

NORTHWEST TERRITORIES

School Health Program

GRADE FOUR



Northwest
Territories Education, Culture and Employment
Health and Social Services

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Education, Culture and Employment
Health and Social Services

August, 1995

NORTHWEST TERRITORIES

School Health Program

INTRODUCTION

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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.

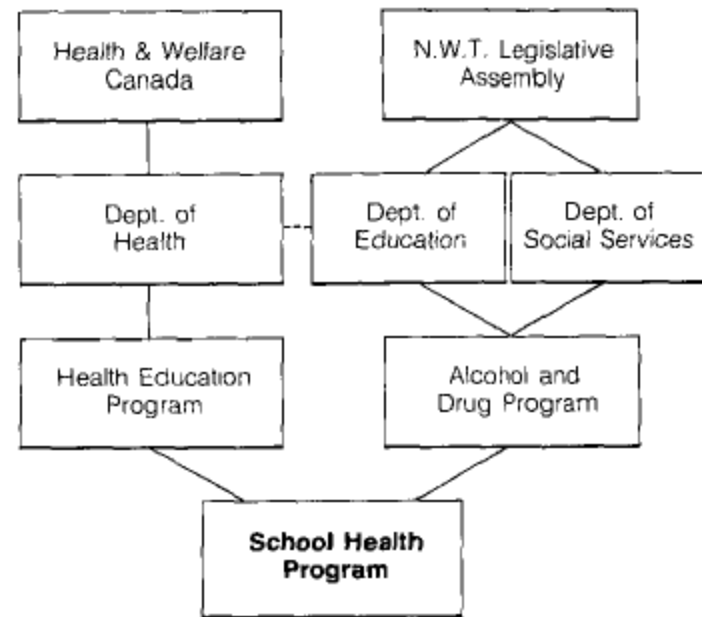
THE HISTORY OF THE N.W.T. SCHOOL HEALTH PROGRAM

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.

REFERENCES

Project Proposal, Health Information and Promotion, Department of Health, September 1981

Health Strategies for Canadians, Ad Hoc Committee Report, June 1981

A New Perspective on the Health of Canadians, M. Lalonde, Government of Canada, April 1974

Western Diseases, O. Schaefer, (Editors, Trowell and Burkett)

General and Nutritional Health in Two Eskimo Populations at Different Stages of Acculturation, O. Schaefer J. Timmermans, Canadian Journal of Public Health, November 1980

Eskimo Personality and Society - Yesterday and Today, O. Schaefer, Arctic, June 1975

Report on Health Conditions in the Northwest Territories 1984, Medical Services, N.W.T. Region, Health and Welfare Canada

Tobacco Use Among Students in the Northwest Territories, Health and Welfare Canada and N.W.T. Department of Health, 1982

Canada Health Attitudes and Behaviours Survey, Northwest Territories Report, Social Program Evaluation Group, Queen's University, 1984-85

Achieving Health for All: A Framework for Health Promotion, J. Epp, Government of Canada, November 1986

Ottawa Charter for Health Promotion, An International Conference on Health Promotion, November 1986

Northwest Territories School Health Program: A Report on the Needs Assessment, Department of Health, September 1984.

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School Health Program

IMPLEMENTATION

MAJOR GOALS

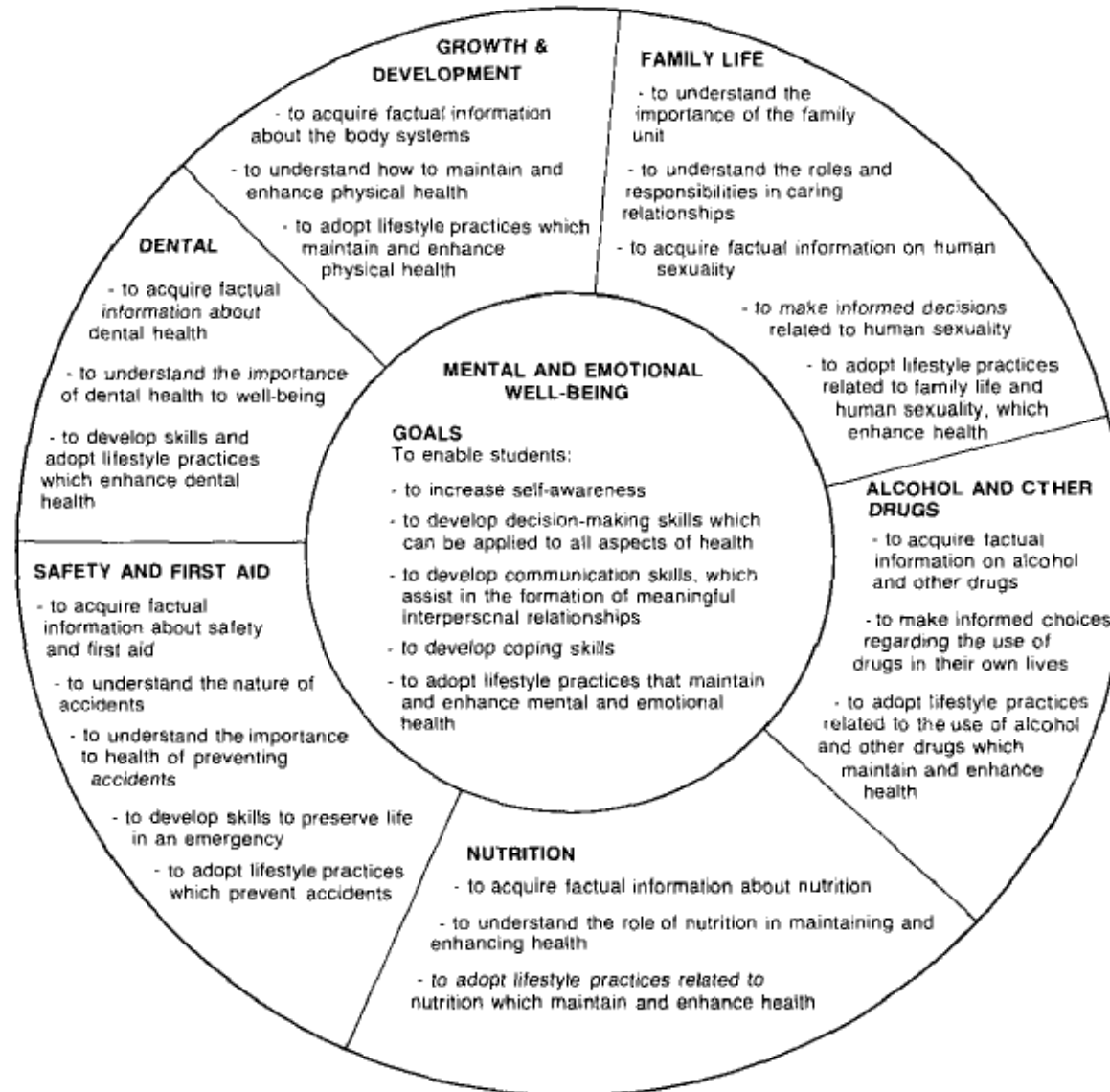
OF THE NORTHWEST TERRITORIES SCHOOL HEALTH PROGRAM

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

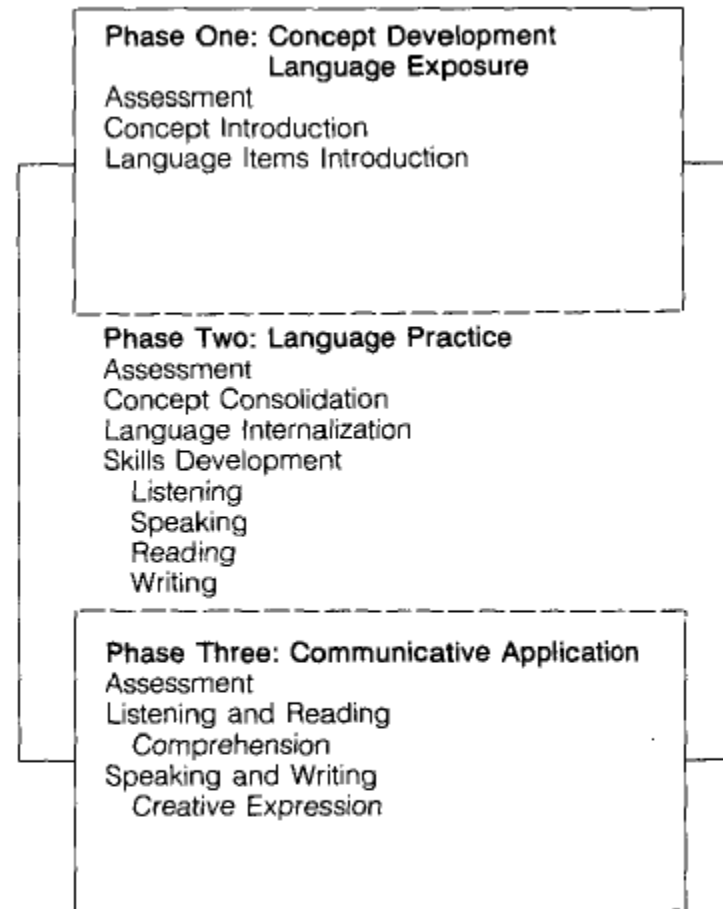
These principles are also valid for students who speak English as a first language. The difference lies in the methods and techniques used. Although designed for second language students, the Language Development Approach allows flexibility in choosing specific classroom practices and techniques to meet 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 4



Education, Culture and Employment
Health and Social Services

August, 1995

MENTAL AND EMOTIONAL WELL BEING

GRADE 4

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	SELF- AWARENESS	Awareness of strengths and weaknesses affects how people feel about themselves	i) identify personal strengths and weaknesses ii) accept personal strengths and weaknesses
2	SELF- AWARENESS	The activities people choose affect how they feel	i) identify activities that make them feel good
3	RELATIONSHIPS	Caring behaviour helps build and maintain relationships	i) identify caring behaviours
4	RELATIONSHIPS	Caring behaviour helps build and maintain –relationships	i) demonstrate caring behaviours i) describe the importance of caring
5	DECISION-MAKING	Better decisions can be made by considering the possible effects of various choices	i) identify the possible effects of various choices ii) identify reasons for individual decisions
6	DECISION-MAKING	Peers influence decisions	i) identify decisions that peers may influence i) identify ways peers influence them
7	DECISION-MAKING	Peers may influence decisions	i) identify methods of resisting peer influence ii) demonstrate methods of resisting peer influence

GROWTH AND DEVELOPMENT

GRADE 4

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	BODY SYSTEMS	The digestive system provides the fuel the body needs	i) name and locate the main parts of the digestive system
2	BODY SYSTEMS	The digestive system provides the fuel the body needs	i) describe the functions of the digestive system ii) state the importance of the digestive system
3	BODY SYSTEMS	The digestive system provides the fuel the body needs	i) name common problem conditions of the digestive system ii) describe ways to care for the digestive system
4	DISEASE PREVENTION	Diseases are caused by a variety of factors	i) explain what communicable diseases are ii) explain what non-communicable diseases are iii) distinguish between communicable and non-communicable diseases
5	ENVIRONMENTAL HEALTH	Safe drinking water is essential for maintaining health	i) identify sources of polluted water ii) name health problems caused by unsafe drinking water iii) identify ways to ensure safe drinking water
6	HEALTH CARE SYSTEM	Health care supports are available to promote individual and community health	i) identify all health care supports available ii) describe the services provided by health care supports iii) describe how to contact the health care supports available

NUTRITION

GRADE 4

LESSON NO.	THEME	CONCEPT	OBJECTIVES
1	FOOD CLASSIFICATION	Foods are classified into four food groups on the basis of nutrient content	Students will be able to: i) identify six major nutrients found in foods and their functions ii) test for the presence of major nutrients in the four food groups
2	FOOD CLASSIFICATION	Foods are classified into four food groups on the basis of nutrient content	i) identify a variety of foods which are excellent sources of major nutrients
3	FOOD CLASSIFICATION	Nutritious snacks are high in nutrient content and low in sugar, salt and fat	i) classify a variety of snacks as nutritious or non-nutritious ii) explain how nutritious snacks contribute to health
4	FOOD SELECTION	Various factors affect food choices	i) describe some factors that affect food choices
5	FOOD APPRECIATION	A willingness to taste nutritious snacks promotes food appreciation and health	i) prepare nutritious snacks ii) demonstrate a willingness to taste nutritious snacks iii) state the importance of nutritious snacks

DENTAL HEALTH

GRADE 4

LESSON NO.	THEME	CONCEPT	OBJECTIVES
1	STRUCTURE AND FUNCTION	The structure of a tooth is related to its function	Students will be able to: i) label the structure of a tooth ii) state the functions of each part of a tooth iii) name the four tooth groups and their functions in a mixed set of teeth
2	ORAL HYGIENE	Regular practice of effective oral hygiene skills promotes dental health	i) illustrate how effective oral hygiene skills promote dental health ii) identify behaviours that promote healthy teeth for a lifetime
3	FACTORS AFFECTING DENTAL HEALTH	Positive behaviours around hazards can prevent dental injuries	i) identify dental health hazards at home, at school and in the community ii) explain safe behaviours that prevent dental injuries at home, at school and in the community
4	DENTAL DISEASE	Tooth decay is a dental disease that can be prevented	i) describe the process of tooth decay ii) describe the importance of fluoride
5	DENTAL SERVICES AND PRODUCTS	Dental health workers play an important role in dental health care	i) describe how dental health workers treat tooth decay and remove plaque

FAMILY LIFE

GRADE 4

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	FAMILIES	Families provide for the physical, emotional, social, intellectual and spiritual needs of their members	i) explain that families provide for the needs of their members ii) identify the importance of families
2	FAMILIES	Family traditions are a product of fulfilling the physical, emotional, social, intellectual and spiritual needs of the family	i) identify family traditions ii) identify the importance of traditions
3	HUMAN DEVELOPMENT AND REPRODUCTION	Puberty is one stage of development in everyone's life	i) describe characteristic changes that begin in boys at puberty
4	HUMAN DEVELOPMENT AND REPRODUCTION	Puberty is one stage of development in everyone's life	i) describe characteristic changes that begin in girls at puberty
5	HUMAN DEVELOPMENT AND REPRODUCTION	The reproductive system enables human life to begin	i) name and locate the major male reproductive parts
6	HUMAN DEVELOPMENT AND REPRODUCTION	The reproductive system enables human life to begin	i) name and locate the major female reproductive parts

LESSON NO.	THEME	CONCEPT	OBJECTIVES
7*	HUMAN DEVELOPMENT AND REPRODUCTION	Menstruation is a natural occurrence in females	<ul style="list-style-type: none"> i) identify menstruation as a natural occurrence ii) describe body hygiene and personal products related to menstruation
8	ABUSE PREVENTION	Touch produces different feelings	<ul style="list-style-type: none"> i) identify feelings associated with touch ij) identify how to deal with touches that produce negative or confused feelings iii) identify trusted people in the community who can help

* Lesson No 7 is an optional lesson. It is intended for girls alone, and should be taught based on the maturity of the girls in the class.

GRADE 4

MENTAL AND EMOTIONAL WELL-BEING

MENTAL AND EMOTIONAL WELL BEING

GRADE: 4


LESSON: 1


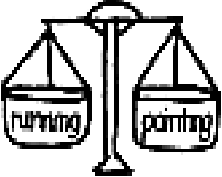
THEME: SELF AWARENESS

CONCEPT: AWARENESS OF STRENGTHS AND WEAKNESSES AFFECTS HOW PEOPLE FEEL ABOUT THEMSELVES

PREPARATION: 1. Prepare a class set of "Good, Not As Good" poem (Activity Sheet ME40)
2. Prepare a class set of Balance It Out worksheets (Activity Sheet ME41)

VOCABULARY: proud, frustrated (other feelings identified by students)

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify personal strengths and weaknesses	Students: 1. Write down three things they can do well. 2. Tell how they feel when they do things they are good at.	Background Information: Page ME37 to ME41 Have students answer using the sentence pattern: I am good at _____ Feelings should include: - happy - smart - proud - good - pleased 

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) accept personal strengths and weaknesses	<p>3. Write down three things they are not as good at.</p> <p>4. Tell how they feel when they do the things they are not as good at.</p> <p>5. Learn the "Good, Not As Good" poem.</p> <p>6. Tell others about something they can do well.</p> <p>7. Complete the Balance It Out Worksheet.</p>	<p>Have students answer using the sentence pattern</p> <p>I am not as good at _____.</p> <p>Feelings should include:</p> <ul style="list-style-type: none"> - dumb - silly - stupid - sad - frustrated  <p>Refer to Activity Sheet ME40.</p> <p>Have students select one thing they are good at and tell the class about it, how to do it, etc E.g.,</p> <ul style="list-style-type: none"> - playing hockey - fishing - reading - cooking <p>Have other students ask questions about the topic.</p> <p>Refer to Activity Sheet ME41.</p> <p>Have students discuss the completed worksheet using the sentence pattern:</p> <p>I am good at _____, but I am not as good at _____.</p>  <p>Emphasize that everyone is good at something.</p>

GOOD, NOT AS GOOD



I'm very good at singing;
I sing just like a bird.
I'm not as good at dancing;
In fact, I look absurd!

