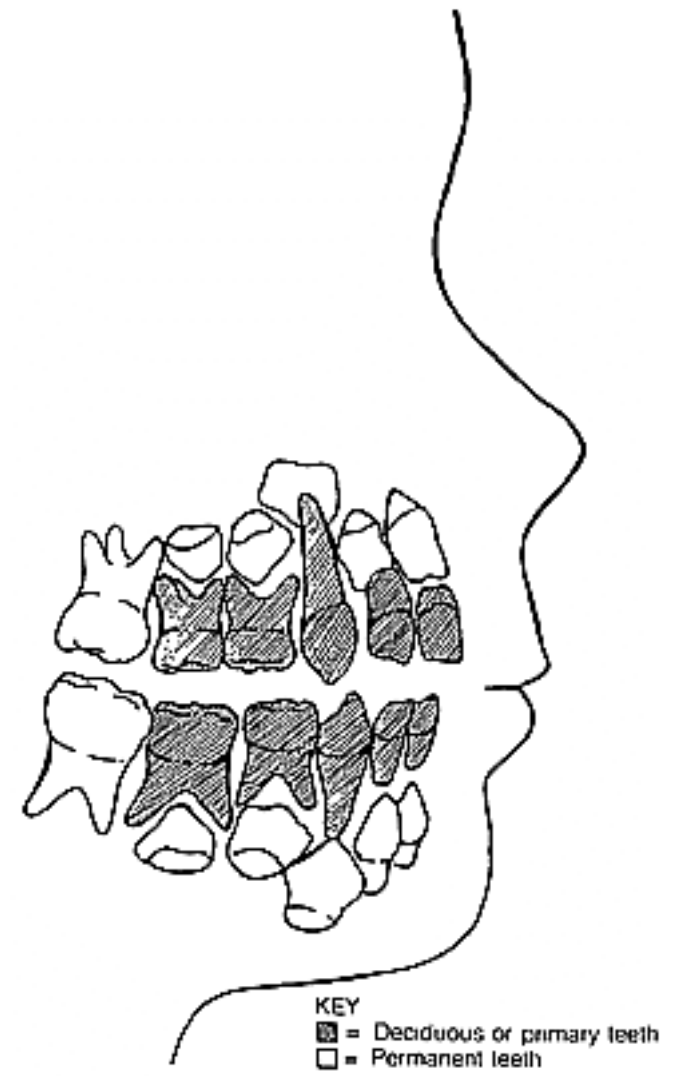
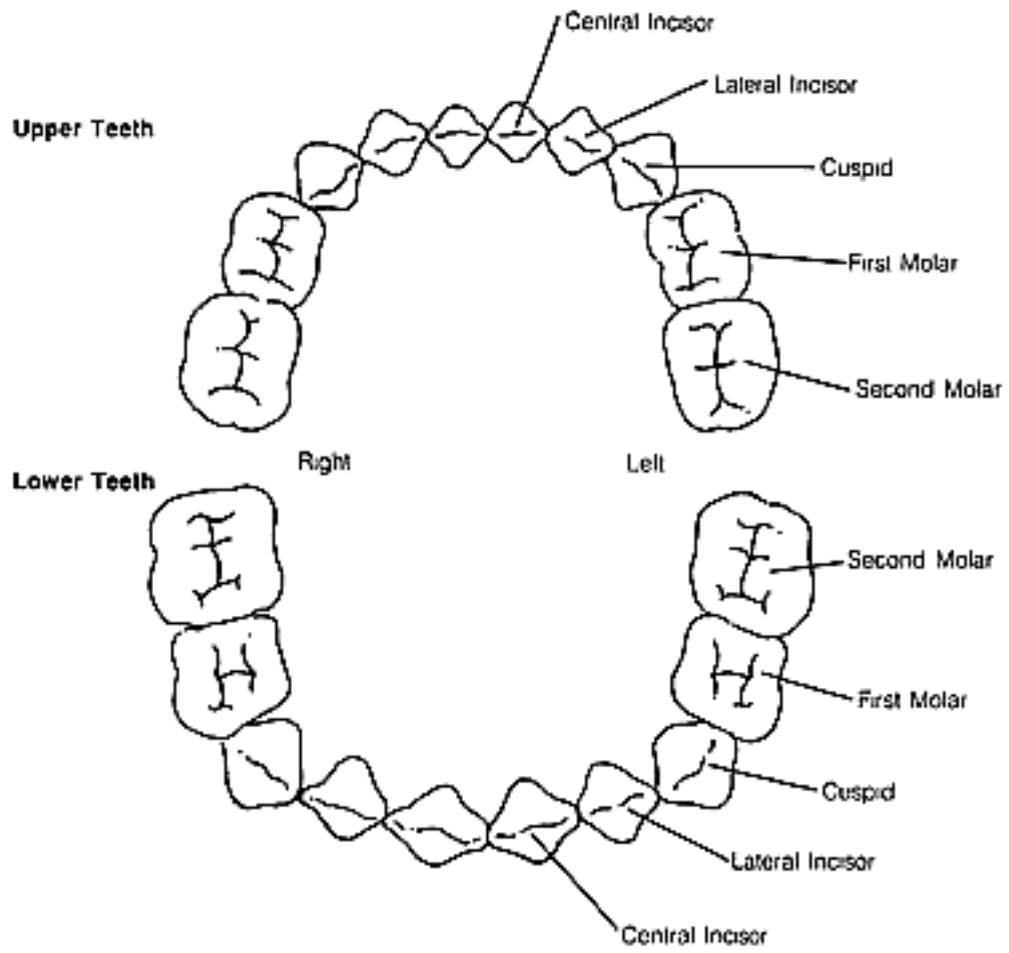
The role of heredity in dental disease is not well understood. Despite seemingly inherited bad gums or proneness to decay, personal neglect and poor quality dentistry are leading causes of poor teeth. Experience does indicate that some mouths are more prone to decay than others, but not because of so-called soft teeth. People who believe they have soft teeth often despair of their chances to keep their teeth. This despair is often associated with poor oral hygiene, dental neglect, faulty nutrition, or experience with poor-quality dentistry. With good home care, regular dental visits and the conscientious application of the principles of modern dentistry, most people should be able to enjoy a healthy mouth and retain their teeth for their lifetime.

Good oral hygiene (proper brushing after each meal and brushing and flossing prior to going to bed) is difficult enough for adults to establish, for children, it is doubly difficult. Not only do young children lack the dexterity to brush and floss their teeth properly, but the benefits of such skills would be considerably reduced in the typical young "continuous eater". Parents should not only assist their young children in the brushing technique and floss their children's teeth up to about age 8, but should strive to keep the snack habit to the minimum, particularly of foods and drinks containing sugar. In lunches or at snack time children should not be given hard or sticky treats such as lollipops or toffee having sugar that remains in the saliva for a long time.