I'm very good at fishing;
I catch a lot of trout.
I'm not as good at painting,
As I have just found out.



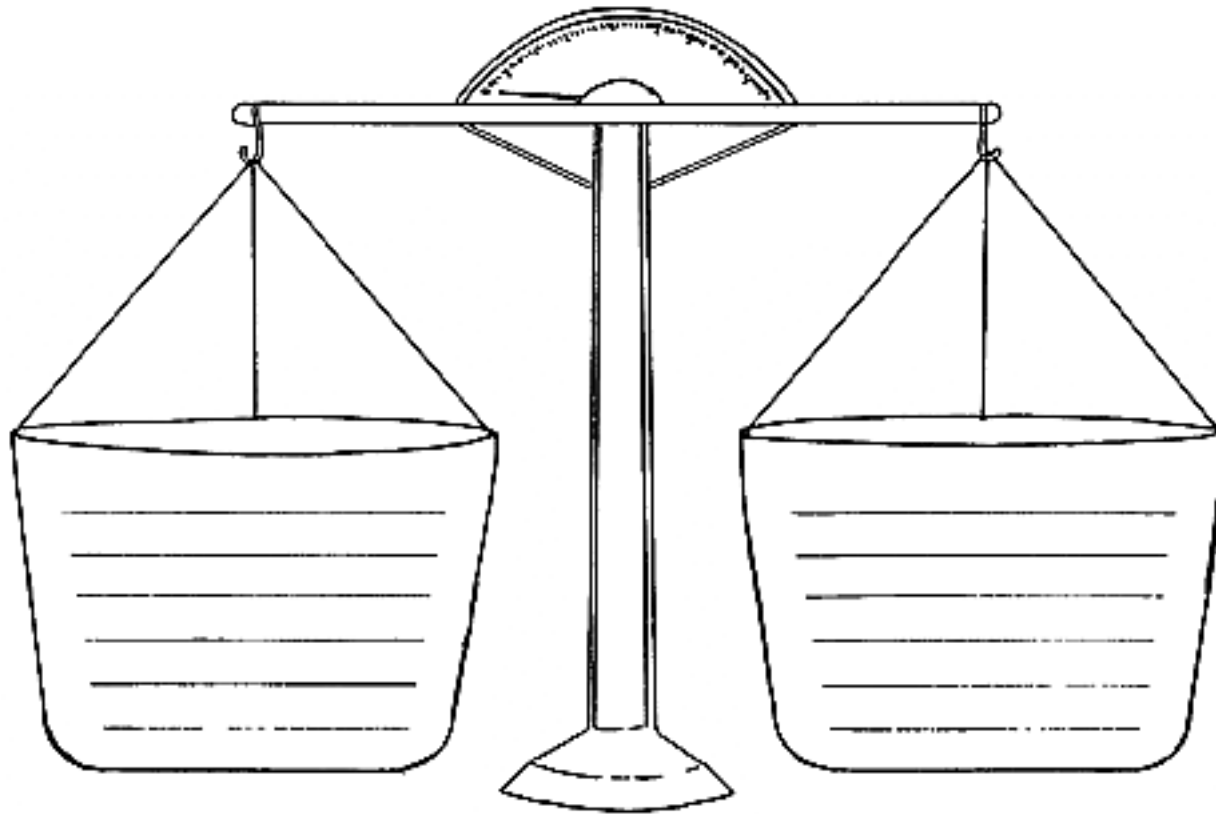
I'm very good at swimming;
I can swim very fast.
I'm not as good at running;
In fact, I'm usually last.

Helen Balanoff
Margy Gilmour



BALANCE IT OUT

On the balance below list some things you are good at doing, and some things you are not as good at doing.



Things I am good at

Things I am not as good at

MENTAL AND EMOTIONAL WELL BEING**GRADE: 4****LESSON: 2****THEME: SELF AWARENESS**

CONCEPT: THE ACTIVITIES PEOPLE CHOOSE AFFECT HOW THEY FEEL

- PREPARATION:**
1. Collect pictures of people doing things they obviously enjoy
 2. Prepare a class set of "Feeling Great" poem (Activity Sheet ME42)
 3. Materials for making scrapbooks
 4. Arrange a Fun Fair
-

VOCABULARY: enjoy

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify activities that make them feel good	Students: 1. Review things they are good at and the feelings they have when they do any of these things. 2. Identify activities that they enjoy doing.	Background Information: Page ME37 to ME41 Refer to previous lesson. Emphasize that when people do things they are good at they generally feel good. Show pictures of people doing things they are obviously enjoying, e.g., playing on swings. Have students identify things they enjoy doing using the sentence pattern: I enjoy (reading a book) . List student responses on the blackboard.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES									
	<p>3. Categorize the items identified in Student Activity 2.</p> <p>4. Learn the poem "Feeling Great".</p> <p>5. Make a scrapbook of activities that make them feel good.</p> <p>6. Participate in a Fun Fair.</p>	<p>Activities should include things which students can do on their own, with one other person or with a number of other people.</p> <p>Record student responses using an experience chart as illustrated.</p> <table border="1" data-bbox="1178 516 2013 748"> <thead> <tr> <th colspan="3" data-bbox="1178 516 2013 553">Things I Enjoy Doing</th> </tr> <tr> <th data-bbox="1178 553 1457 630">On My Own</th> <th data-bbox="1457 553 1736 630">With One Other Person</th> <th data-bbox="1736 553 2013 630">With A Lot Of Other People</th> </tr> </thead> <tbody> <tr> <td data-bbox="1178 630 1457 748">reading a book sewing going for a walk</td> <td data-bbox="1457 630 1736 748">swimming playing a game going for a walk</td> <td data-bbox="1736 630 2013 748">playing hockey going for a walk</td> </tr> </tbody> </table> <p>Refer to Activity Sheet ME42.</p> <p>Have students draw pictures or use magazine cut-outs to make their scrapbook. Have them include activities from each of the three categories in Student Activity 3.</p> <p>This activity requires planning and organizing. Have students select activities they can do at school from those identified in Student Activity 3. Have resource people come in to supervise/assist with specific activities E.g.,</p> <ul style="list-style-type: none"> - sewing - playing hockey - reading - cooking <p>Let students select the activity they wish to participate in. Students can state activities depending on the time available.</p>	Things I Enjoy Doing			On My Own	With One Other Person	With A Lot Of Other People	reading a book sewing going for a walk	swimming playing a game going for a walk	playing hockey going for a walk
Things I Enjoy Doing											
On My Own	With One Other Person	With A Lot Of Other People									
reading a book sewing going for a walk	swimming playing a game going for a walk	playing hockey going for a walk									

FEELING GREAT!

I enjoy sewing or reading a book.
I enjoy swimming and learning to cook.
I enjoy chopping and carrying the wood.
All of these things make me feel good!

I enjoy walking and looking up high.
I enjoy flying kites up in the sky.
I enjoy playing hockey along with my mates.
All of these things make me feel great! ,

Helen Balanoff
Heather Nolsoe
Margy Gilmour



MENTAL AND EMOTIONAL WELL BEING

GRADE: 4**LESSON: 3****THEME: RELATIONSHIPS**

CONCEPT: CARING BEHAVIOUR HELPS BUILD AND MAINTAIN RELATIONSHIPS

- PREPARATION:**
1. Collect pictures of parents demonstrating caring behaviours
 2. Pocket chart
 3. Prepare several sets of How Do You Show You Care sentence cards (Activity Sheet ME43)
 4. Bean bag
-

VOCABULARY: care

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify caring behaviours	Students: 1. Identify ways in which parents show they care for their children.	Background Information: Page ME37 to ME41 Show pictures of parents demonstrating caring behaviours with their children. Behaviours might include: - kissing - hugging - comforting - being kind - helping - playing - listening

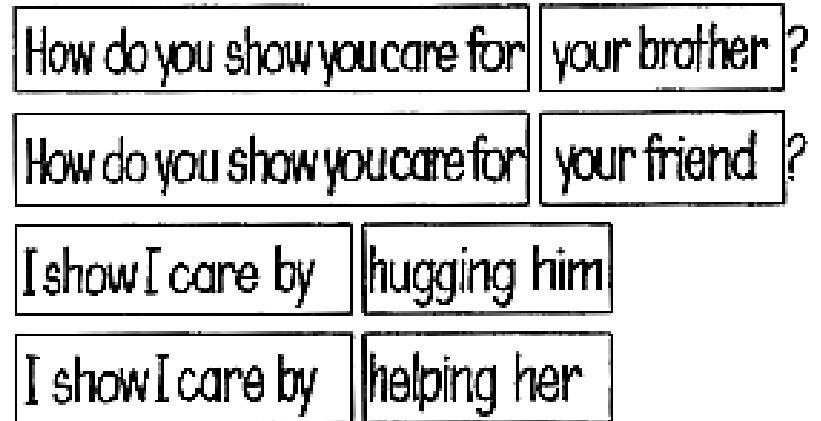
OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

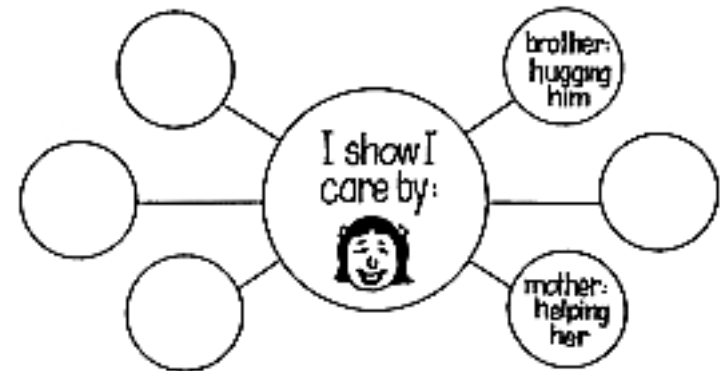
2. Identify ways in which they show they care for people close to them.

Record student responses using the sentence strips and a pocket chart as illustrated.



3. Make a Caring chart.

Have each student draw a picture of themselves inside a large circle and write "I show I care by...". In each smaller circle write the name of someone they care for and identify a caring behaviour.



OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>4. Describe caring behaviours in given situations.</p> <p>5. Play the game, How Do You Know I Care.</p>	<p>Refer to Activity Sheet ME43.</p> <p>Have students work in small groups. Prepare a set of cards for each group. Students take turns selecting a card and discussing what they can do to show they care.</p> <p>Have students form a circle with one person standing in the middle with a bean bag. Students clap and chant:</p> <p>"I care, I care How do you show you care?"</p> <p>Student in the middle throws the bean bag to someone and they answer:</p> <p>"I show I care by hugging my brother... That's how I show I care."</p> <p>That person then has a turn in the middle.</p>

HOW DO YOU SHOW YOU CARE?

1. Your brother has cut his knee.



2. Your friend has lost his favourite toy.



3. Your mother is sick in bed.



4. Your sister wants to borrow your bike.



5. Your father feels sad.



6. A boy in your class can't do his math.



7. Your friend feels lonely.



8. Your brother has torn your book.



MENTAL AND EMOTIONAL WELL BEING**GRADE: 4****LESSON: 4****THEME: RELATIONSHIPS**

CONCEPT: CARING BEHAVIOUR HELPS BUILD AND MAINTAIN RELATIONSHIPS

- PREPARATION:**
1. Prepare a class set of "Caring" poem (Activity Sheet ME44)
 2. Blindfolds and an obstacle course
 3. How Do You Show You Care? situation cards (Activity Sheet ME43 from previous lesson)
 4. Prepare several sets of cards from How Do You Feel? worksheet (Activity Sheet ME45)
 5. Large letters for the Caring mobile (CARING)
-

VOCABULARY: caring, trust, feelings vocabulary

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) demonstrate caring behaviours	Students: 1. Learn the poem "Caring." 2. Participate in a trust walk. 3. Describe how they felt.	Background Information: Page ME37 to ME41 Refer to Activity Sheet ME44. Have students work with a partner. Blindfold one partner and have the other lead him/her around an obstacle course. Then switch roles. Afterwards discuss how students felt both in the role of the "leader" and in the role of the person being led.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) describe the importance of caring	<p>4. Demonstrate caring behaviours by adopting a secret friend.</p> <p>5. Roleplay caring behaviours for given situations in the previous lesson.</p> <p>6. Discuss the importance of caring.</p>	<p>This is an on-going activity.</p> <p>Give each student another student's name and tell them that this person is to be their secret friend. Students have to do things which show they care for their secret friend without the secret friend knowing who's doing these things. Activities might include:</p> <ul style="list-style-type: none"> - sending a nice note - being friendly - making something special - helping - sharing <p>Remind students a couple of times a week that they should be caring for their secret friend. After several weeks ask students to identify nice thing which happened to them, and how they feel.</p> <p>Refer to Activity Sheet ME43.</p> <p>Divide students into small groups. Using the situations from Activity Sheet ME43 have students act out appropriate caring behaviours.</p> <p>Have students discuss how they would feel if:</p> <ul style="list-style-type: none"> - they cut their knee and no one helped them - they had no one who would share with them - they had no one to care for them, etc. <p>Discuss the importance of caring.</p>

OBJECTIVES**STUDENT ACTIVITIES****TEACHER NOTES**

7. Describe how they would feel in given situations.

Refer to Activity Sheet ME45

Have students work in small groups. Prepare a set of cards for each group using Activity Sheet ME45. Students take turns selecting a card and reading the situation while other students in the group describe how they would feel. The student reading the situation begins with the sentence pattern.

"How would you feel if _____". Each student responds with the sentence pattern

"I would feel _____."

8. Write sentences about caring behaviours.

Have students work in small groups to write sentences for each letter of the word caring E.g.,

C Caring is something we do every day.
 A _____
 R _____
 I _____
 N _____
 G _____

9. Make a class mobile on caring.

Make large letters for the word caring. Copy each sentence from Student Activity 8 on the appropriate letter as illustrated:



Hang from the ceiling as a mobile.

CARING



Why do you comfort me when I cry?
 Why do you hug me when I feel shy?
 Why do you share your piece of pie?
 . . . Because you care.



Why are you kind to me every day?
 Why do you buy me new shoes at the Bay?
 Why do you listen to what I say?
 . . . Because you care.



Why do you help me when I'm stuck?
 Why do you take me for rides in the truck?
 Why do you often wish me good luck?
 . . . Because you care.



Helen Balanoff



HOW DO YOU FEEL

Tell how you feel in each situation.

1. You asked your brother if you could borrow his bike. He said no.



2. You've cut your knee. Your mother cleans it and puts a band-aid on it.



3. You can't do your math. Your teacher helps you.



4. Your friend tells you s/he likes you a lot.



5. The kids you're working with won't share their crayons with you.



6. An older boy hits you at recess.



7. You're trying to tell your father that a kid hit you. He's watching T.V. and not listening.



8. Your sister tells you you're stupid.



MENTAL AND EMOTIONAL WELL BEING

GRADE: 4**LESSON: 5****THEME: DECISION-MAKING**

CONCEPT: BETTER DECISIONS CAN BE MADE BY CONSIDERING THE POSSIBLE EFFECTS OF VARIOUS CHOICES

PREPARATION: 1. Fortunately, Unfortunately story (Activity Sheet ME46)

VOCABULARY: choices, effects, decisions, fortunately, unfortunately, responsible decision, positive, negative

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify the possible effects of various choices	Students: 1. Identify the decisions they made during one day.	Background Information: Page ME37 to ME41 Ask students what decisions they made yesterday. Decisions should include: - what time to get up - what to wear - what to eat for breakfast - whether to play outside Have each student identify one decision and respond using the sentence pattern: I decided to _____. Record the decisions students made in the first column of a 5 column experience chart as illustrated in Student Activities 3 and 4.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES															
ii) identify reasons for individual decisions	2. Identify possible effects of various choices they identified in Student Activity 1.	<p>Identify both negative and positive effects. Record student responses using an experience chart as illustrated.</p> <table border="1"> <thead> <tr> <th data-bbox="1089 412 1371 444">Choice</th> <th data-bbox="1371 412 1705 444">Positive</th> <th data-bbox="1705 412 2009 444">Negative</th> </tr> </thead> <tbody> <tr> <td data-bbox="1089 444 1371 521">to eat breakfast</td> <td data-bbox="1371 444 1705 521">I will be comfortable</td> <td data-bbox="1705 444 2009 521">I have to get up earlier</td> </tr> <tr> <td data-bbox="1089 521 1371 597">to skip breakfast</td> <td data-bbox="1371 521 1705 597">I can sleep later</td> <td data-bbox="1705 521 2009 597">I will be hungry all day</td> </tr> <tr> <td data-bbox="1089 597 1371 673">to stay up late</td> <td data-bbox="1371 597 1705 673">I can watch a movie</td> <td data-bbox="1705 597 2009 673">I will be tired at school</td> </tr> <tr> <td data-bbox="1089 673 1371 743">to get enough sleep</td> <td data-bbox="1371 673 1705 743">I will be ready for school</td> <td data-bbox="1705 673 2009 743">I will miss the movie</td> </tr> </tbody> </table>	Choice	Positive	Negative	to eat breakfast	I will be comfortable	I have to get up earlier	to skip breakfast	I can sleep later	I will be hungry all day	to stay up late	I can watch a movie	I will be tired at school	to get enough sleep	I will be ready for school	I will miss the movie
	Choice	Positive	Negative														
to eat breakfast	I will be comfortable	I have to get up earlier															
to skip breakfast	I can sleep later	I will be hungry all day															
to stay up late	I can watch a movie	I will be tired at school															
to get enough sleep	I will be ready for school	I will miss the movie															
3. Identify and give reasons for their decisions. 4. Identify situations in which they have made responsible decisions and situations in which the decisions have not been responsible.	<p>Continue the experience chart across two more columns as illustrated.</p> <table border="1"> <thead> <tr> <th data-bbox="1089 820 1598 852">Decision</th> <th data-bbox="1598 820 2009 852">Why?</th> </tr> </thead> <tbody> <tr> <td data-bbox="1089 852 1598 894">To eat breakfast</td> <td data-bbox="1598 852 2009 894">I didn't want to be hungry</td> </tr> </tbody> </table> <p>Emphasize that a responsible decision does not hurt any person (including themselves) or property.</p> <p>Have students answer using the sentence pattern.</p> <p>I made a responsible decision when _____ because _____.</p> <p>I made a poor decision when _____ because _____.</p>	Decision	Why?	To eat breakfast	I didn't want to be hungry												
Decision	Why?																
To eat breakfast	I didn't want to be hungry																

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>5. Read the "Fortunately, Unfortunately" story Make up a new version of the story.</p>	<p>In pairs have one student say the "Fortunately" line, the other student say the "Unfortunately" line. Or have the students act out the verses. Discuss the decisions James made.</p>

FORTUNATELY, UNFORTUNATELY

It was Saturday.

Fortunately, James did not have to go to school.

Unfortunately, James was bored.

Fortunately, he was going to his friend's house to play.

Unfortunately, his friend was not home.

Fortunately, James had another friend to play with.

Unfortunately, he was babysitting.

Fortunately, James liked going for walks alone.

Unfortunately, he was not very warmly dressed.

Fortunately, there was a game to watch at the gym.

Unfortunately, the game was just over.

Fortunately, James met his friend leaving the game.

And they went home to play.

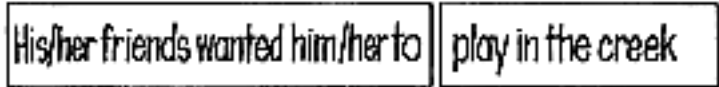

MENTAL AND EMOTIONAL WELL BEING


GRADE: 4**LESSON: 6****THEME: DECISION-MAKING**

CONCEPT: PEERS INFLUENCE DECISIONS

- PREPARATION:**
1. Prepare a class set of "Making My Own Decisions" poem (Activity Sheet ME 47)
 2. Pocket Chart and sentence strips
 3. Cards for each student to label for Student Activity 3
 4. Speech balloons for Student Activity 6
-

VOCABULARY: decisions influence

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify decisions that peers may influence	Students: 1. Learn the poem "Making My Own Decisions." 2. Identify things from the poem that his/her friends wanted him/her to do. 3. Decide if it would be a responsible decision to do what the friends wanted. Give reasons.	Background Information: Page ME37 to ME41 Refer to Activity Sheet ME47. Have students answer using sentence strips and a pocket chart as illustrated.  Have students make two cards  They have to hold up the appropriate card for each situation. Have the class discuss which is the more responsible choice and explain why. If necessary, review what a responsible decision is.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify ways peers influence them	<p>4. Tell about something which they did to please their friends but which they didn't want to do.</p> <p>5. Give reasons why people do things they may not want to do.</p> <p>6. Identify ways in which peers influence decisions.</p>	<p>Have students answer using the sentence patterns:</p> <p>My friends wanted me to _____.</p> <p>I didn't want to _____, but I said, "Yes."</p> <p>Teachers should emphasize that peer influence can be positive as well as negative.</p> <p>Using the situations identified by the students in Activity 4, ask students why they did these things. Include:</p> <ul style="list-style-type: none"> - wanting to be part of the crowd - feeling threatened - being bullied - being bribed - being teased - being called names - being made to feel bad <p>Refer to Activity Sheet ME47.</p> <p>Using situations from the poem, have small groups of students identify what peers might have said or done to influence decisions. E.g.,</p> <p>"If you don't come and play with me in the creek, I'll tell everyone you're a loser!"</p> <p>Record student responses in speech balloons and save for the next lesson.</p> 

MAKING MY OWN DECISIONS



My friends wanted me to play in the creek
 To go out in the storm, to play hide and seek.
 My friends wanted me to lie to my dad
 But I didn't want to, 'cause I felt bad!



My friends wanted me to skip out of school
 To smoke a cigarette - they thought that was cool.
 My friends wanted me to steal some money
 But I didn't want to, 'cause I felt funny!

My friends wanted me to race my skidoo
 Across the ice, without falling through.
 My friends wanted me to take eggs from the nest
 I didn't want to, but I said Yes!



Heather Nolsoe
 Margy Gilmour
 Helen Balanoff



MENTAL AND EMOTIONAL WELL BEING

GRADE: 4**LESSON: 7****THEME: DECISION-MAKING**

CONCEPT: PEERS MAY INFLUENCE DECISIONS

PREPARATION: 1. A class set of ' Making My Own Decisions" poem (Activity Sheet ME47) from previous lesson
2. Speech balloons from previous lesson
3. Speech balloons for Student Activity 5

VOCABULARY: influence, refuse

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify methods of resisting peer influence	Students: 1. Review the influence of peers. 2. Identify times when they have not done what friends wanted. 3. Tell how they resisted the influence of their friends. Discuss.	Background Information: Page ME37 to ME41 Refer to Activity Sheet ME47 from the previous lesson. Ask students to think of a time when they refused to do something their friends wanted them to do. List student responses on the blackboard Include - saying "No" - telling their own feelings - leaving the situation - avoiding situations where a refusal is necessary - changing friends

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) demonstrate methods of resisting peer influence</p>	<p>4. Roleplay ways of resisting peer influence.</p> <p>5. Respond to the speech balloons from the previous lesson.</p> <p>6. Rewrite the last two lines of "Making My Own Decisions."</p>	<p>Refer to Activity Sheet ME47.</p> <p>Using situations from the poem, have small groups of students roleplay different ways of resisting the influence of friends.</p> <p>Have students respond to the speech balloons from the previous lesson by refusing to go along with their friends E.g.,</p> <div data-bbox="1226 574 1814 846" data-label="Image"> </div> <p>Refer to Activity Sheet ME47.</p> <p>Have students rewrite the last two lines of the poem so that the person is saying "No."</p>

GRADE 4

TEACHER BACKGROUND INFORMATION

MENTAL AND EMOTIONAL WELL-BEING

MENTAL AND EMOTIONAL WELL BEING

Mental and emotional well-being refers to how a person feels, thinks and acts. If s/he feels "good", this translates into positive feelings, positive relationships with other people, decisiveness and an ability to cope with the stresses of every day life. A person who does

not feel "good" has difficulty forming worthwhile relationships and has difficulty functioning in every day life. People derive those feelings about themselves, in large part, from the attitudes towards them of significant people in their lives.

Poor Mental and Emotional Well-Being Low Self-Esteem



Significant People

- family
- friends
- peers
- teachers
- elders
- church leaders
- community members
- other people

Attitudes

- anger
- rejection
- distrust
- discouragement
- "put downs"

Behaviours

- failure
- fear
- guilt
- aggression
- withdrawal
- mistrust

Healthy Mental and Emotional Well-Being High Self-Esteem



Significant People

- family
- friends
- peers
- community members
- teachers
- elders
- church leaders
- other people

Attitudes

- love
- care
- acceptance
- encouragement
- trust

Behaviours

- success
- enthusiasm
- responsibility
- creativity
- co-operation
- ability to cope

The Mental and Emotional Well-Being Unit of the Health program aims to enable students to function effectively in a social context. An increase in self-understanding will lead to an enhancement of self-esteem. Together with the acquisition of decision-making, communication and coping skills, they will lead to an improvement in students' mental and emotional well-being, and in their ability to function effectively socially.

The school can contribute greatly in the development of a healthy mental and emotional well-being, through the attitudes of staff, and the atmosphere in both the classroom and the school. Positive attitudes and a positive atmosphere will enhance students' self-esteem.

For that reason, the creation of a positive classroom atmosphere is essential for teaching this unit. (Refer to "Introduction: Building A Positive Classroom Atmosphere".) Since the unit deals with very personal topics (students are, after all, learning about themselves, and nothing can be more personal than that!), teachers should be aware of the need for

sensitivity and respect. Students should all be given the opportunity to participate in discussions, but should also be given the opportunity to pass, if they feel uncomfortable in sharing information with others. Students, and teachers, will gradually become more accustomed to the teaching methods used in this unit, and will soon begin to feel quite comfortable with the unit. Pilot testing of this unit indicated that students were hesitant for the first two or three lessons, but then really enjoyed learning about themselves!

Because of the personal nature of the unit, teachers must become familiar with their cultural appropriateness. Different cultural groups have different values regarding the self, as opposed to the group. They have different ways of appropriately expressing (or not expressing) feelings. Teachers should adapt the materials as necessary to fit the local situation. Wherever possible, members of the local culture should teach culturally sensitive topics to enhance and reinforce students' understanding of these topics within the appropriate cultural context.

As opportunities present themselves in class, school or community, teachers should encourage students to demonstrate the skills and to apply the concepts. In this way, students will continue to develop positive attitudes, and will also see the relevance of what they learn to their everyday lives.

The teacher can work with individual students to help them improve in areas where they are particularly weak. Each student can be helped to set a personal goal, such as “I will try to be friendlier to other students.” The teacher can help each student identify concrete ways to work towards the goal and can, together with the student, monitor progress.

Eg . CLIMBING THE LADDER

NAME: _____

be friendlier to other people


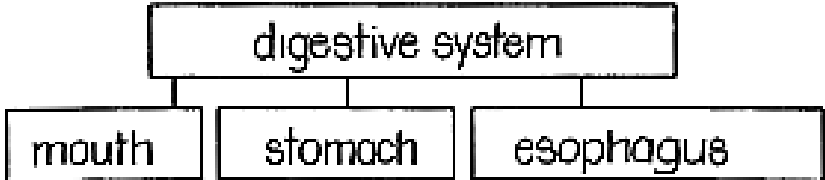
help people who need some help

take turns

share my toys, crayons

GRADE 4

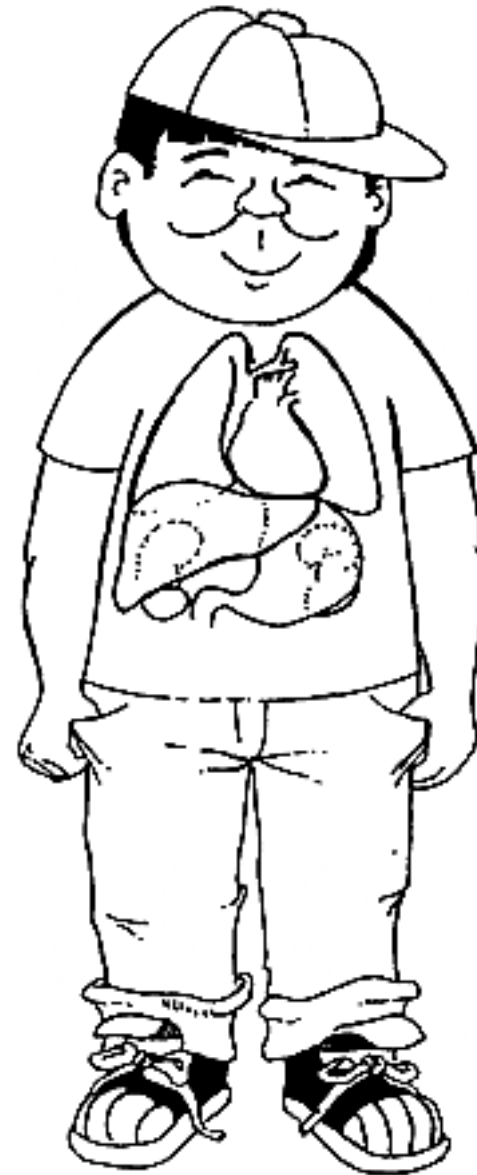
GROWTH AND DEVELOPMENT

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. List words related to the digestive system.</p> <p>4. Use the child size body outline and detachable digestive parts to name and locate the main parts of the digestive system.</p> <p>5. Make a mobile using the names of the digestive system parts.</p> <p>6. Observe the digestive parts of an animal.</p> <p>7. Complete the My Digestive System worksheet.</p>	 <p>Refer to Activity Sheets GD32A to 32E.</p> <p>Put the child size body outline on the board. Have students name and place the following digestive parts on the outline:</p> <ul style="list-style-type: none"> - mouth - esophagus - stomach - small intestine - large intestine - anus  <p>Say the words over, so that students remember them.</p> <p>Ask a hunter or a butcher to provide the class with the digestive parts of an animal. Or take the class to observe a hunter cutting up an animal. Have the students name the digestive parts.</p> <p>Refer to Activity Sheet GD33.</p> <p>Have students draw a line linking each label to the correct body part.</p>

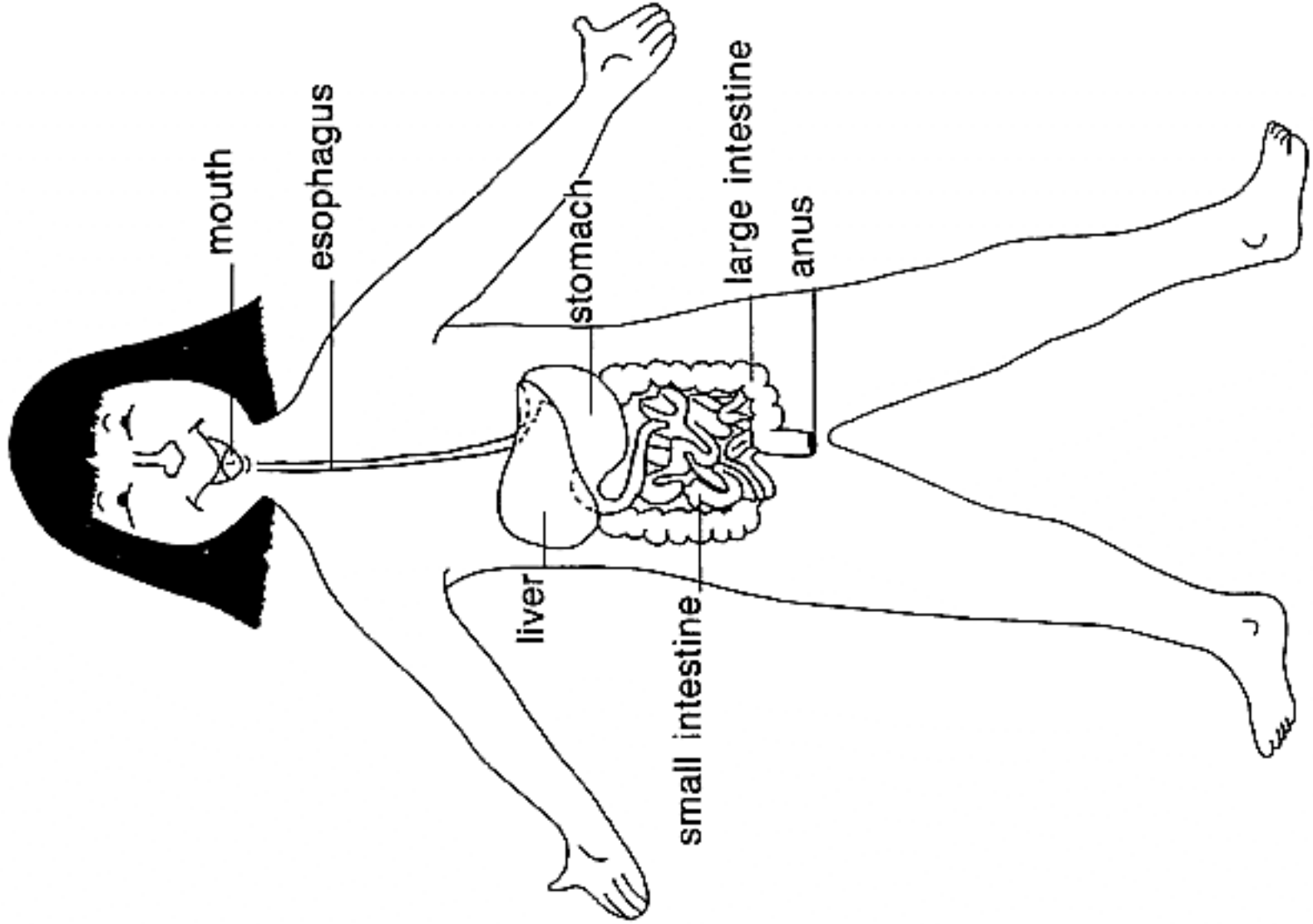
THE INSIDE STORY

There are parts of me
You cannot see.
They're there.
There is no doubt.
If I were magic
You could see them.
'Cause I'd turn
My insides out.