Adapted from 'Dental Health A Teacher's Guide K-12,' Health and Welfare Canada

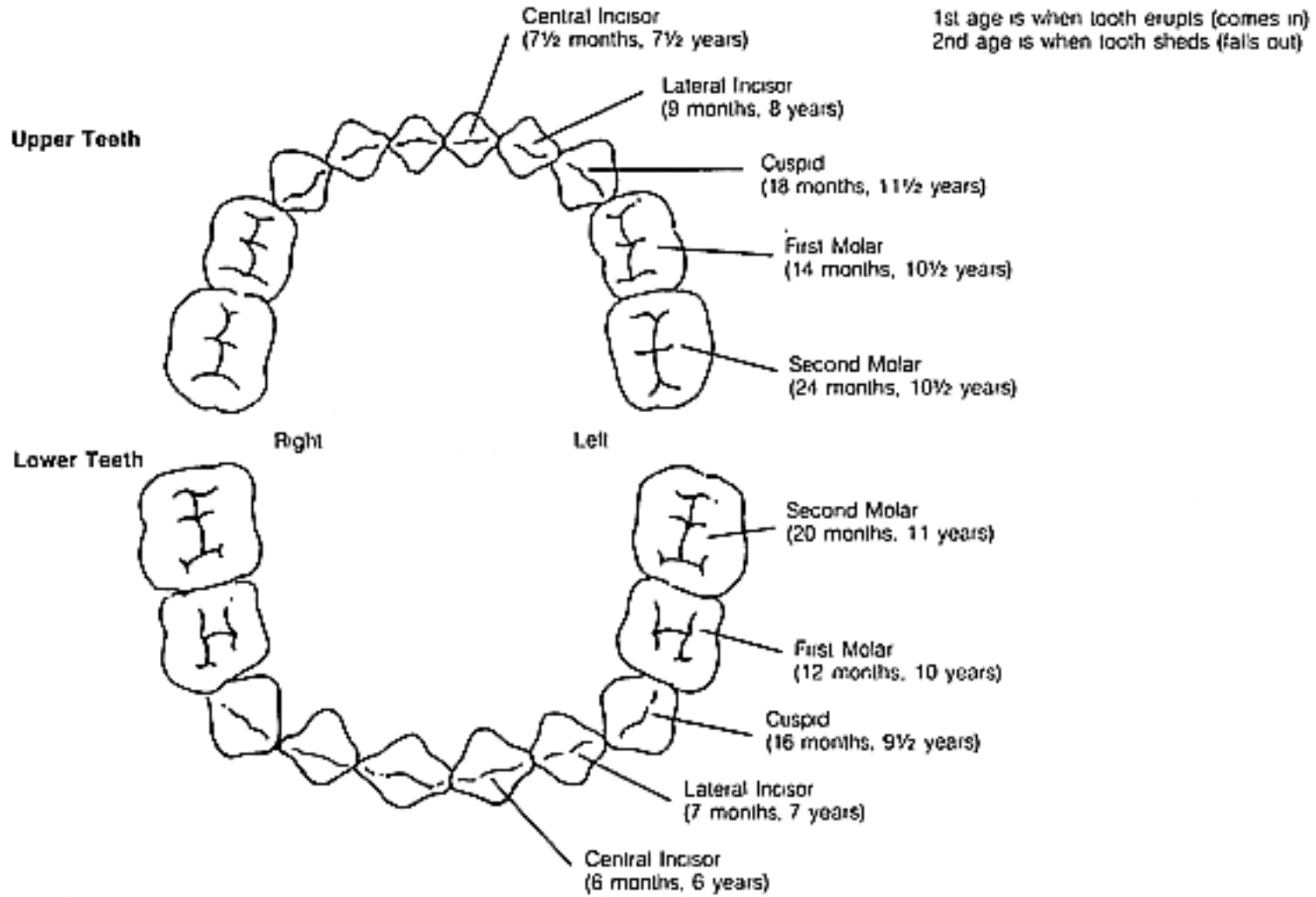
PRIMARY (BABY) TEETH

LOCATION OF TEETH AT 6 YEARS OF AGE



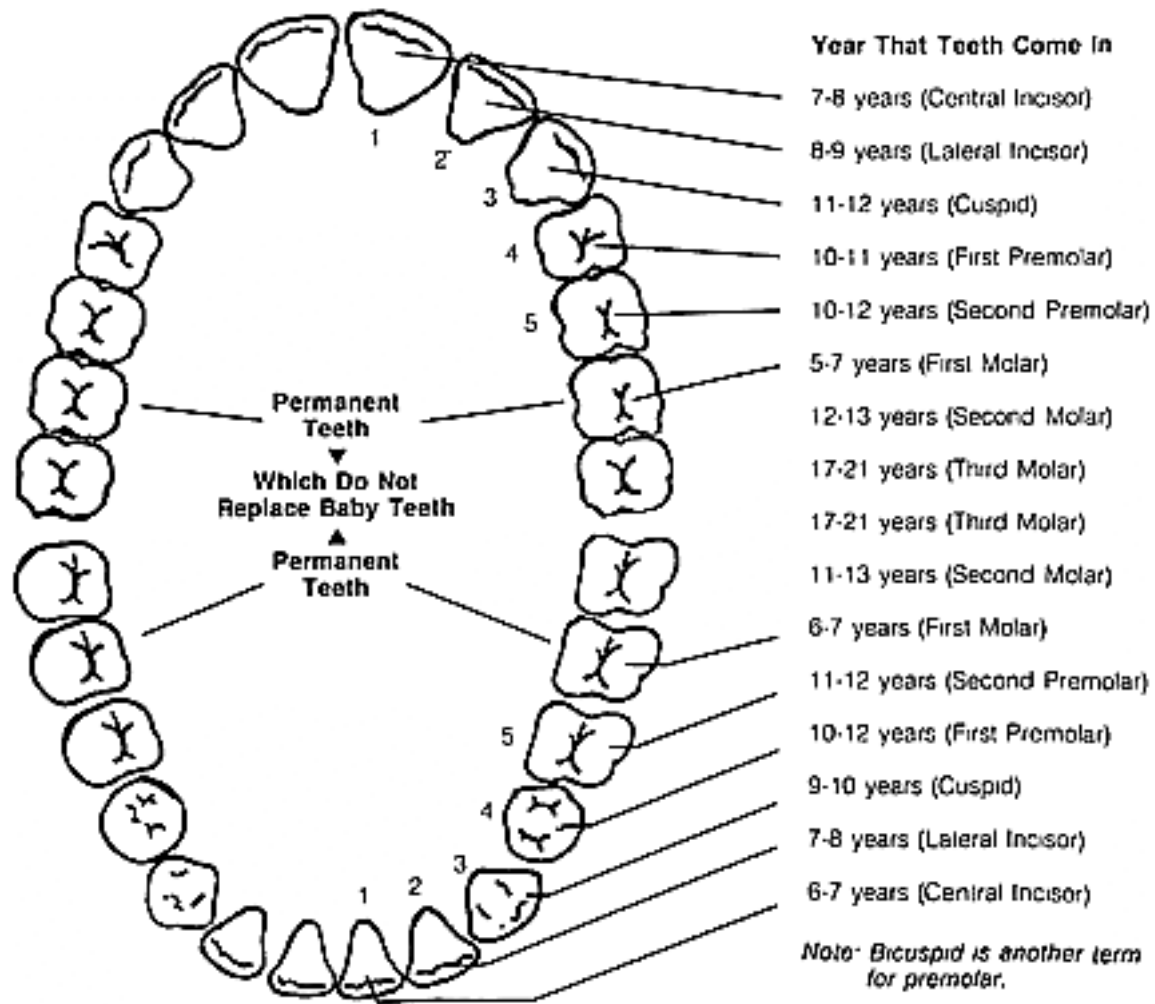
AGE SCHEDULE FOR PRIMARY TEETH

PRIMARY (BABY) TEETH



AGE SCHEDULE FOR PERMANENT TEETH

(Teeth numbered 1 to 5 replace baby teeth)



TOOTHBRUSHING - REMOVAL OF PLAQUE

How to Brush

Toothbrushing disrupts and removes plaque from the inner, outer and top surfaces of the teeth.