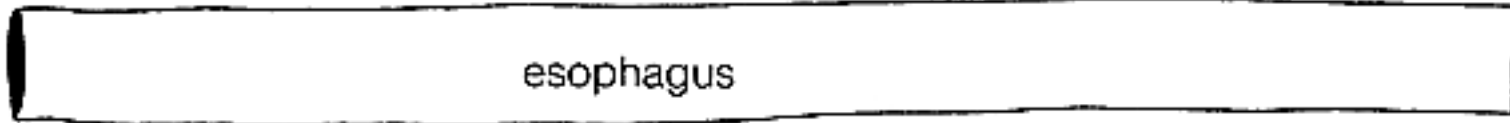
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THE DIGESTIVE SYSTEM

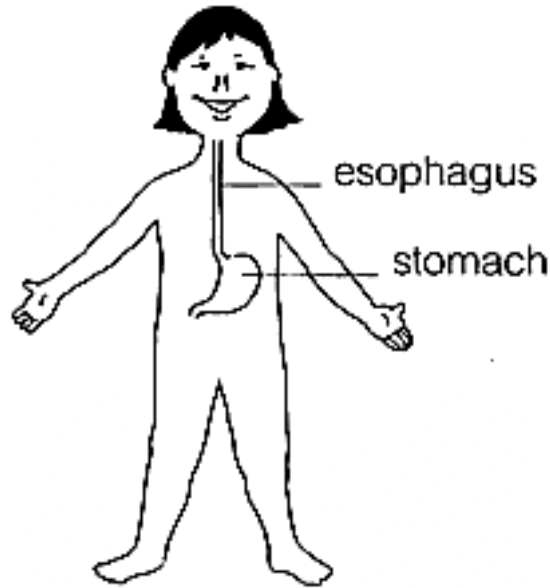
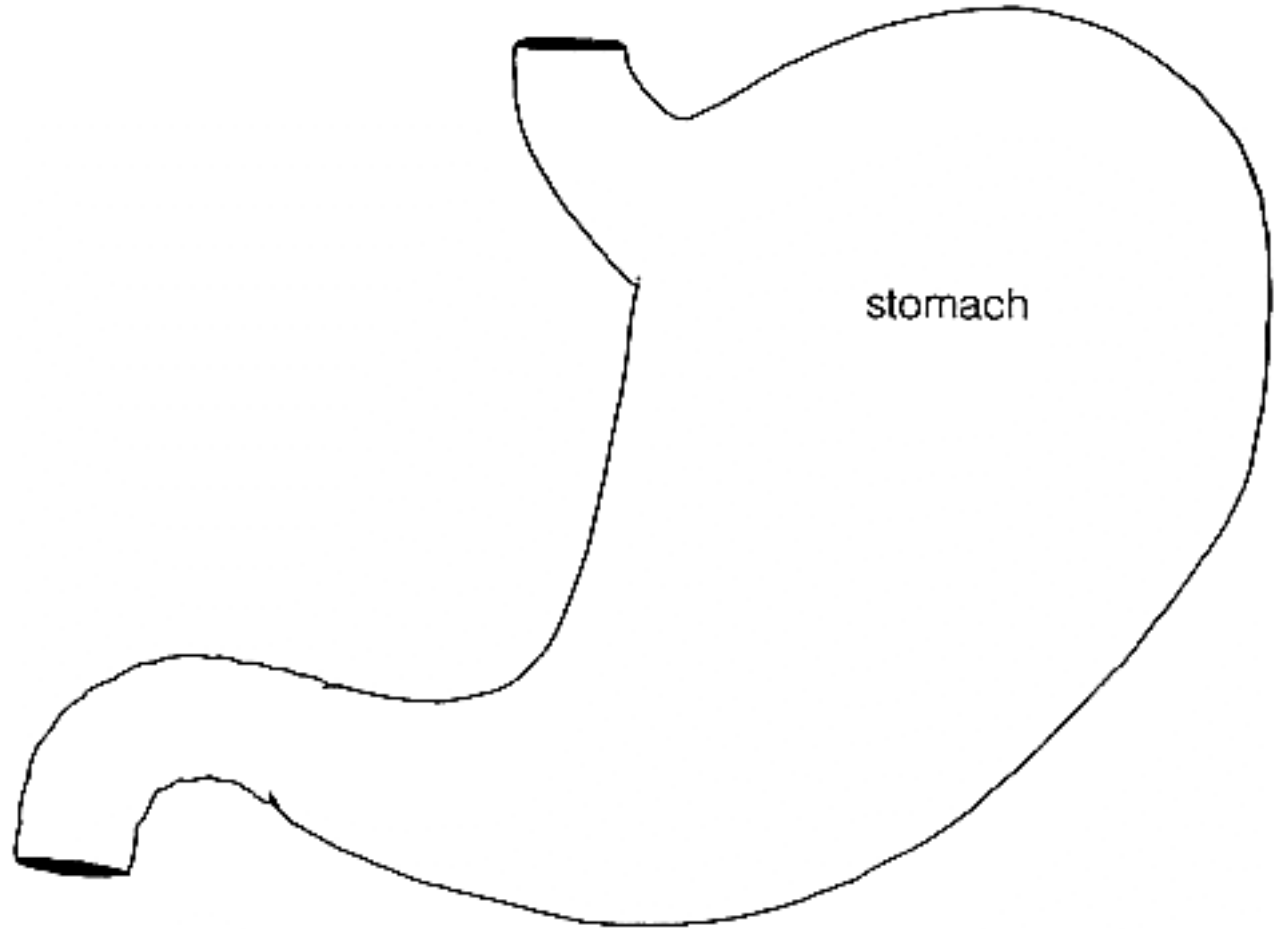


ESOPHAGUS AND STOMACH



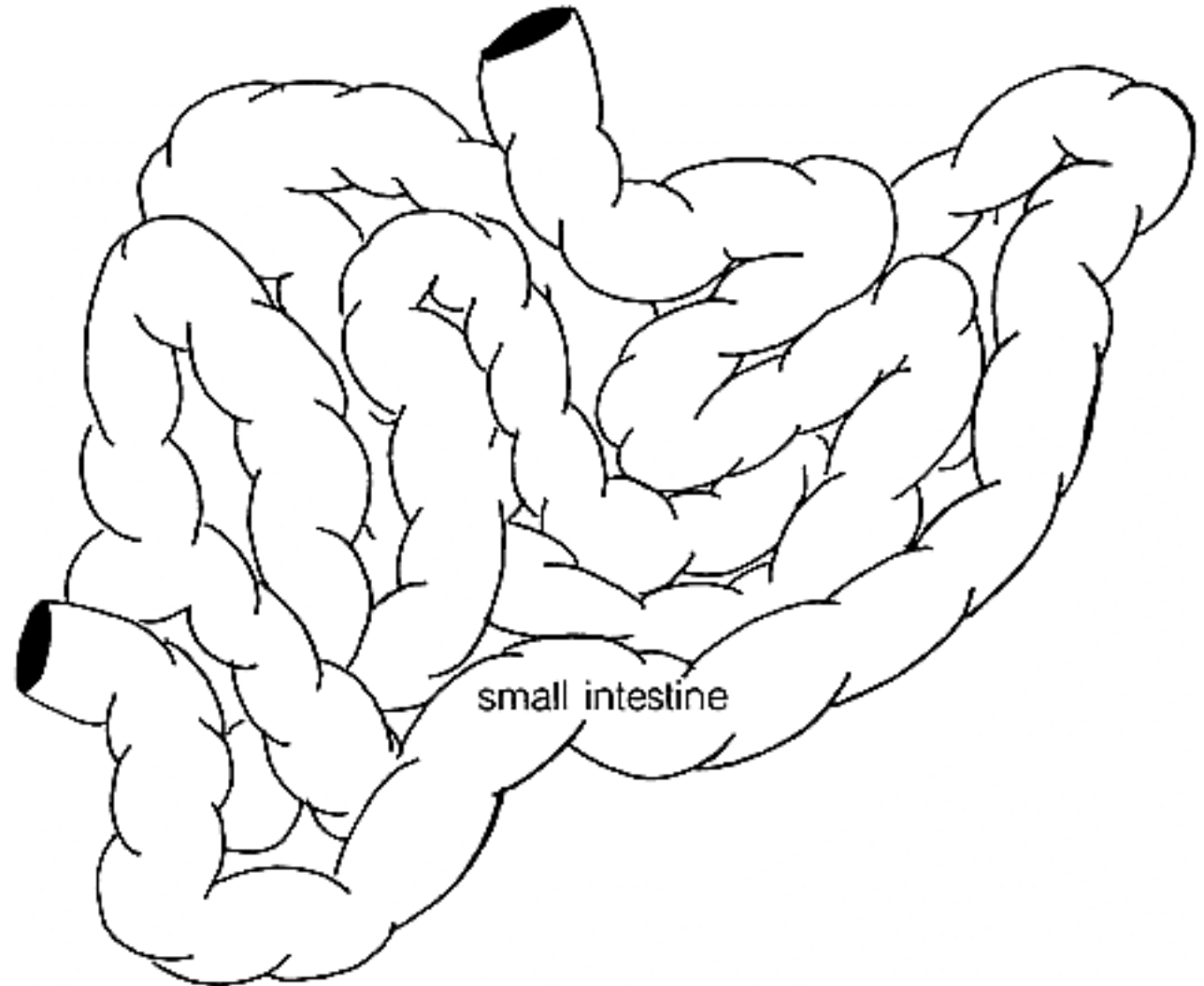
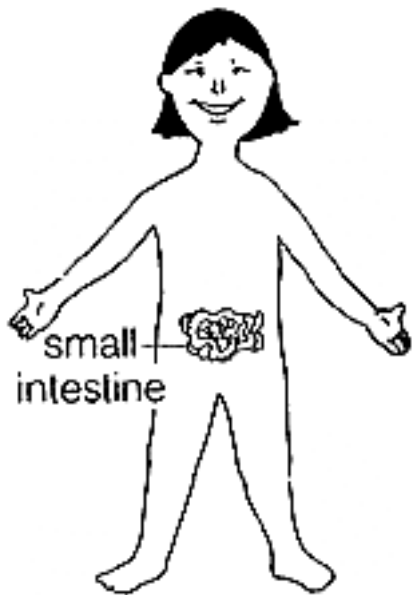
Colour the esophagus pink. Cut it out.
Position between mouth and stomach

Colour the stomach orange. Cut it out.
Position so that upper tube connects to the esophagus.

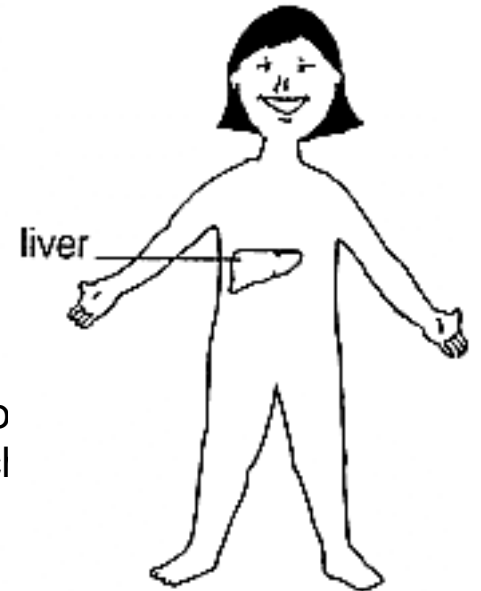
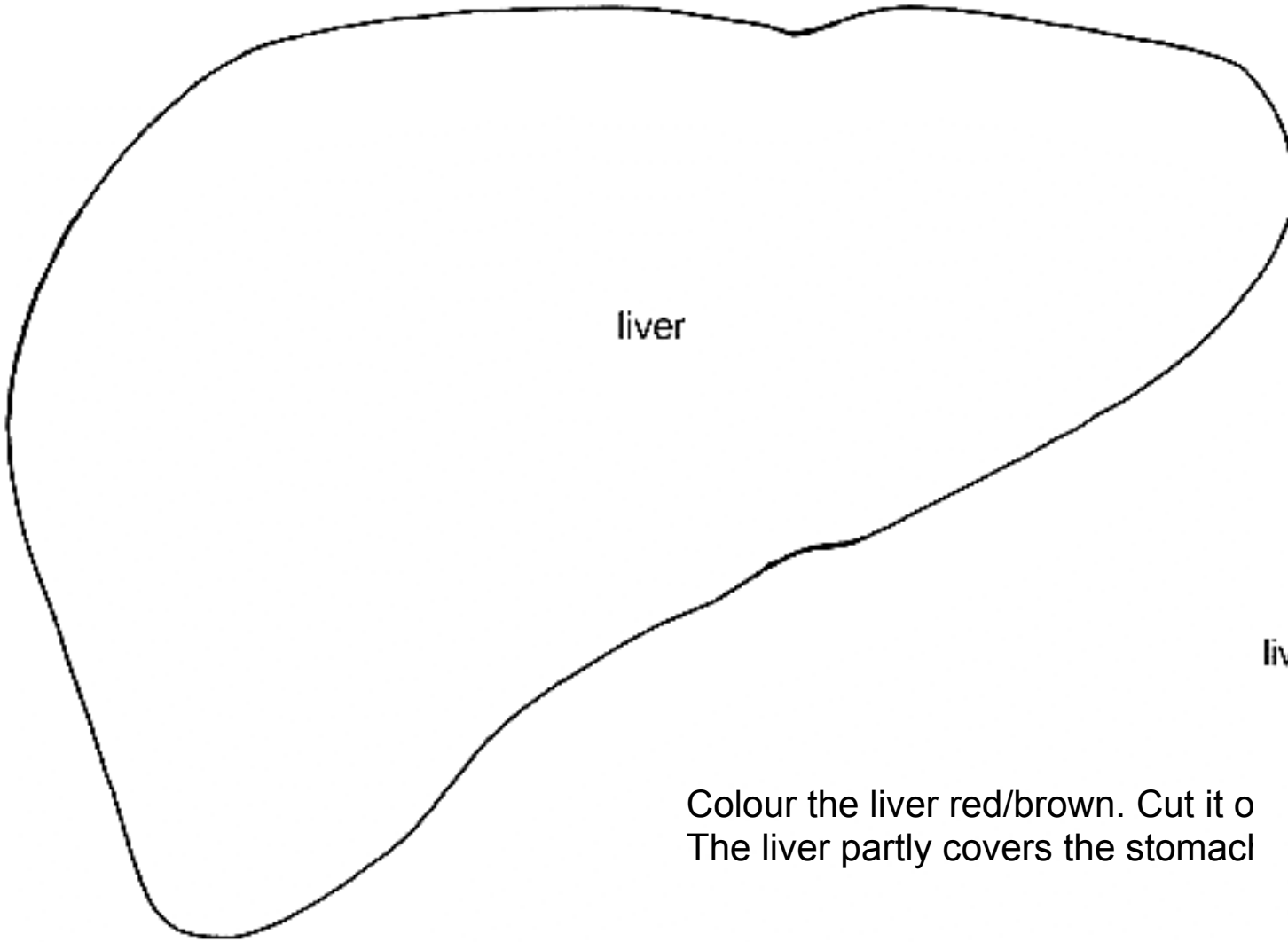


SMALL INTESTINE

Colour the intestine light orange. Cut it out. Position on the body so the upper tube connects to the lower tube of the stomach.



LIVER



Colour the liver red/brown. Cut it o
The liver partly covers the stomacl

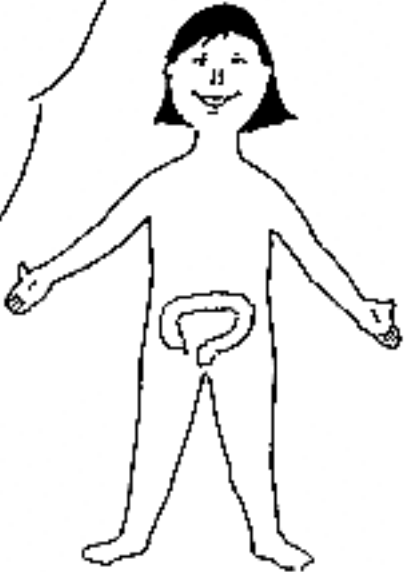
LARGE INTESTINE

Colour the large intestine dark orange. Cut it out.
Position on body outline so that the
anus is between the legs. Large intestine
partly covers small intestine. Left end of
small intestine fits to hole above appendix.

appendix

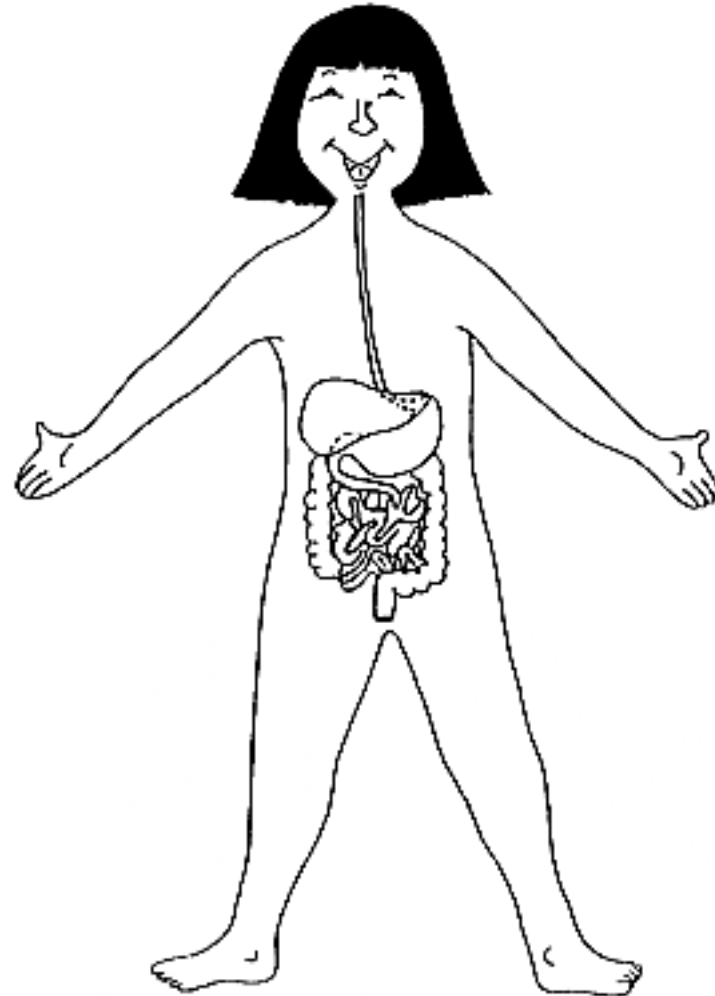
large intestine

anus



MY DIGESTIVE SYSTEM

Draw a line to join the label with the correct body part.



liver

mouth

large intestine

small intestine

anus

esophagus

stomach

GROWTH AND DEVELOPMENT**GRADE: 4****LESSON: 2****THEME: BODY SYSTEMS**

CONCEPT: THE DIGESTIVE SYSTEM PROVIDES THE FUEL THE BODY NEEDS

- PREPARATION:**
1. A muffin, a blender some milk, rubber tubing, marble, oil, meat tenderizer, hamburger, water, soap, small bone, lemon juice, hydrochloric acid measuring spoons, glass jars
 2. Pocket chart with Function cards copied onto sentence strips (Activity Sheet GD34)
 3. Prepare a class set (enough for 1 between 2 people) of functions cards (Activity Sheet GD34) and rings for a flip book
 4. Prepare a class set of Word Find (Activity Sheet GD35A)
-

VOCABULARY: grind, squeeze, churn, juices, chemicals, waste

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe the functions of the digestive system	Students: 1. Observe a simulation of the teeth's role in the digestive system. 2. Observe a simulation of the digestive process in the esophagus.	Background Information Page GD47 to GD49 Throughout this lesson, teachers should keep reinforcing the words 'digestive', 'digestion', etc. Put a muffin into a blender. Switch the blender on for a few seconds so that the muffin is coarsely chopped. Use a piece of rubber tubing. Have students push a marble lubricated with jelly or oil through the tube. The tubing represents the esophagus. The marble represents the food and the jelly or oil represents the saliva.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
	3. Observe a simulation of the digestive process in the stomach.	Physical Process		Chemical Process
		Add milk or water to the muffin in the blender. Process until it is liquid.		Dissolve one teaspoonful of meat tenderizer in 100 cc of water. Add one teaspoon of hamburger. In another far, do the same without meat tenderizer. Check results the following day.
	4. Observe a simulation of the digestive process in the small intestine.	On Fats	On Minerals	On Proteins
		Half fill a far with water. Half fill another with a mixture of soap and water (1/2 & 1/2). Add 1 tbsp oil to each far. Watch what happens.	Place a small bone (e.g., a bird bone) in DILUTE hydrochloric acid*. Predict what will happen to the bone. After 3 days remove the bone and observe.	Add 30 ml of lemon juice to 240 ml of milk. Observe after one hour, then after three hours.
		Observations and conclusions should include:		
		The soap and water break down the fat.	The bone is soft and bendable, showing the breakdown of bone minerals.	The milk curdles showing the breakdown of the proteins.
	* For this experiment teachers may prefer to handle the dilute hydrochloric acid.			

OBJECTIVES**STUDENT ACTIVITIES****TEACHER NOTES**

5. Describe the functions of the different parts of the digestive system.

Record student responses using a pocket chart and sentence strips as illustrated.

The mouth

tastes, moistens and mixes the food

The teeth

cut and grind the food

The esophagus

squeezes the food into the stomach

The liver

makes chemicals to break down the food
--

The stomach

churns and mixes the food

The small intestine

moves food nutrients into the blood

The large intestine

collects wastes

The anus

gets rid of wastes

6. Match name and function cards to the appropriate digestive parts on the child size body outline.

Refer to Activity Sheet GD34.

Prepare these cards with the name of a digestive part on one side and its function on the reverse side.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) state the importance of the digestive system</p>	<p>7. Match digestive part names to the function.</p> <p>8. Discuss the importance of the digestive system.</p> <p>9. Complete the Word Find.</p>	<p>Use Activity Sheet GD34. The teacher should cut each card into two -the name and the function.</p> <p>In pairs have the students make the cards into flip books. Have students match name and function.</p> <div data-bbox="1331 488 1881 656" style="text-align: center;"> </div> <p>Ask students:</p> <ul style="list-style-type: none"> - what happens if they swallow something without chewing - why babies and older people may need blended food - what happens if food is not digestible <p>The digestive process reduces food into small particles that the body uses for fuel. The fuel is necessary for growth, energy and regularity.</p> <p>Refer to Activity Sheet GD35A.</p> <p>Answers are given on GD35B.</p>

DIGESTIVE FUNCTION CARDS

mouth	tastes, moistens and mixes the food
teeth	cut and grind the food
esophagus	squeezes the food into the stomach
liver	makes chemicals to break down the food
stomach	churns and mixes the food
small intestine	moves food nutrients into the blood
large intestine	collects wastes
anus	gets rid of wastes

WORD FIND

Find these words and circle them:

- stomach
- intestine
- liver
- teeth
- anus
- grind
- mix
- waste
- food
- juice
- blood
- cut

n	y	o	w	a	s	t	e	f
s	h	v	e	x	u	r	m	o
o	b	g	r	i	n	d	l	o
r	s	t	o	m	a	c	h	d
e	f	e	n	j	o	p	t	w
v	x	e	s	c	u	t	d	f
i	n	t	e	s	t	i	n	e
l	o	h	c	k	a	s	c	b
m	o	n	b	l	o	o	d	e

They may be found up ↑ , down ↓ , across → or diagonal ↘ .

WORD FIND

(Answer guide)

n	y	o	w	a	s	t	e	f
s	h	v	e	x	u	r	m	o
o	b	g	r	i	n	d	l	o
r	s	t	o	m	a	c	h	d
e	f	e	n	d	o	p	t	w
v	x	e	s	c	u	t	d	f
i	n	t	e	s	l	i	n	e
l	o	h	c	k	a	s	c	b
m	o	n	b	l	o	o	d	e

GROWTH AND DEVELOPMENT

GRADE: 4**LESSON: 3****THEME: BODY SYSTEMS**

CONCEPT: THE DIGESTIVE SYSTEM PROVIDES THE FUEL THE BODY NEEDS

PREPARATION: 1. Collect a number of products used for digestive system problems
2. Materials to make posters

VOCABULARY: problem

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) name common problem conditions of the digestive system	Students: 1. Name common problem conditions related to the digestive system. Briefly discuss.	Background Information Page GD47 to GD49 Throughout this lesson, teachers should keep reinforcing the words 'digestive', 'digestion', etc. Collect a number of products designed to give relief from problems related to the digestive system, e.g., Tums, Alka Seltzer, Ora-gel and Preparation H. Choose products with which students are likely to be familiar. Ask students - why these products are used - if they have ever had a problem with a part of the digestive system, e g stomach - to name problems related to the digestive system

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe ways to care for the digestive system</p>	<p>2. Identify what to do if a problem with any part of the digestive system occurs.</p> <p>3. List ways to take care of the digestive system. Discuss.</p>	<p>Make a list Students may be familiar with</p> <ul style="list-style-type: none"> - stomach-ache - constipation, diarrhea - nausea, vomiting - food poisoning - appendicitis - ulcers - haemorrhoids - worms - gallstones - heartburn <p>Emphasize that if students have a problem they should tell an adult they trust.</p> <p>Ask students how they take care of their digestive system. Have students respond using the sentence pattern:</p> <p>I take care of my digestive system by _____.</p>

OBJECTIVES**STUDENT ACTIVITIES****TEACHER NOTES**

		Record student responses using an experience chart as illustrated:		
		What you eat	How you eat it	Food preparation
		<ul style="list-style-type: none"> - eating fresh meat or fish - eating from the 4 food groups - eating breakfast every day - eating only a little sugar, salt and fat - not eating junk food - drinking lots of liquids - putting only food in the mouth 	<ul style="list-style-type: none"> - not rushing meals - not talking or laughing while eating - chewing food thoroughly, especially hard foods 	<ul style="list-style-type: none"> - washing hands before eating or preparing food - washing pots and pans after cooking food - washing berries before eating them
	4. Make posters indicating ways of caring for the digestive system.	Have students select one item from the experience chart. Make it into a poster with a slogan. Display them in prominent places around the school.		

GROWTH AND DEVELOPMENT**GRADE: 4****LESSON: 4****THEME: DISEASE PREVENTION**

CONCEPT: DISEASES ARE CAUSED BY A VARIETY OF FACTORS

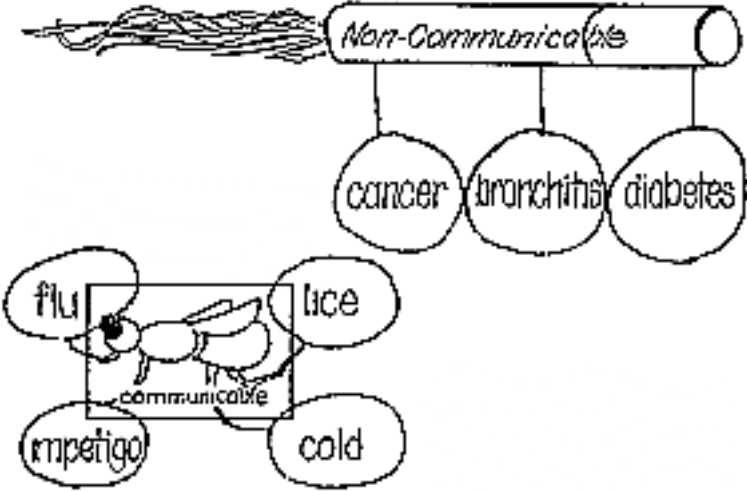
PREPARATION:

1. Prepare a class set of 'What A Mix Up' worksheet (Activity Sheet GD35)
2. Materials for mobiles
3. Prior to the lesson, arrange for the nurse to visit the class

VOCABULARY: causes

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) explain what communicable diseases are	Students: 1. Learn the term communicable. 2. Define the term communicable disease.	Background Information Page GD50 to GD51 Review with students what a disease is. Ask if they know what a communicable disease is. Brainstorm what they think the definition might be. It might help them to think of another word that has a similar root – communicate. Explain that it is a disease which can be given to other people.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES				
ii) explain what non-communicable diseases are	5. Describe causes of communicable diseases. 6. Describe non-communicable diseases. 7. List common non-communicable diseases.	Ask students what they think causes diseases. Record student responses using an experience chart as illustrated. <table border="1" data-bbox="1241 407 1430 558"> <tr> <td>Causes</td> </tr> <tr> <td>- germs</td> </tr> <tr> <td>- insects</td> </tr> <tr> <td>- worms</td> </tr> </table> Explain to students that some diseases cannot be given to other people. Ask students if they know anyone who has had lung cancer. Ask students to name diseases which are not communicable. Have students respond using the sentence pattern(s). You cannot get _____ from other people You cannot give _____ to other people List student responses in column 1 of a 2 column experience chart as illustrated.	Causes	- germs	- insects	- worms
	Causes					
- germs						
- insects						
- worms						
<table border="1"> <thead> <tr> <th data-bbox="1186 1075 1598 1110">Common Diseases</th> <th data-bbox="1598 1075 2009 1110">Causes</th> </tr> </thead> <tbody> <tr> <td data-bbox="1186 1110 1598 1433"> <ul style="list-style-type: none"> - cancer - emphysema - malnutrition - bronchitis - diabetes - heart disease - arthritis </td> <td data-bbox="1598 1110 2009 1433"> <ul style="list-style-type: none"> <i>Environmental factors</i> - smoking - pollution <i>Poor health habits</i> - poor diet - lack of exercise <i>Heredity</i> </td> </tr> </tbody> </table>	Common Diseases	Causes	<ul style="list-style-type: none"> - cancer - emphysema - malnutrition - bronchitis - diabetes - heart disease - arthritis 	<ul style="list-style-type: none"> <i>Environmental factors</i> - smoking - pollution <i>Poor health habits</i> - poor diet - lack of exercise <i>Heredity</i> 		
Common Diseases	Causes					
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OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>iii) distinguish between communicable and non-communicable diseases</p>	<p>8. Describe causes of non-communicable diseases.</p> <p>9. Complete the What A Mix Up worksheet.</p> <p>10. Make 2 class mobiles - one for communicable, the other for non-communicable diseases.</p>	<p>Ask students to identify what might have caused each non-communicable disease. (E.g., teachers may need to lead students to suggest that smoking may cause cancer.)</p> <p>Record student responses in the second column of the experience chart started in Student Activity 7.</p> <p>Refer to Activity Sheet GD35.</p> <p>Have students make a large model fly with sticky feet made out of masking tape loops. Write the names of communicable diseases on circles and hang them from the fly's feet.</p> <p>Have students make a large cigarette with smoke. Hang non-communicable diseases from the cigarette E.g.,</p> 

WHAT A MIX UP!