Place the toothbrush inside the mouth with the bristles along the upper last two teeth pointing at a 45° angle toward the gum line. This ensures that the bristles cover both teeth and gum surfaces

Vibrate the brush in a slight back and forth or circular motion directing gentle pressure towards the gums. This movement keeps the brush alongside the same two teeth and allows some of the bristles to clean the surfaces under the edge of the gums. Do not scrub.

Count to ten and then, move to the next group of teeth.

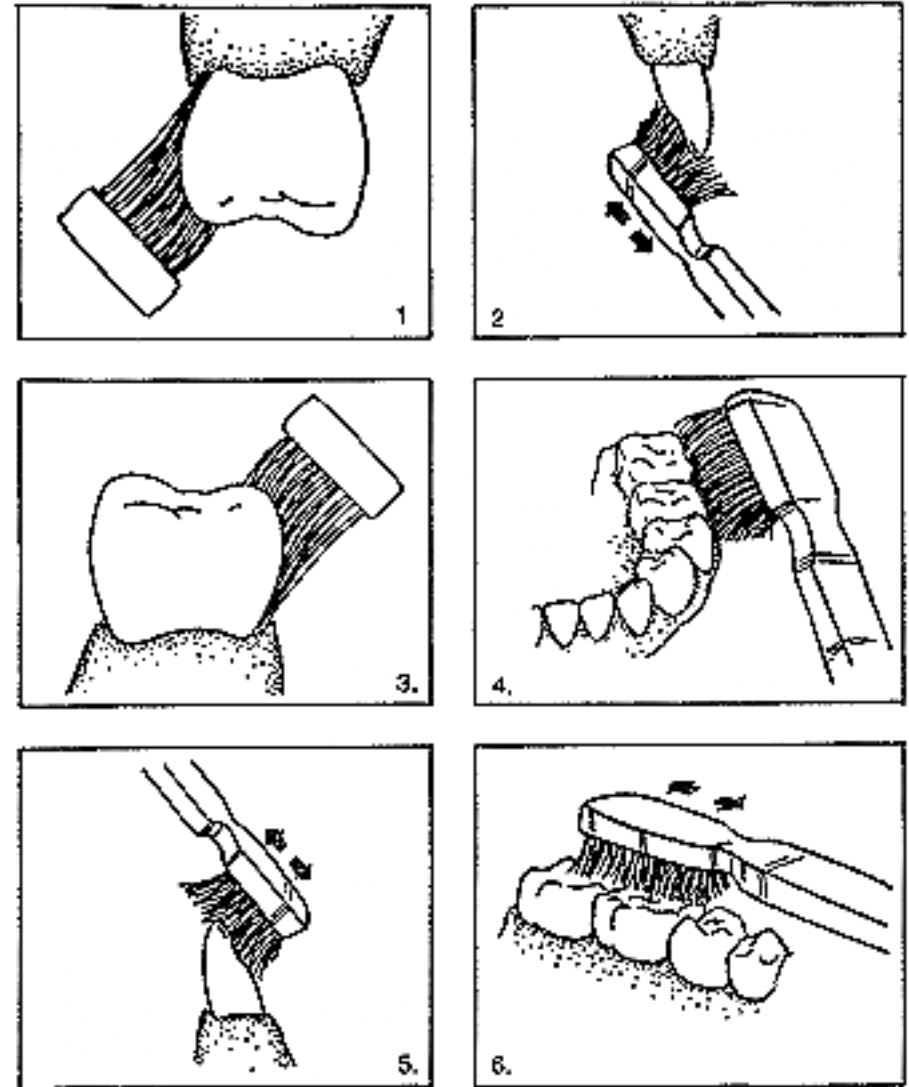
All inside and outside surfaces of teeth are cleaned in this way. The top surfaces of the back teeth are cleaned with a back and forth motion the bristles directly on top of the teeth.

To ensure all surfaces are brushed, the same circuit is followed every time.

This is where toothbrushing should begin.

1. Position of brush for brushing upper inside back teeth
2. Position of brush for brushing outside upper front teeth.
3. Position of brush for brushing lower inside back teeth
4. Position of brush for brushing lower outside middle teeth
5. Position of brush showing brushing of lower outside front teeth.
6. Position of brush showing brushing of top surface of back teeth.

From: CDA, "Do It Yourself Oral Hygiene", 1981



A BASIC TECHNIQUE FOR DAILY PLAQUE REMOVAL

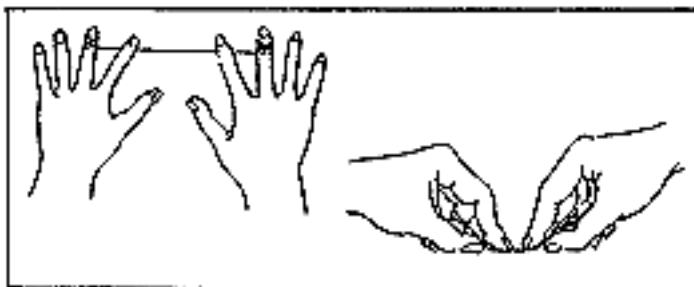
Flossing - Removal of Plaque

How to Floss

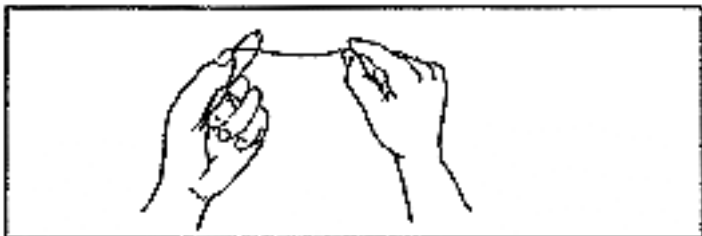
Flossing disrupts and removes plaque between the teeth and under the edges of the gums

To floss properly, use about 46 cm of dental floss. Wind most of the floss around the middle finger of one hand and the rest around the middle finger of the other hand. This leaves about 8 cm free.

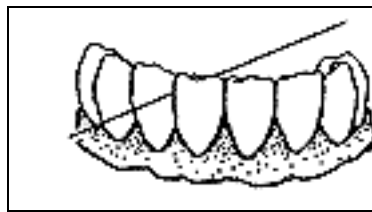
The free part of the floss is grasped with the thumbs and 1st fingers of each hand leaving about 2.5 cm as the 'working portion' of the floss.