Unscramble the words to find out what the diseases are. Circle those diseases that are communicable.

lemsase _ _ _ _ _
Ulf _ _ _ _
racenc _ _ _ _ _
necihkc xpo _ _ _ _ _ _ _ _ _
rehta ssdeiae _ _ _ _ _ _ _ _ _ _
dloc _ _ _ _
sbdieeat _ _ _ _ _
beassic _ _ _ _ _

The diseases are:

- cancer
- cold
- flu
- heart disease
- measles
- chicken pox
- diabetes
- 2. scabies

Finish the sentences:

A communicable disease _____

A non-communicable disease _____



GROWTH AND DEVELOPMENT**GRADE: 4****LESSON: 5****THEME: ENVIRONMENTAL HEALTH**

CONCEPT: SAFE DRINKING WATER IS ESSENTIAL FOR MAINTAINING HEALTH

- PREPARATION:**
1. Jars for collecting water samples
 2. Microscopes
 2. Arrange for students to visit places associated with the community water supply
 2. Polaroid camera, tape recorder
 2. Materials for mural
 6. Invite an elder or wildlife officer to describe how to choose safe drinking water
-

VOCABULARY: pollution, safe, sewage

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES														
Students will be able to: i) identify sources of polluted water	Students: 1. Collect samples of water from different places. 2. Observe the samples of water and indicate which are safe to drink and why.	Background Information Page – This lesson relates to Science, Grade 3 Have students collect a number of jars of water from different sources a tap, a puddle on the road that vehicles drive through, a stagnant pond, a river, etc. Number the samples so that students do not know the sources. Have students look at the samples and decide which they would prefer to drink. Ask them to describe each sample by colour, content, smell, etc. Record student responses using an experience chart <table border="1" data-bbox="808 1344 2022 1456"><thead><tr><th data-bbox="808 1344 1035 1385">Sample #</th><th data-bbox="1035 1344 1241 1385">Colour</th><th data-bbox="1241 1344 1478 1385">Content</th><th data-bbox="1478 1344 1692 1385">Smell</th><th data-bbox="1692 1344 2022 1385">Would you drink it?</th></tr></thead><tbody><tr><td data-bbox="808 1385 1035 1456">1</td><td data-bbox="1035 1385 1241 1456"></td><td data-bbox="1241 1385 1478 1456"></td><td data-bbox="1478 1385 1692 1456"></td><td data-bbox="1692 1385 2022 1456"></td></tr></tbody></table>					Sample #	Colour	Content	Smell	Would you drink it?	1				
Sample #	Colour	Content	Smell	Would you drink it?												
1																

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES				
ii) name health problems caused by unsafe drinking water	3. After finding out the sources of each sample, indicate which water they would drink. 4. Observe the samples of water under a microscope. 5. List sources of pollutants in rivers, lakes, streams and oceans.	Reveal the sources of the water and have students identify which they would rather drink. Have students give reasons for their choices. These should include: <ul style="list-style-type: none"> - absence of obvious pollution - no smell - where it is found - how it looks, etc Discuss what students see that indicates the water is polluted. Ask students how water gets polluted. Have students respond using the sentence pattern: _____ cause(s) water pollution Record student responses using an experience chart as illustrated: <table border="1" data-bbox="800 922 2020 1109"> <thead> <tr> <th data-bbox="800 922 1503 959">Caused by people</th> <th data-bbox="1503 922 2020 959">Natural</th> </tr> </thead> <tbody> <tr> <td data-bbox="800 959 1503 1109"> - raw sewage - oil spills - smoke from fires - litter </td> <td data-bbox="1503 959 2020 1109"> - animal waste - dust from storms - smoke from fires </td> </tr> </tbody> </table>	Caused by people	Natural	- raw sewage - oil spills - smoke from fires - litter	- animal waste - dust from storms - smoke from fires
	Caused by people	Natural				
- raw sewage - oil spills - smoke from fires - litter	- animal waste - dust from storms - smoke from fires					
6. List examples of diseases caused by drinking unsafe water.	Ask students what they think would happen if they drank polluted water. (Some students may know about visiting countries where it is easy to get sick from the water and where it is best to drink bottled water.) Health problems include: <ul style="list-style-type: none"> - diarrhea - polio - hepatitis - dysentery (diarrhea, nausea, vomiting) - typhoid - cholera Where clean water is scarce, diseases related to dirty water are more common.					

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES				
iii) identify ways to ensure safe drinking water	<p>7. Name ways to prevent water pollution.</p> <p>8. Describe how to choose and prepare safe drinking water when out on the land.</p>	<p>Ask students how people can help prevent water pollution. Record student responses using a pocket chart and sentence strips as illustrated:</p> <table border="1" data-bbox="1186 407 1656 561"> <tr><td>We can prevent water pollution by</td></tr> <tr><td>not dumping garbage</td></tr> <tr><td>not dumping sewage</td></tr> <tr><td>not swimming</td></tr> </table> <div data-bbox="1717 444 2018 487" style="border: 1px solid black; padding: 2px;">in the water supply</div> <p>Explain that traditionally people knew where there was safe water and camped near it. Nowadays people may have to make water safe to drink. Ask students if they know what to do to make water safe to drink. Have students respond using the sentence pattern:</p> <p>It is safer to drink water if _____.</p> <ul style="list-style-type: none"> - we collect it in a clean metal pot - we collect it where the water is moving - we boil it for ten minutes <p>Invite an elder or wildlife officer to describe how to choose safe drinking water. Some students may also know about water purification tablets.</p>	We can prevent water pollution by	not dumping garbage	not dumping sewage	not swimming
We can prevent water pollution by						
not dumping garbage						
not dumping sewage						
not swimming						

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>9. Identify where the community drinking water comes from and how it is made safe.</p> <p>10. Make a Water Watchers class mural.</p>	<p>Arrange for students to visit places related to the community water supply. These may include:</p> <ul style="list-style-type: none"> - the water supply lake or river - the water reservoir - the water truck and garage - the water treatment plant <p>Ask how the water is made safe to drink. If possible, arrange for the visit to coincide with the doctor/nurse testing the water. Explain that they test because we cannot always see the pollutants.</p> <p>While visiting the community water supply, have students take photographs of:</p> <ul style="list-style-type: none"> - the supply - the steps in supplying water to the community - the people who ensure the community has safe drinking water <p>Interview people associated with supplying water.</p> <p>Later, make a mural by putting up the photographs and writing a sentence about each.</p>

GROWTH AND DEVELOPMENT**GRADE: 4****LESSON: 6****THEME: HEALTH CARE SYSTEM**

CONCEPT: HEALTH CARE SUPPORTS ARE AVAILABLE TO PROMOTE INDIVIDUAL AND COMMUNITY HEALTH

PREPARATION: 1. Arrange for a number of health professionals to take part in a panel discussion

VOCABULARY: agency, organization, promote, supports

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
Students will be able to: i) identify all health care supports available	Students: 1. Identify all health care supports available in their community.	Background Information Page – Ask students to name the health care workers in their community. Record student responses in column one of a three column experience chart as illustrated:		
		Available in community	Located in another community	What do they do?
		- nurse - dental therapist		
		Have students respond using the sentence pattern: A _____ is available in our community.		

OBJECTIVES**STUDENT ACTIVITIES****TEACHER NOTES**

2. Identify health care supports that are located in another community, but available to people in their community.

Health care support should include agencies and organizations such as Alcoholics Anonymous, St John Ambulance, etc.

Ask students what other health care supports come in to their community, or are available elsewhere for them to use. Have students respond using the sentence patterns:

The _____ has to come from _____

We have to go to _____ to see a _____

Record student responses in column two of the experience chart started in Student Activity 1.

Available in community	Located in another community	What do they do?
nurse		
dental therapist		
	doctor	

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES														
ii) describe the services provided by health care supports	3. Describe the functions of each health care support person.	<p>Add the function of each person to the third column of the experience chart started in Student Activity 1. Have students respond using the sentence pattern:</p> <p>The (nurse) _____</p> <table border="1" data-bbox="892 443 2018 899"> <thead> <tr> <th data-bbox="892 443 1417 521">Available in community</th> <th data-bbox="1417 443 1717 521">Located in another community</th> <th data-bbox="1717 443 2018 521">What do they do?</th> </tr> </thead> <tbody> <tr> <td data-bbox="892 521 1417 672">nurse</td> <td data-bbox="1417 521 1717 672"></td> <td data-bbox="1717 521 2018 672">treatment clinics information education</td> </tr> <tr> <td data-bbox="892 672 1417 750">dental therapist</td> <td data-bbox="1417 672 1717 750"></td> <td data-bbox="1717 672 2018 750">cleaning treatment</td> </tr> <tr> <td data-bbox="892 750 1417 899"></td> <td data-bbox="1417 750 1717 899">doctor</td> <td data-bbox="1717 750 2018 899">information testing clinics emergency</td> </tr> </tbody> </table>			Available in community	Located in another community	What do they do?	nurse		treatment clinics information education	dental therapist		cleaning treatment		doctor	information testing clinics emergency
Available in community	Located in another community	What do they do?														
nurse		treatment clinics information education														
dental therapist		cleaning treatment														
	doctor	information testing clinics emergency														
iii) describe how to contact the health care supports available	<p>4. Prepare a class directory of health care supports.</p> <p>5. Listen to various health professionals discuss their agencies/organizations and the services they provide.</p>	<p>Divide students into groups. Have each group research a health care support person. Information should include:</p> <ul style="list-style-type: none"> - who the person is - who s/he works for (Health & Welfare Canada, GNWT Health) - what s/he does - hours of work - his/her location and phone number <p>Compile all the information into one directory.</p> <p>Prior to the lesson, arrange for a number of health professionals to take part in a panel discussion on services available to promote health. Have students ask questions about the support services offered.</p>														

GRADE 4

TEACHER BACKGROUND INFORMATION

GROWTH AND DEVELOPMENT

THE DIGESTIVE SYSTEM

Digestion begins in the mouth, where food is broken down by the teeth and the enzyme action of the saliva. The muscular tongue guides food to the site of the teeth, the incisors cut, the canines tear and the molars grind. By the time food reaches the mouth, secretions of saliva have been increased. This occurs as thoughts of food signal the brain to send impulses to the salivary glands. Secretion from these glands is continuous to keep the mouth moist and ready for food.

Solid foods become a semi-liquid mass as a result of the action of teeth and saliva. Swallowing pushes the food mass into the first part of the esophagus called the pharynx or throat. The pharynx is a passageway for both air and food. The food travels from the pharynx down the esophagus to the stomach. The act of swallowing signals the air passages of the pharynx to be sealed off so that food does not enter the air passages.

The food is moved down the ten-inch esophagus by muscular contractions called peristalsis. As food enters the stomach, the secretion of digestive gastric juice begins. The gastric juice is secreted from the stomach walls and signals the churning action of the stomach to start. As food is churned it mixes with the enzymes of the gastric juice. The stomach wall is made up of proteins and protective mucus prevents it from also being digested.

The gurgling sounds often heard in the stomach are a result of trapped gases. These gases can also cause hunger pangs when they apply pressure to the walls of an empty stomach.

Some foods remain in the stomach for three to four hours while others may pass through to the small intestine in a few minutes. Foods like meat take longer to digest than soft drinks.

The food flows from the stomach to the small intestine. Neutralizing digestive juices from the pancreas and the liver arrive in the small intestine and act on the partially digested food now called chyme.

The pancreas is located behind the lower portion of the stomach. The

pancreatic juices neutralize acids and also digest fats, carbohydrates and proteins.

The liver is located under the diaphragm. Its functions include storage of vitamins, iron and blood sugar, regulation of blood sugar levels; and detoxification of poisons such as alcohol and old red blood cells. The liver also produces bile to digest fats and metabolize proteins. The gallbladder is a special storage place for bile on its way to the small intestine. The presence of fats in the small intestine stimulate the gallbladder to send secretions of bile.

The small intestine is responsible for the absorption of food nutrients into the blood and the lymph. The lining of the small intestine is made up of millions of tiny finger-like projections called villi. The villi and the folds in the lining greatly increase the absorption surfaces of the small intestine.

The villi also secrete intestinal juices which complete the digestion of fats, proteins and carbohydrates before absorption.

The process of absorption, through the villi takes two pathways. The blood picks up digested carbohydrates and proteins and delivers them to the liver, which in turn sends them to the body cells as they are needed. Digested fats are picked up by the lymph vessels and delivered to the tissues.

Remaining waste materials enter the colon or large intestine. Its function is to absorb water from the waste material. The appendix is a 3-4 inch structure at the beginning of the large intestine. It appears to have no function. The solid waste products found at the end of the colon are stored in the rectum and eliminated through the anus as feces.

Adapted from: Harvey, D and White, D (ed)
Body Systems and Physical Fitness,
Health Education Methods Project for Elementary
School Teachers, Ottawa, Ont Health Promotion
Directorate, Health and Welfare Canada, 1983

PROBLEM CONDITIONS OF THE DIGESTIVE SYSTEM

Problem	Cause	Brief Description
choking	- can occur when a person is talking or laughing while eating	- the message to the pharynx becomes confused and the air passage is not sealed off, food enters air passage, breathing becomes difficult or impossible
constipation	- too little exercise, a diet low in fibre: emotional stress	- bowel movements are difficult and infrequent
diarrhea	- large intestine does not absorb enough water, infections	- bowel movements are watery, loose and occur too often
food poisoning	- food infected with harmful bacteria, unrefrigerated raw meat, salads	- severe vomiting, diarrhea, abdominal pains and fever, usually within 24 hours of eating infected food
gas/flatulence	- air or gas in intestinal tract - gas forming foods e g , onions, cabbage, turnips, members of bean family, seasonings - air ingested - indigestion	- may cause discomfort due to distention
heartburn	- stomach gases may escape into esophagus	- feeling of discomfort after eating
indigestion	- difficulty in digesting some foods - disease - change in diet or lifestyle	- abdominal pain or discomfort, heartburn, flatulence, nausea, vomiting may occur
appendicitis	- unknown	- swollen, inflamed and pus-filled small pouch of the large intestine surgical removal may be necessary
diabetes mellitus	- genetic and/or environmental predisposition, possible virus	- inability to make or utilize insulin to break down blood sugar - a controlled diet and/or insulin injections may be necessary

PROBLEMS CONDITIONS OF THE DIGESTIVE SYSTEM (CONTINUED)

Problem	Cause	Brief Description
lactose intolerance	- genetic or dietary predisposition	- inability to breakdown component of milk - avoidance of milk may be necessary or a supplement to break down the milk
gallstones	- diet high in fats, low in fibre is suspected	- hard stone-like substances form in the gallbladder, may cause pain, fever and infection or pass through bile duct to be eliminated through digestive system - surgical removal of gallbladder may be necessary
haemorrhoids	- constipation, sedentary lifestyle, pregnancy, obesity	- swollen veins in the anal area may lead to itching, pain and bleeding
pinworms	- direct transfer of infective eggs by hand from the feces and anus to mouth by the same or a new host	- anal itching with disturbed sleep
ulcers	- many contributing factors are suspected poor diet, stress, heredity, too much caffeine, alcohol, tobacco, aspirin	- open sores in the lining of the stomach or duodenum - excess acid weakens the lining and bleeding, blockage or perforation can occur - or mucus secretion to neutralize acid may be inadequate

WAYS TO CARE FOR THE DIGESTIVE SYSTEM

Positive health habits related to the digestive system include

- eating fresh, wholesome foods
- eating a proper balanced diet from the four food groups
- eating breakfast every day
- eating sparingly of sugar, salt and fat
- not eating junk food
- washing hands before eating or preparing food
- washing food
- drinking lots of liquids
- putting only food in the mouth
- not rushing meals
- not talking or laughing with food in mouth
- chewing food thoroughly (especially hard foods)
- washing pots and pans after preparing food