When flossing lower teeth the floss is guided mainly by the 1st finger of each hand.



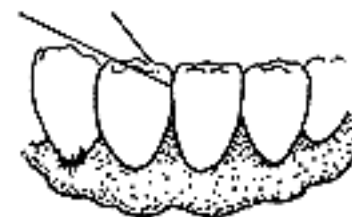
For upper teeth exert pressure with the thumb of one hand and the forefinger of the other hand.



A gentle sawing motion is used to insert the floss between teeth. Curve the floss into a C-shape around the surface of one tooth and gently work the floss under the gums until a slight resistance is felt.

Holding the floss against the tooth to a C-shape, move the floss up and down several times.

Clearly, shows the "c" shape that is necessary to attain



(When all the plaque has been removed, the floss rubbing against the tooth often makes a 'squeaky-clean' sound.)



Repeat the procedure on the adjacent tooth surface at the same site.

This method is repeated on the remaining teeth starting on the upper right teeth and ending on the lower left teeth.

From CDA, "Do It Yourself Oral Hygiene", 1981

THE STRUCTURE OF A TOOTH

A tooth consists of two anatomical parts

Crown: usually appears above the gums and shows in the mouth

Root: anchors the tooth in the bony socket of the jawbone and is ordinarily not visible

Structures of the crown:

Enamel: the hard, glistening substance that forms the outer layer of the crown

Dentin: an ivory-like substance under the enamel, which forms the body of the tooth

Pulp Cavity: the hollow space in the centre of the tooth which contains nerves and blood vessels

Structures of the root:

Cementum: a thin layer of bone-like tissue covering the root.

Dentin: an ivory-like substance located under the cementum

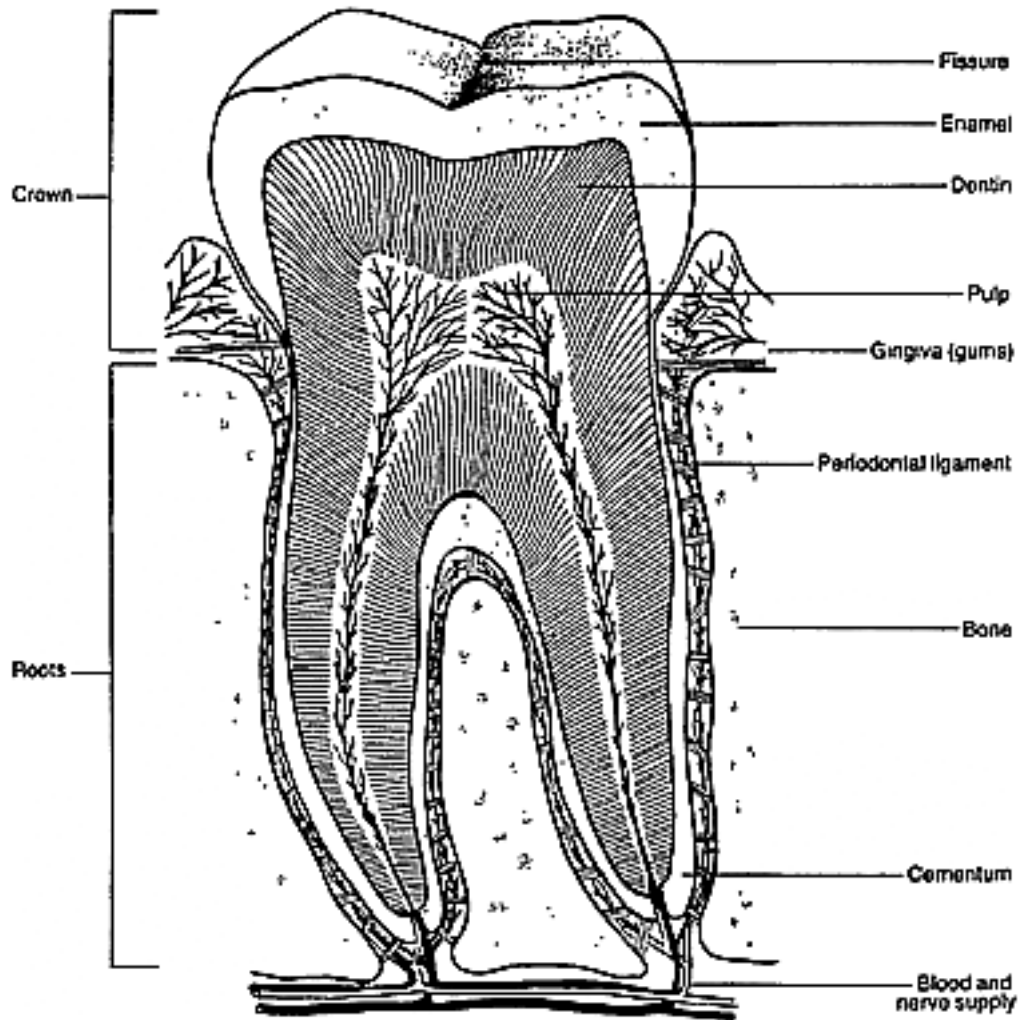
Pulp canal: an inner cavity containing nerves and blood vessels, an extension of the pulp cavity to the tip of the root

Surrounding tissues:

Periodontal ligament: fastens the root of the tooth to the jawbone. It acts as a shock absorber as the teeth come together in the chewing process

Gingiva (gums): soft tissue that immediately surrounds the teeth and the bone.

Jawbone: the bone surrounding and supporting the roots of the teeth

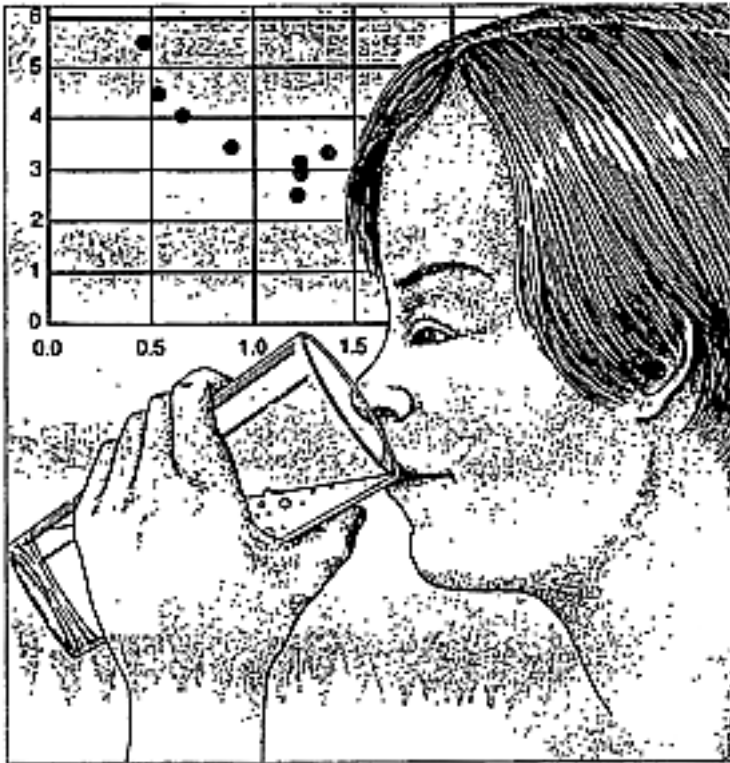


WATER FLUORIDATION IN THE NORTHWEST TERRITORIES

Many residents of the Northwest Territories suffer from tooth decay. The rate of tooth decay in the N.W.T is almost four times greater than in southern Canada

Tooth decay is unusually high among native people, particularly children. The high rate of tooth decay results, in part, from the change of a high protein traditional diet to processed food and a high carbohydrate diet.

Water fluoridation, along with good nutrition, proper dental care and good dental hygiene practices, is an excellent way of reducing tooth decay.



What is fluoride?

Fluoride is a natural chemical which is produced by combining the natural element fluorine with other elements.

Low levels of fluoride are found naturally in most community water supplies. It also is found in some foods including spinach, fish and other seafoods. Tea also contains high levels of fluoride.

What does it do?

Fluoride prevents tooth decay by strengthening enamel during tooth formation and fighting tooth decay in formed teeth.

Studies conducted in North American cities over the past 20 years show that children raised in communities where fluoride has been added to the water, have 40% - 60% fewer cavities than children raised elsewhere.

Fluoride helps children grow stronger teeth. Adults who consume fluoride tend to keep their own teeth longer. It also strengthens bones and reduces bone fragility disease in elderly people.

The effects of fluorides can however be overwhelmed by the frequent consumption of foods and drinks containing sugar especially soft, sticky types of foods. Regular brushing of the teeth with a fluoride-containing toothpaste has the potential to reduce the incidence of dental decay.

What is water fluoridation?

Water fluoridation is the process of adding fluoride to water supplies. Fluoride does not change the taste of water.

Adding fluoride to drinking water usually does not cause health problems. However, high doses of fluoride taken while teeth are forming can permanently change the colour and texture of the teeth. The addition of fluoride to drinking water is controlled so high doses are not added. (The range of effective water fluoridation is between 7 and 12 parts per million.)

The method of adding fluoride to water supplies is determined by water supply and distribution systems. It is easier to add fluoride to water in treatment plants that serve piped water distribution systems. This method

is used in the Yellowknife, Inuvik, Iqaluit and Fort Smith water treatment plants.

It is more difficult to safely fluoridate community water supplies in communities served by trucked water distribution systems. Safe and properly controlled fluoridation is possible only where reservoirs designed for year round storage are used. Skilled personnel can add fluoride while the reservoir is being filled.

Water fluoridation generally is not recommended in communities with small water storage facilities or communities with no storage facilities as proper mixing and dilution of the fluoride may not be consistently achieved.

Fluorides have the effect of rendering the teeth less soluble (but not insoluble) in the acids derived from the action of certain oral bacteria on sugar. Teeth which have been completely formed under the influence of an adequate amount of fluoride are much more resistant to the initiation of dental decay and to its rate of progress.

Other alternatives

To be effective against dental decay, fluoride must be provided on a daily basis over the entire period of tooth formation - from birth to about age 14.

Fluoride added to milk has produced modest reductions in tooth decay. However, its effectiveness is limited because.

- there are wide variations in the amount of milk people drink
- some families may not be able to afford a lot of milk
- teenagers often do not drink much milk

Fluoride tablets and drops are effective when used on a daily basis for the first 14 or more years of life. However, when such programs have been instituted in Canada and the United States, users tended to "get lazy" after a year or two and stop taking the tablets or drops.

Fluoride treatment of teeth by a dental health worker, and the daily use of fluoride toothpaste or mouthwash combined with proper brushing and flossing are recommended for individuals who live in communities which do not have fluoridated water supplies.

For more information on fluorides and fluoridated water systems, contact:

Community Works and Capital Planning
Municipal and Community Affairs
Government of the Northwest Territories
Yellowknife, N W T
X 1 A 2L9
Telephone (403) 873-7644

Fluorides in the form of water fluoridation, a good diet with sugar consumption kept to a minimum, especially for between-meal snacks, brushing and flossing thoroughly each day and brushing after meals if possible (fluoride toothpaste) will prevent most dental decay and gum disease. These four preventive measures constitute a dental health program that can be carried out by the individual at a very low cost. Prevention of dental disease is relatively inexpensive but neglect is costly.

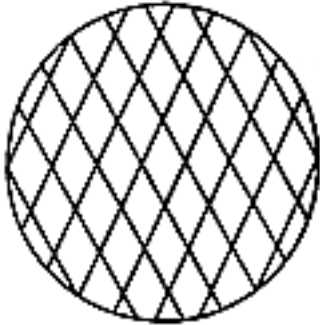
Reprinted from 'Water Fluoridation in the Northwest Territories', N. W. T. Municipal and Corporate Affairs, May 1988, and Fact Favour Fluoridation, Canadian Dental Association, 1979.

ROLES OF FLUORIDES

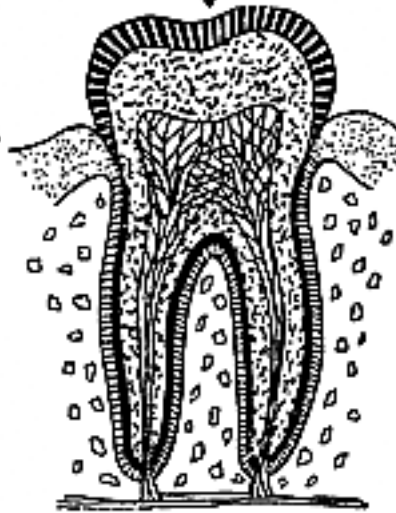
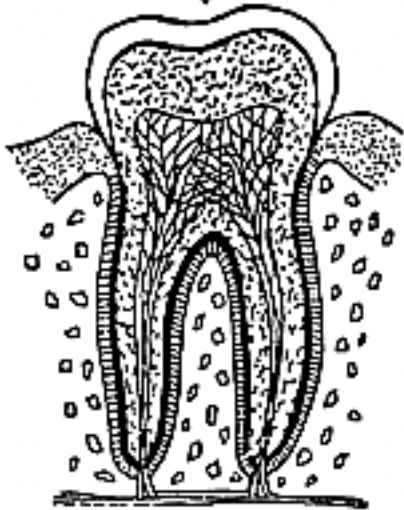
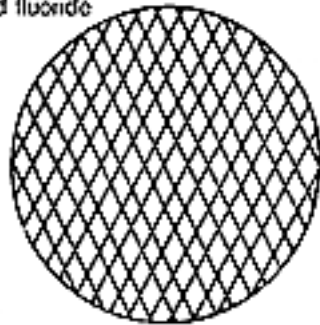
Systemic Fluoride