OTHER DISEASES WITH WHICH STUDENTS MAY BE FAMILIAR

Problem	Communicable	Cause	Brief Description
AIDS	Yes	<ul style="list-style-type: none"> - virus - spread from person to person usually by sexual contact 	<ul style="list-style-type: none"> - break down of the body's immune system which makes the person susceptible to many different diseases
arthritis	No	<ul style="list-style-type: none"> - Unknown 	<ul style="list-style-type: none"> - swelling and inflammation of a joint or joints causing pain and stiffness
bronchitis	No/Yes	<ul style="list-style-type: none"> - irritants - spread from person to person by direct contact 	<ul style="list-style-type: none"> - an inflammation of the mucous membrane of the bronchi with fluid and thick mucus accumulation; - signals cold, hoarseness, coughing
cancer	No	<ul style="list-style-type: none"> - environmental, hereditary, biological factors 	<ul style="list-style-type: none"> - normal body cells become malignant
chicken pox	Yes	<ul style="list-style-type: none"> - spread from person to person by direct contact, virus 	<ul style="list-style-type: none"> - slight fever, headache, backache, loss of appetite, small red spots on the back or chest, spots enlarge and a vesicle of clear fluid appears, itchy
common cold	Yes	<ul style="list-style-type: none"> - spread from person to person by direct contact, virus 	<ul style="list-style-type: none"> - upper respiratory infection, especially of nose and throat, - signals headache, runny/stuffed nose, watery eyes, fever, cough
diabetes mellitus	No	<ul style="list-style-type: none"> - 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
ear infection	Yes	<ul style="list-style-type: none"> - environmental predisposition, virus, bacteria, spread from person to person by direct contact 	<ul style="list-style-type: none"> - severe pain, fever, draining of the ear
emphysema	No	<ul style="list-style-type: none"> - smoking, pollution 	<ul style="list-style-type: none"> - lung disorder in which the bronchioles become plugged with mucus, onset - 40-80 years old
German Measles (Rubella)	Yes	<ul style="list-style-type: none"> - spread from person to person by direct contact, bacteria 	<ul style="list-style-type: none"> - slight cold, some fever, sore throat, lymph nodes swell, rash on face and scalp, then to body and arms, spots do not run together - rash fades in 2-3 days

OTHER DISEASES WITH WHICH STUDENTS MAY BE FAMILIAR (CONTINUED)

Problem	Communicable	Cause	Brief Description
impetigo	Yes	- spread from person to person by direct contact, bacteria	- thin walled vesicle which ruptures and is covered by a honey-yellow crust, spreads in circles on exposed parts of the body
influenza (flu)	Yes	- spread from person to person by direct contact, virus	- fever, chills, headache, sore throat, cough, intestinal disorders, muscular pain
lice (pediculosis) (head lice)	Yes	- spread from person to person by direct contact	- visible white specks in the hairs of the back of the head, glands behind ears and back of the neck are enlarged, itching
meningitis	Yes	- spread from person to person by direct contact	- headache, vomiting, nausea, stiff neck, chills, fever, irritability, confusion and later convulsions
mumps	Yes	- spread from person to person by direct contact	- swelling of glands in the neck, pain, tenderness, fever, loss of appetite, back pains, headache
red measles	Yes	- spread from person to person by direct contact	- tired and uncomfortable, running nose, fever, pains in back and head, small white dots on the gums, rash at the hairline spreading down the body, spots may run together to form blotches
pneumonia	Yes	- virus, bacteria	- an infection of the lung tissue often accompanied by fluid, - signals breathing difficulty, fever and coughing
scabies	Yes	- spread from person to person by direct contact	- intense itching, more often at night, usually one month after initial infection
strep throat	Yes	- spread from person to person by direct contact, bacteria	- sore throat, headache, red pharynx, enlarged tonsils, flushed face
tuberculosis (TB)	Yes	- spread from person to person by direct contact	- mainly a disease of the lungs with development of lesions, - signals fever, weight loss, cough, sputum, blood, pain, difficult to breathe
tonsillitis	Yes	- spread from person to person by direct contact	- tonsils act as a defence against respiratory infections, signals include sore throat, enlarged tonsils, difficulty in swallowing

GRADE 4

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 in the school. The G.N.W.T. Family Life Education Consultants in the Department of Health 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 children) 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: 4****LESSON: 1****THEME: FAMILIES**

CONCEPT: FAMILIES PROVIDE FOR THE PHYSICAL, EMOTIONAL, SOCIAL, INTELLECTUAL AND SPIRITUAL NEEDS OF THEIR MEMBERS

PREPARATION: 1. A picture of a family a number of years ago
2. Drawings of various needs (Activity Sheet FL27)
3. Materials for mobiles

VOCABULARY: needs, physical, emotional, social, spiritual, intellectual

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) explain that families provide for the needs of their members	Students: 1. Identify and discuss the various needs which are provided for by families.	Background Information, Page – This lesson relates to Social Studies, Grade 4, Topic A. It also relates to Family Life, Grade 2. Lesson 1. Brainstorm the needs which are provided for by the family. Have students respond using the sentence pattern Families provide _____ for their members Needs should include: - food - clothing - shelter - education - values - love - affection - companionship - protection - leadership - fun - caring

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

2. Describe how families in the past provided for basic needs.

Using a picture of a family a number of years ago, have the students discuss what families provided and how they provided it.

Have students respond using the following sentence pattern. Record their responses on an experience chart as illustrated.

In the past, families provided _____ by _____

Need	In the past
- food	- hunting - trapping - fishing - gathering
- clothing	- gathering and preparing skins - sewing
- shelter	- building - sewing

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
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3. Describe how families provide for basic needs nowadays.

Add students' ideas about nowadays to the experience chart. Have students respond using the sentence pattern:

Now families provide _____ by _____

Need	In the past	Now
- food	- hunting - trapping - fishing - gathering	- hunting, etc - buying at the store - growing
- clothing	- gathering skins - sewing	- sewing - buying
- shelter		- renting - buying - building

4. Compare the needs of family members in the past to current family needs.

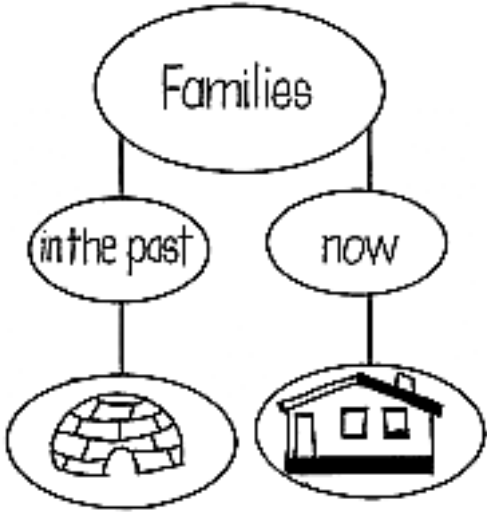
Have students discuss whether the needs have changed. Generally the needs have remained the same but the method of providing for them may have changed or be changing.

5. Define the terms physical emotional, social, intellectual and spiritual.

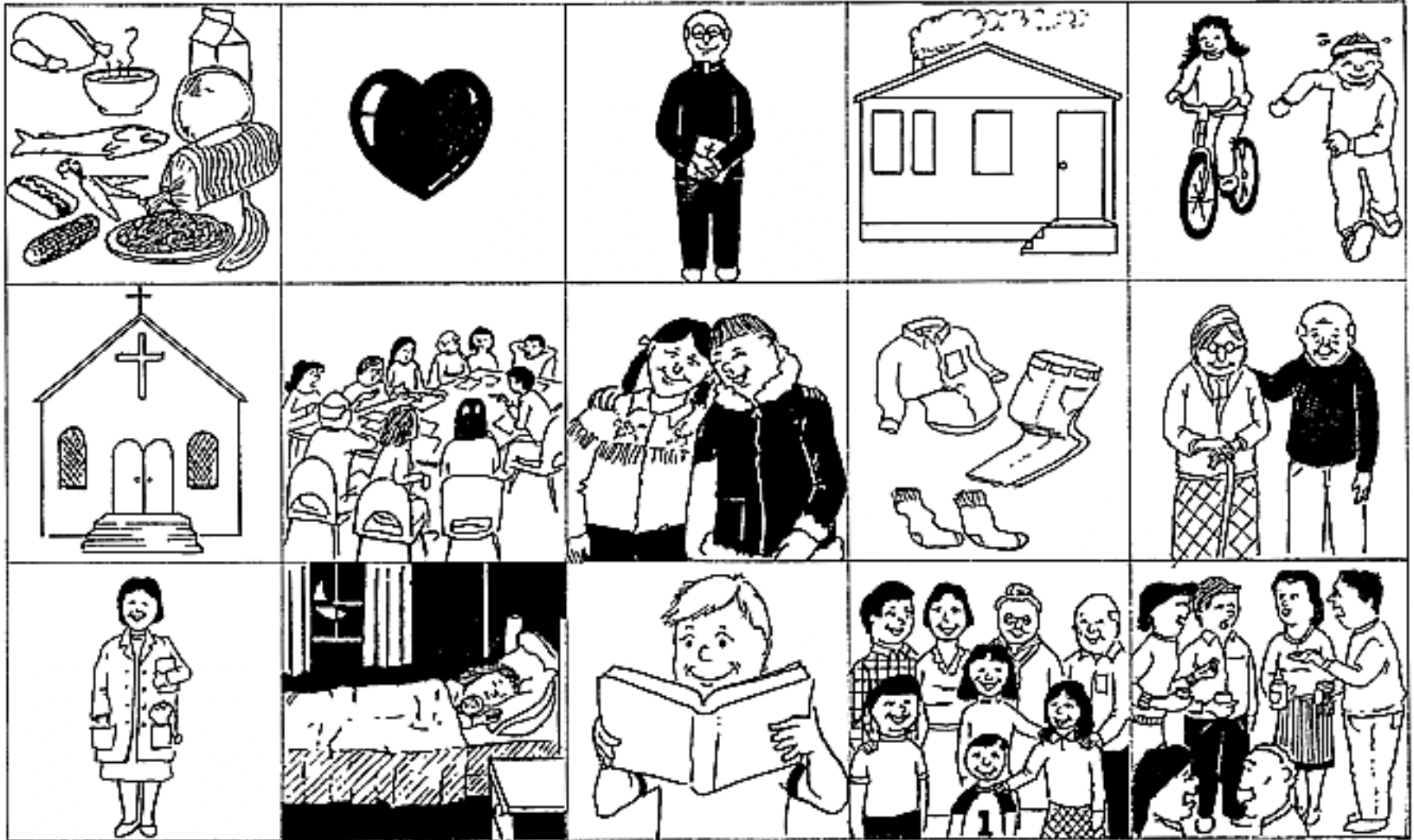
Have students think of words or phrases related to these words.

e.g., physical education, a “physical” examination
emotions
social services, society
spirit, the Great Spirit
intellectual, intellect, intelligence

Ask the students what they think each of the five words means.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify the importance of families	<p>6. Categorize the needs into physical, emotional, social, intellectual and spiritual.</p> <p>7. Identify why families are important.</p> <p>8. Make a mobile demonstrating the importance of families in the past and in the present.</p>	<p>Refer to Activity Sheet FL27.</p> <p>Have students take turns sorting the drawings of various needs into categories.</p> <p>Ask students why families are important and who would provide for their needs if there were no families.</p> <p>Have students respond using the sentence pattern.</p> <p>Families are important because they provide for <u>(physical)</u> needs.</p> <p>Have students cut out or draw pictures of various things which families provided) in the past and in the present.</p> 

NEEDS

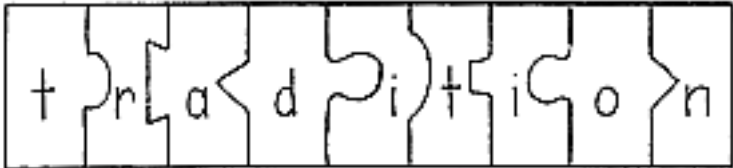


FAMILY LIFE**GRADE: 4****LESSON: 2****THEME: FAMILIES**

CONCEPT: FAMILY TRADITIONS ARE A PRODUCT OF FULFILLING THE PHYSICAL, EMOTIONAL, SOCIAL, INTELLECTUAL AND SPIRITUAL NEEDS OF THE FAMILY

- PREPARATION:**
1. Make the word tradition into a puzzle
 2. A symbol of a tradition, e.g., Christmas tree
 3. Invite an elder (or elders) to the class
 4. Materials for class book
-

VOCABULARY: tradition

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify family traditions	Students: 1. Make the word tradition from the puzzle.	Background Information Page - Write the word tradition in large letters on a piece of paper. Cut it into separate letters which will fit back together again to make the word tradition, e.g.,  Have the students complete the puzzle.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) identify the importance of traditions	2. Define the term tradition.	Use a dictionary and discussion to define the term.
		A tradition is a story, custom, belief or practice that has been in the family for a long time.
	3. Describe a specific tradition.	Use a symbol of one specific tradition, e.g., a Christmas stocking, a drum, etc. Describe this tradition to the students. Ask how many of them have the same tradition.
	4. Identify family traditions.	<p>List traditions which different families observe. Some may involve sharing a tradition with other families, e.g., a drum dance.</p> <p>Have students respond using the sentence pattern:</p> <p style="padding-left: 40px;">In our family, we _____.</p> <ul style="list-style-type: none"> - go out to camp in spring time - have a special dinner at Christmas - have birthday cakes - get new parkas at Christmas - listen to our grandfather's stories at fish camp
	5. Compare family traditions	From the list, have students identify which traditions their family observes Compare them to those of other families. Are they the same?
	6. Identify some traditions which have remained the same and some which have changed.	Invite an elder (or elders) to the class to talk about traditions. Classify them into two lists: Those Which Are Still Carried Out Today and Those Which Have Changed.
	7. Tell why families have traditions.	<p>Have students identify why families have particular traditions. Traditions are usually related to the needs of the family, e.g.,</p> <ul style="list-style-type: none"> - a feast was to celebrate killing an animal and having lots of food to share with others - telling stories is related to education

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
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8. Categorize traditions according to whether they fulfill physical, emotional, social or spiritual needs.

Some traditions may fit more than one category. Discuss how the tradition fulfils needs.
Record student responses using an experience chart as illustrated.

physical	emotional	social	spiritual
- feast		- feast	- feast
	- stories	- stories	- stories
- go to camp		- go to camp	

9. Make a class book of Our Family Traditions.

Have students select one family tradition. (If two students select the same tradition, they could work together.) Write and draw about the tradition Make them into a class book.

FAMILY LIFE**GRADE: 4****LESSON: 3****THEME: HUMAN DEVELOPMENT
AND REPRODUCTION**

CONCEPT: PUBERTY IS ONE STAGE OF DEVELOPMENT IN EVERYONE'S LIFE

PREPARATION: 1. A picture of a boy and a man
2. Overhead transparency of Activity Sheet FL28
3. Prepare a class set of sentence diamonds (Activity Sheet FL29)

VOCABULARY: change, heavier, adults

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe characteristic changes that begin in boys at puberty	Students: 1. Identify physical differences between a boy and a man. 2. Describe the physical changes which take place in boys as they become adults.	Background Information Page FL60 to FL61 Show students a picture of a boy (8-9 years old) and a man. Ask students how their physical appearance is different. Refer to Activity Sheet FL28. Using the overhead transparency, have students describe the changes which take place. Have students respond using the sentence pattern: As boys get older, _____ (they get taller). - their voices get deeper

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
		Record student responses using an experience chart as illustrated.		
	changes	male	female	
height	- taller			
weight	- heavier			
skin	<ul style="list-style-type: none"> - oilier - rougher - pimples - sweats more 			
voice	<ul style="list-style-type: none"> - breaks - becomes deeper 			
hair	<ul style="list-style-type: none"> - face - under arms - arms and legs - top of legs - chest and back 			
body shape	<ul style="list-style-type: none"> - muscles develop - shoulders get broader 			
<p data-bbox="926 1227 1507 1263">Save the experience chart for the next lesson.</p> <p data-bbox="926 1302 2003 1373">Teachers should emphasize that these changes happen at different ages for different people.</p>				

OBJECTIVES

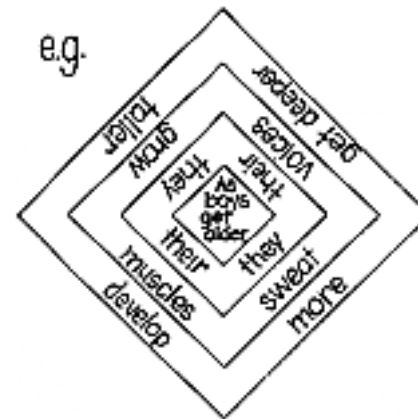
STUDENT ACTIVITIES

TEACHER NOTES

3. Make a sentence diamond of physical changes that take place in boys as they become adults.

Refer to Activity Sheet FL29.