- ingested fluoride is deposited into developing teeth
- makes the enamel and dentin crystals harder and more densely packed
- leads to more decay resistant tissue
- most beneficial means of preventing tooth decay

enamel mineralized with calcium, phosphorus

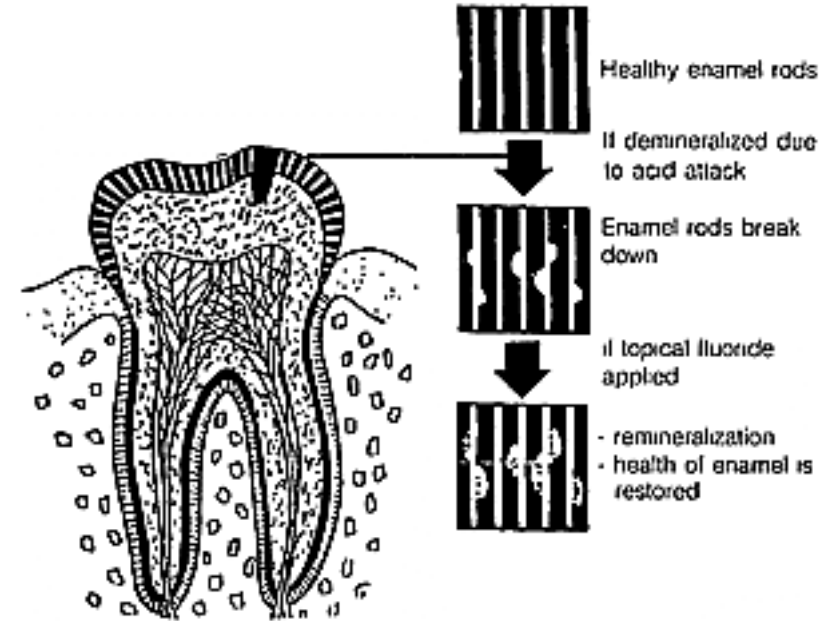


enamel mineralized with calcium, phosphorus and fluoride



Topical Fluoride

- applied fluoride provides benefits to the surface layer of enamel
- strengthens enamel rods (remineralization)



FLUORIDE PRODUCTS

There are many ways to ensure adequate levels of fluoride necessary to strengthen teeth and "fight cavities" Products containing fluoride are approved by the Canadian Dental Association and bear the C.D.A. Seal.

Systemic Fluoride Treatments

- drinking fluoridated water
- fluoride tablets (e.g. Peditabs)
- fluoride drops (e.g. Pedidrops)
- baby vitamins with fluoride (e.g. Fluor-vi-sol)

Residents of communities with fluoridated drinking water do not need other systemic fluoride treatments.

Topical Fluoride Treatments

- a) professional treatments by a dental health worker
- b) self treatments
 - fluoride rinses (e.g. Fluorinse by Oral B)
 - mouthwashes with fluoride (e.g. Listermint)
 - fluoride gels

DENTAL HYGIENE AIDS

There are many products designed to clean the surfaces of the teeth as well as the area between the teeth and under the gum lines In addition to the toothbrush these include

Dental floss

- unwaxed
- waxed
- flavoured

Dental tape

- used to clean spaces between widely spaced teeth

Super floss

- a special floss designed to clean under bridgework

Stimudents

- an interdental cleaner, similar to a toothpick

Proxabrush

- a small brush used to clean between widely spaced teeth

Water pik

- an irrigation device which can remove debris from around the teeth, gums, braces and other dental appliances

Most dental health products other than a soft bristle toothbrush, fluoridated toothpaste and dental floss, should only be used following recommendation and instruction from a dental health professional

EFFECTS OF TOBACCO

The tar in tobacco stains the teeth with an unattractive dark brown to black stain Meticulous cleaning will help to keep accumulations to a minimum Nevertheless, it may be necessary to have the stains removed regularly at a dental office A distinctive unpleasant mouth odour and taste develop with heavy smoking

The use of tobacco also causes a reduction in the sense of taste.

Prevention of Cancer of the Mouth

Tumours and other growths occur in both the soft and hard parts of the mouth more frequently than is generally recognized Not all of them are malignant, many of them are benign Nevertheless, these conditions should be of concern until diagnosed otherwise

Cancer of the mouth and pharynx (back of the throat) accounted for 591 of the 21,008 male cancer deaths in 1978 Among females 206 of the 16,490 cancer deaths were caused by cancer of the mouth and pharynx The higher male risk is obvious

Dentists and other dental health workers look for tumours and growths when they are examining the mouth. Other conditions in the head and neck region may also be found during the dental examination. Early detection of such abnormalities can save lives.

Although cancer is more frequent in those of mature years, no age group is immune. Cancer occurs in many forms in the mouth, with differing degrees of malignancy. The lips, mainly the lower lip, the tongue, gums, cheeks and bones of both upper and lower jaws may all develop cancerous growths.

Pain is not usually an early symptom. The following abnormalities of either the soft or the hard parts of the mouth should be examined by a dentist or physician at once.

- any swelling or hardness, however small, recently found, which is increasing in size.
- any sore spot, roughening or whitish discolourization which does not heal within two weeks.

It is better to take steps to prevent cancer from occurring than to rely on discovery and treatment after it appears. Probably the most important lesson about mouth cancer that young people can learn is that persons who drink heavily or smoke are at a greater risk of acquiring the condition. It appears also that smoking and alcohol use interact. The risk of mouth cancer among persons who both drink and smoke is greater than can be attributed to the independent effects of smoking and alcohol use. A similar relationship between smoking and drinking alcohol is found for cancers of the larynx (voice-box) and esophagus (gullet). It seems, therefore, that all tissues lining the upper respiratory and digestive systems, which can be most readily exposed to tobacco and alcohol, are susceptible to their effects.

Pipe, cigar and cigarette smoking are of similar importance in the development of cancers of these tissues. This is somewhat different from the situation for the lungs where cigarette smoking is a greater risk than pipe and cigar smoking. Use of chewing tobacco has also been found to be associated with mouth cancer. As would be expected, the risk of developing mouth cancer increases with the amount used.

Chronic irritation due to dental neglect, resulting in badly decayed, broken-down teeth and in open root abscesses and infections of the gums, may also be important.

Periodic dental examinations and regular dental care will reduce the risk of oral cancer by eliminating or reducing sources of chronic irritations of the mouth tissues. In addition to the possible saving of lives, the early treatment of tumours of either soft or hard parts of the mouth will reduce the possibility of disfigurement.

The potential for preventing mouth and other cancers is of paramount importance. The most effective preventive method is the avoidance of tobacco products, including second hand smoke.

DENTAL HEALTH WORKERS

Dental Assistant

The Dental Assistant aids the Dentist in providing care for the patient.

Duties of the Dental Assistant vary with the dental practice and may include:

- preparing the patients for dental treatment, - taking x-rays;
- assisting the Dentist at chairside;
- simple cleaning of teeth in small children;
- clerical and receptionist duties, such as making appointments for patients, filing charts, etc.

Location

Most Dentists in practice employ a Dental Assistant.

Education

There are two programs offered at some community colleges:
(Both suggest grade 12 education.)

1. One year program at the college
2. 18 month Independent Correspondence Course for those having experience as a Dental Assistant .

Dental Assistants may be trained to a dental office but must sit examinations to be registered. Registration is not compulsory in most provinces and territories but is a great asset.

Dental Hygienist

The Dental Hygienist is primarily concerned with prevention of dental problems through education. The Hygienist's duties include:

- examining and charting the condition of mouth and teeth;
- taking x-rays of teeth;
- cleaning teeth;
- applying materials to teeth to prevent cavities;
- teaching adults and children how to take care of teeth and the importance of eating healthy food.

Location

In the north, the Dental Hygienist works in Dentists' offices. In some areas the Hygienist works for health centres or hospitals.

Education

Grade 12, Senior Matriculation with chemistry. Two year course at a university leading to a diploma in Dental Hygiene. Certain community/ vocational colleges offer programs in Dental Hygiene.

Dental Therapist

Dental Therapy, an exciting new career, provides dental care to those living in remote areas of Canada, particularly in the Canadian North, and native people on reserves. Dental therapists follow treatment prescribed by a supervisor dentist who visits the therapist regularly. The dentist examines patients and writes treatment plans which outline the specific work procedures to be completed after the dentist has gone.

This work includes:

- giving local anaesthetics;
- preparing teeth for and placing routine fillings in teeth;
- performing uncomplicated extractions of deciduous (baby) and permanent teeth;
- scaling (cleaning) teeth;
- taking and developing x-rays;

- conducting preventive dental health programs which include
 - supervised brushing,
 - topical fluoride application,
 - classroom teaching

Location

Dental therapists are employed by the Regional Health Boards of the N.W.T. to work in communities in the Northwest Territories. The work usually involves travel to many communities on a regular basis.

Education

Grade 12 with biology, or mature students who can demonstrate equivalent training may also be considered. Reading comprehension, writing and speaking skills are important. Two year Dental Therapy course at the School of Dental Therapy.

Dentist

The primary concern of the Dentist is to help people keep healthy teeth. They do this through treating problems of the teeth and mouth, and emphasizing prevention of dental problems. A healthy mouth and teeth are essential factors in achieving good general health.

Some of the duties of the Dentist include:

- filling, cleaning, extracting and replacing teeth,
- treatment of the gums and roots of the teeth,
- surgery of the mouth,
- straightening teeth,
- care of children's teeth;
- promoting dental health through education

Location

In the north, Dentists work in private practice or work for the Government travelling to certain parts of the N.W.T.

Education

Senior Matriculation with B standing or better. Several years university study with specific science courses such as chemistry, physics and biology. Four year university program to obtain the Doctor of Dental Surgery or Doctor of Dental Medicine.

COMMON PROBLEM CONDITIONS OF TEETH AND MOUTH OF CHILDREN AND YOUTH

Problem	Signals	Causes	Consequences	Treatment	Prevention
dental decay	<ul style="list-style-type: none"> - plaque build up - brown spots in grooves on surfaces or between teeth - bad breath - bad taste - some pain when hot, cold, sweet substances are eaten 	<ul style="list-style-type: none"> - improper brushing and flossing - lack of brushing and flossing - frequent eating of sweet sticky foods - dental neglect 	<p>plaque + sugar =</p> <p>acid + tooth =</p> <p>tooth decay</p>	<ul style="list-style-type: none"> - drilling to remove disease - filling - crowns - root canal 	<ul style="list-style-type: none"> - fluorides - proper daily brushing and flossing - plaque control - careful selection of foods - sealants - health education - regular dental check-ups
gum disease -gingivitis, periodontitis	<ul style="list-style-type: none"> - soft, swollen, tender gums when brushed or flossed - loose permanent teeth - persistent bad breath or taste in mouth - a feeling of pressure between teeth after eating - gums shrink from teeth 	<ul style="list-style-type: none"> - bacteria in plaque irritates gums - plaque hardens and irritates gums - infection 	<ul style="list-style-type: none"> - bleeding gums - pockets of pus between gums and tooth - gums, ligaments, bones that support tooth are damaged - teeth loosen and fall out 	<ul style="list-style-type: none"> - removal of plaque and calculus - treatment of infection - Surgical removal of tooth 	<ul style="list-style-type: none"> - plaque control - proper daily brushing and flossing - health education - regular dental check ups
orthodontal	<ul style="list-style-type: none"> - crooked or poorly aligned permanent teeth - grinding of teeth - improper spacing of teeth 	<ul style="list-style-type: none"> - premature loss of primary teeth - late loss of primary teeth - thumb sucking beyond 5 years 	<ul style="list-style-type: none"> - plaque control problems - appearance problems - biting, chewing, speaking problems - grinding of teeth 	<ul style="list-style-type: none"> - space maintainers - exercises or appliances to move teeth to correct locations - prevention of thumb sucking 	<ul style="list-style-type: none"> - regular dental check-ups - health education

Problem	Signals	Causes	Consequences	Treatment	Prevention
		<ul style="list-style-type: none"> - teeth too large or too small for jaw - cleft palate 	<ul style="list-style-type: none"> - uneven wear of teeth - periodontal disease 	<ul style="list-style-type: none"> - prevention of grinding of teeth 	
nursing bottle mouth	<ul style="list-style-type: none"> - new teeth are decayed 	<ul style="list-style-type: none"> - frequent exposure of a child's teeth for long periods of time to liquids containing sugars e.g., milk, formula, fruit juice, pop, sweetened water or tea - usually caused when baby is allowed to sleep with the bottle in the mouth - teeth are bathed in liquid. 	<ul style="list-style-type: none"> - bacteria + sugar = acid - acid + tooth = decay 	<ul style="list-style-type: none"> - fillings - tooth removal - caps 	<ul style="list-style-type: none"> - teach parents/ caregivers proper feeding techniques - babies should not be put down to sleep with a bottle, or bottle should contain only water - give bottle when baby is awake in a sitting position to stimulate natural swallowing and tongue positioning - don't let baby or young child fall asleep with sweet liquids in mouth - don't "prop" bottle

DENTAL EMERGENCY PROCEDURES

Knocked-out Tooth

Rinse the tooth. Do not scrub. Place the tooth in a glass of water or milk, or wrap in a wet towel or cloth. Go to the dental health worker immediately with the tooth.



Bitten Tongue or Lip

Apply direct pressure to bleeding area with a clean cloth. If swelling occurs, apply cold compresses. If bleeding persists, go to the hospital or nursing station.



Possible Fractured Jaw

Immobilize the jaw using a handkerchief, scarf or towel. If swelling persists, apply a cold compress. Call the dental health worker immediately and go to the hospital or nursing station.



Broken Tooth

Gently rinse the area with warm water. If swelling occurs, place cool compresses on outside of cheek. Go to the dental health worker immediately.



Orthodontic Problems

If a wire is causing irritation, cover the end of the wire with wax or cotton. Go to the dental health worker immediately. If a wire is embedded in the cheek, tongue or gums, do not attempt to remove. Go to the dental health worker immediately. If an appliance becomes loose or breaks, take the appliance to the dental health worker immediately.



Toothache

Remove any debris around tooth by rinsing with warm water and flossing on either side of the tooth. If swelling is present, place cool compresses on the outside of the cheek. Do not use heat. See the dental health worker as soon as possible.



Object Wedged Between Teeth

Try to remove objects with dental floss. Do not snap the floss in between the teeth. If flossing does not remove the object, go to the dental health worker. Do not try to remove the object with sharp or pointed instruments.



Adapted from: Health Education, Dental Health Teaching Supports, Grade 5, Manitoba Education, 1986.

NUTRITION AND DENTAL HEALTH

Foods can be classified as either Go, Caution or Stop foods

Go



Foods both dentally and nutritionally recommended

High in Nutrients, Low in Sugar.

Go foods are high in nutritional value. Whether they are selected as a part of meals and/or as between meal snacks, such foods can contribute significantly to the total daily nutrient needs. Since they are also low in sugar, they do not promote tooth decay.

Sample Foods

White milk, (homo, 2%, 1% or skim)	Raw or cooked fruits and vegetables
Buttermilk	Unsweetened fruit* and vegetable juice
Plain yogurt	Tossed salads and coleslaw
Cheese or cottage cheese	Devilled or hard cooked eggs
Plain whole grain or enriched breads	Nuts (peanuts, pistachios, almonds, etc.)
Melba toast	Seeds (sunflower, pumpkin, sesame)
Meat, poultry, fish, eggs, cheese or peanut butter	
Hamburgers, pizza	

* *Unsweetened fruit juices are acceptable, but should not be taken too frequently during the day as they contain natural sugars which can damage teeth just as refined sugars do. Water is good for thirsty people.*

Caution



Foods that are either not recommended dentally or nutritionally

A. Dentally poor foods that have nutritional value

Moderately High in Nutrients, High in Sugar

These popular foods have some nutritional value, but are also high in sugar content. They are less harmful to the teeth if consumed with bigger meals instead of as single snacks. Greatly increased flow of saliva during a main meal will help neutralize the harmful acids that are formed in the mouth from the sugar. Between meals, the flow of saliva is much decreased, hence the natural protection for the teeth is lacking.

Sample Foods

Milk puddings	Ice Cream sodas	Unsweetened fruit
Milkshakes	Yogurt, sweetened	juices, if taken
Chocolate milk or drink	Sherbert	frequently
Ice Cream	Sweetened fruits	Raisins and other dried fruits

B. Foods nutritionally poor but dentally acceptable

Low in Nutrients, Low in Sugar

Although these foods are relatively harmless to the teeth due to low sugar content, they contribute little toward fulfilling body nutrient needs. Since they contain few nutrients in relation to the calories provided, they should be chosen infrequently. Only people on otherwise well-balanced diets can afford to indulge in these occasionally.

Sample Foods

Popcorn, without salt or butter
Sugar-free soft drinks and sugarless gum

Stop



Products nutritionally and dentally unacceptable

Low in Nutrients, High in Sugar

These products are high in sugar and are not acceptable. They are also low in nutrient value and should never be allowed to replace the high-nutrient foods in the diet. Avoid them as much as possible.

Sample Foods

Sweet baked goods

Chocolate bars, candies,
lozenges, regular gum and
breath mints

Honey, jams, jellies, syrup

Beverages containing sugar such
as regular soft drinks, tea and
coffee with added sugar, drink
crystals

Popcorn with salt and butter
Cheesies, potato chips, etc

Read the label: "Sugar" can be spelled many ways - sucrose, glucose, fructose, lactose, molasses, honey, syrup.

Source: Eating Properly For Better Dental Health, Canadian Dental Association, 1979

VITAMINS AND MINERALS ESSENTIAL FOR DENTAL HEALTH

Vitamins, minerals and water are not digested by the body as are carbohydrates, fats and proteins. They are released from foods and absorbed by the body's tissues. These nutrients maintain specific body functions. Required for dental health are calcium, phosphorus and fluoride, as well as vitamins A, C, D.

mineral	function	good-excellent sources
calcium	<ul style="list-style-type: none"> - maintains bones and teeth - blood clotting - nerve and heart activity 	<ul style="list-style-type: none"> - milk products, seaweed (kelp, laver), lambs-quarters, dried, salted codfish, canned salmon with bones, sardines, herring, eggs, broccoli, soft animal bones
phosphorus	<ul style="list-style-type: none"> - develops bones and teeth - aids muscle activity - releases energy in metabolism 	<ul style="list-style-type: none"> - milk, egg yolk, meat, birds, fish, whole grain cereals, nuts, legumes
fluoride	<ul style="list-style-type: none"> - strengthens teeth, bones 	<ul style="list-style-type: none"> - fish, fluoridated water, seafoods, tea

vitamin	function	good-excellent sources
A	<ul style="list-style-type: none"> - maintains healthy teeth, bones, eyes, skin 	<ul style="list-style-type: none"> - milk products, egg yolk, green and yellow vegetables, eel, crab, organ meats, caribou stomach contents
D	<ul style="list-style-type: none"> - builds and maintains bones and teeth - helps absorb phosphorus 	<ul style="list-style-type: none"> - fortified milk, eggs, sun (ultraviolet) light on exposed skin
C	<ul style="list-style-type: none"> - keeps teeth firmly in gums - heals wounded tissue - aids in iron absorption 	<ul style="list-style-type: none"> - raw fruits and vegetables, vitamized fruit juice, rosehips, dock, lambsquarters, cranberries, black currants, gooseberries, raw oysters, citrus fruits

LIFESTYLE BEHAVIOURS WHICH PROMOTE ORAL AND DENTAL HEALTH FOR A LIFETIME

DO

- 1 Eat a well balanced diet according to the NWT Food Guide.
- 2 Brush and floss thoroughly at least once a day
3. Rinse the mouth with water when brushing is not possible
- 4 Use disclosing tablets from time to time to ensure all plaque is being removed, and to check for effectiveness of brushing and flossing
5. Use a fluoride toothpaste and a brush with soft nylon bristles with rounded ends
6. Drink fluoridated water, or take fluoride drops or pills daily until about age 14.
7. Visit the dental health worker regularly (usually every 6 months)
- 8 Wear protective equipment when playing sports, or driving ATV's and snowmobiles.
- 9 Wear seat belts in cars and trucks
- 10 Go to the dental health worker immediately in the event of any dental or mouth injury

DON'T

- 1 Eat too many sweet or sticky foods.
- 2 Eat sweet or sticky foods too often.
- 3 Let a baby fall asleep with a bottle (unless it contains only plain water)
- 4 Use sweets as a reward or treat for children.
- 5 Use a worn out, frayed toothbrush. It does not clean effectively
- 6 Push others near dental hazards, such as drinking fountains and playground equipment
- 7 Put harmful objects in the mouth.

DENTAL HYGIENE AIDS

There are many products designed to clean the surface of the teeth as well as the area between the teeth and under the gum line. In addition to the toothbrush these include:

Dental floss - unwaxed
- waxed
- flavoured

Dental tape - used to clean spaces between widely spaced teeth

Super floss - a special floss designed to clean under bridgework

Stimudents - an interdental cleaner, similar to a toothpick

Proxabrush - a small brush used to clean between widely spaced teeth

Water pik - an irrigation device which can remove debris from around the teeth and gums

Caution

The following products should be used only after recommendation and instruction by a dental professional: water piks, stimudents, dental tape, super floss, fluoride supplements and rinses, and toothpastes for sensitive teeth.

If you are uncertain about any dental product, always ask a dental health professional