Have students complete sentences in the blank sentence diamond, describing some of the changes which take place as boys get older.



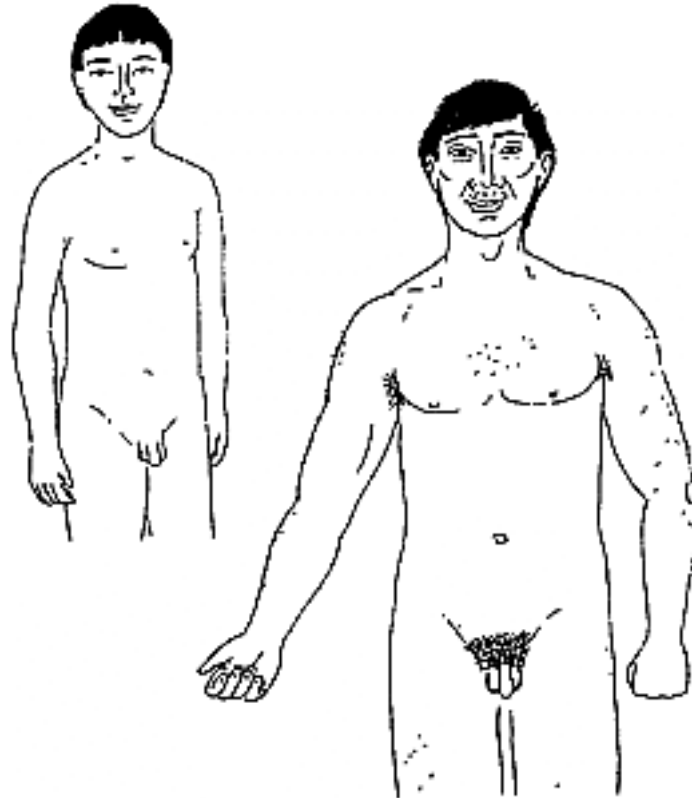
PHYSICAL CHANGES FROM A BOY TO A MAN

Skin:

- becomes oilier and rougher
- may develop spots and pimples
- sweats more

Voice:

- breaks
- becomes deeper



Body Shape:

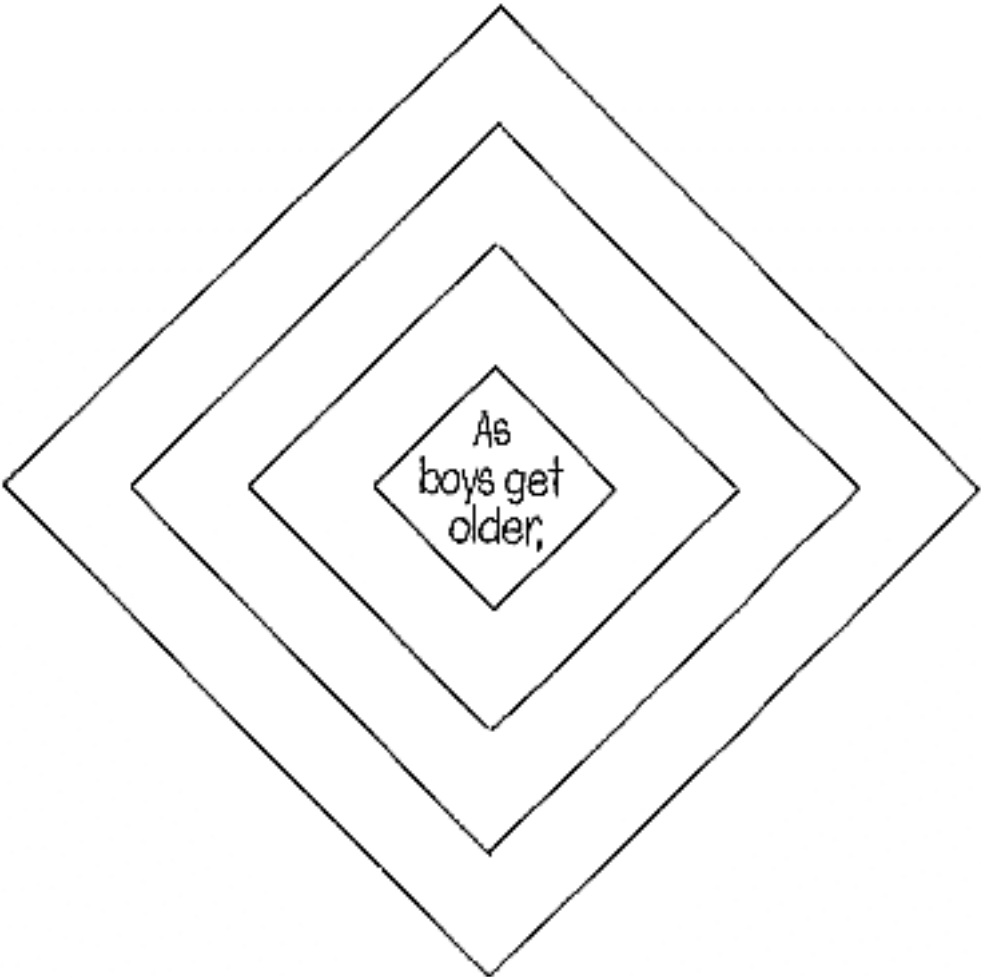
- muscles develop
- shoulders broaden
- becomes taller and heavier

Hair develops:

- on face
- under arms
- on chest and back
- on arms and legs
- at top of legs

SENTENCE DIAMOND

Complete the sentence on each side of the diamond.



FAMILY LIFE**GRADE: 4****LESSON: 4****THEME: HUMAN DEVELOPMENT
AND REPRODUCTION**

CONCEPT: PUBERTY IS ONE STAGE OF DEVELOPMENT IN EVERYONE'S LIFE

- PREPARATION:**
1. A picture of a girl and a woman
 2. Overhead transparency of Activity Sheet FL30
 3. Prepare a class set of sentence diamonds (Activity Sheet FL31)
-

VOCABULARY: breasts, nipples, hips, thighs

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe characteristic changes that begin in girls at puberty	Students: 1. Identify physical differences between a girl and a woman. 2. Describe the physical changes which take place in girls as they become adults.	Background Information Page FL60 to FL61 Show students a picture of a girl (8-9 years old) and a woman. Ask students how their physical appearance is different. Refer to Activity Sheet FL30. Using the overhead transparency, have students describe the changes which take place. Have students respond using the sentence pattern: As girls get older, <u> </u> (they get taller). - their breasts develop

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
		Add to the experience chart from the previous lesson. (Some will be the same as for boys.)	
		changes	male
		height	- taller
		weight	- heavier
		skin	<ul style="list-style-type: none"> - oilier - rougher - pimples - sweats more
		voice	<ul style="list-style-type: none"> - breaks - becomes deeper
		hair	<ul style="list-style-type: none"> - face - under arms - arms and legs - top of legs - chest and back
		body shape	<ul style="list-style-type: none"> - muscles develop - shoulders get broader
		<ul style="list-style-type: none"> - face becomes fuller - breasts develop - nipples stand out - buttocks, hips and thighs get rounder 	
		Teachers should emphasize that these changes happen at different ages for different people .	

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. Make a sentence diamond of physical changes that take place in girls as they become adults.</p>	<p>Refer to Activity Sheet FL31.</p> <p>Have students complete sentences in the blank sentence diamond, describing some of the changes which take place as girls get older.</p>

PHYSICAL CHANGES FROM A GIRL TO A WOMAN

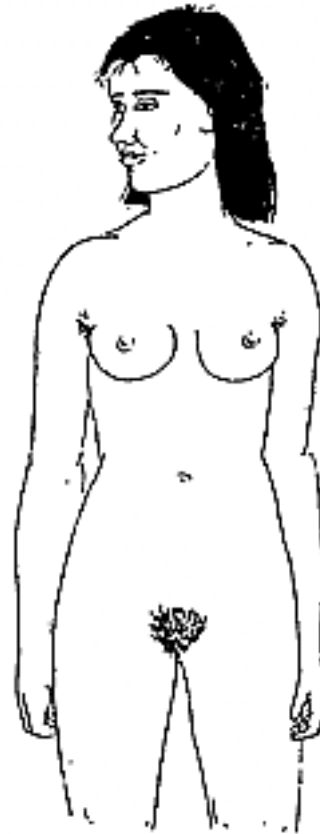
Skin:

- becomes oilier
- may develop spots and pimples
- sweats more



Voice:

- gets slightly deeper



Body Shape:

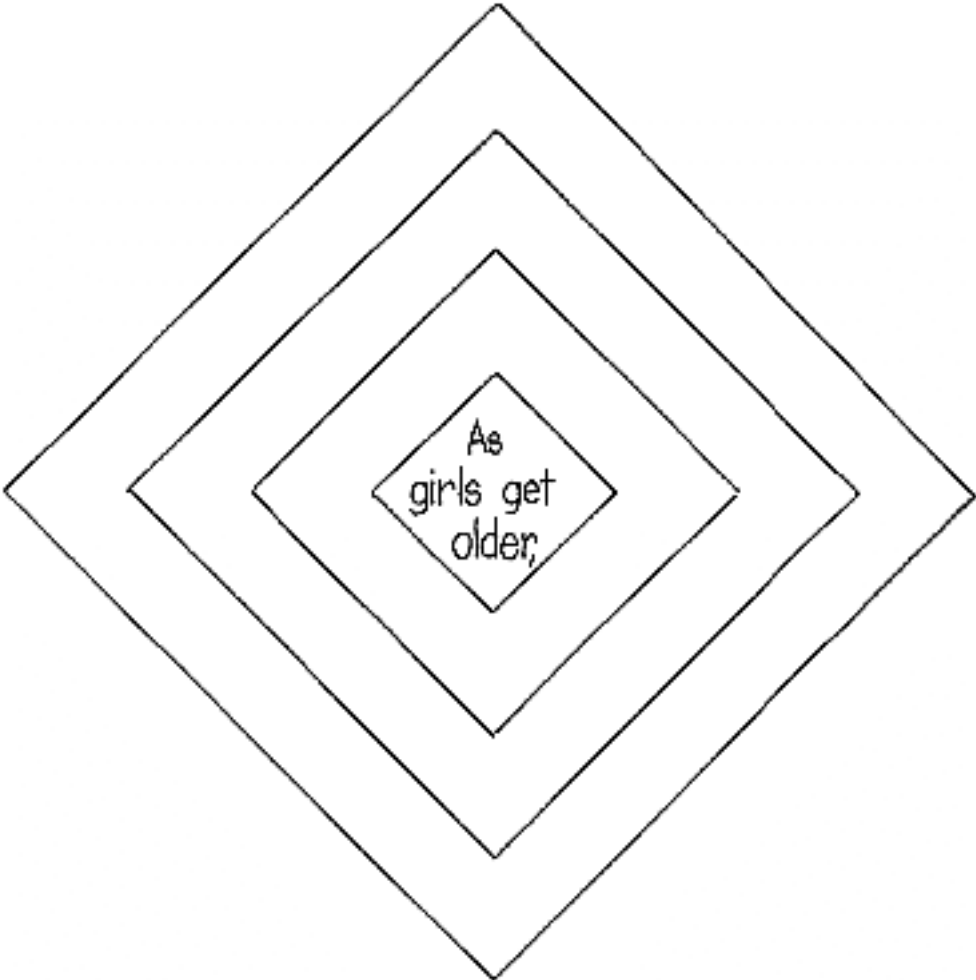
- face becomes fuller
- breasts develop
- nipples stand out
- buttocks, hips and thighs become rounder

Hair develops:

- under arms
- on arms and legs
- at top of legs

SENTENCE DIAMOND

Complete the sentence on each side of the diamond.

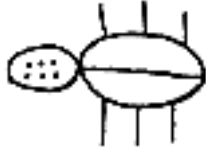


FAMILY LIFE**GRADE: 4****LESSON: 5****THEME: HUMAN DEVELOPMENT
AND REPRODUCTION**

CONCEPT: THE REPRODUCTIVE SYSTEM ENABLES HUMAN LIFE TO BEGIN

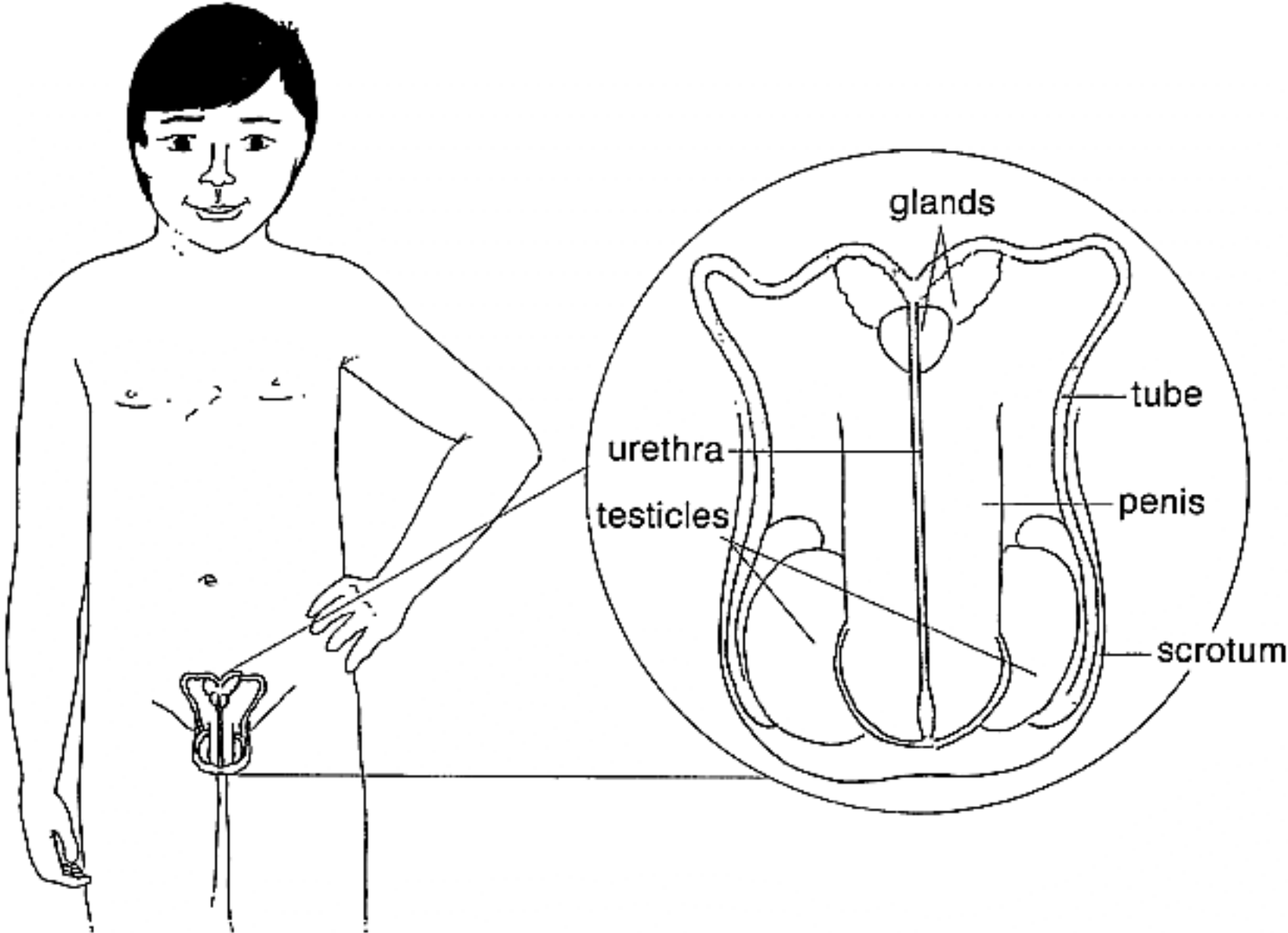
PREPARATION: 1. A simple chalkboard illustration for Activity 1
2. Overhead transparency of Activity Sheet FL32
3. Prepare a class set of Male Reproductive System worksheets (Activity Sheet FL33)

VOCABULARY: reproduce, reproductive, tubes, testicles, scrotum, urethra, glands

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) name and locate the major male reproductive parts	Students: 1. Copy a simple illustration. 2. Define the terms reproduce and reproductive.	Background Information Page FL62 to FL65 Have students copy a simple illustration exactly. Explain that they have 'reproduced' the illustration.  Use a dictionary and general discussion to help define the terms. In the Family Life unit, these terms refer to the production of off-spring.

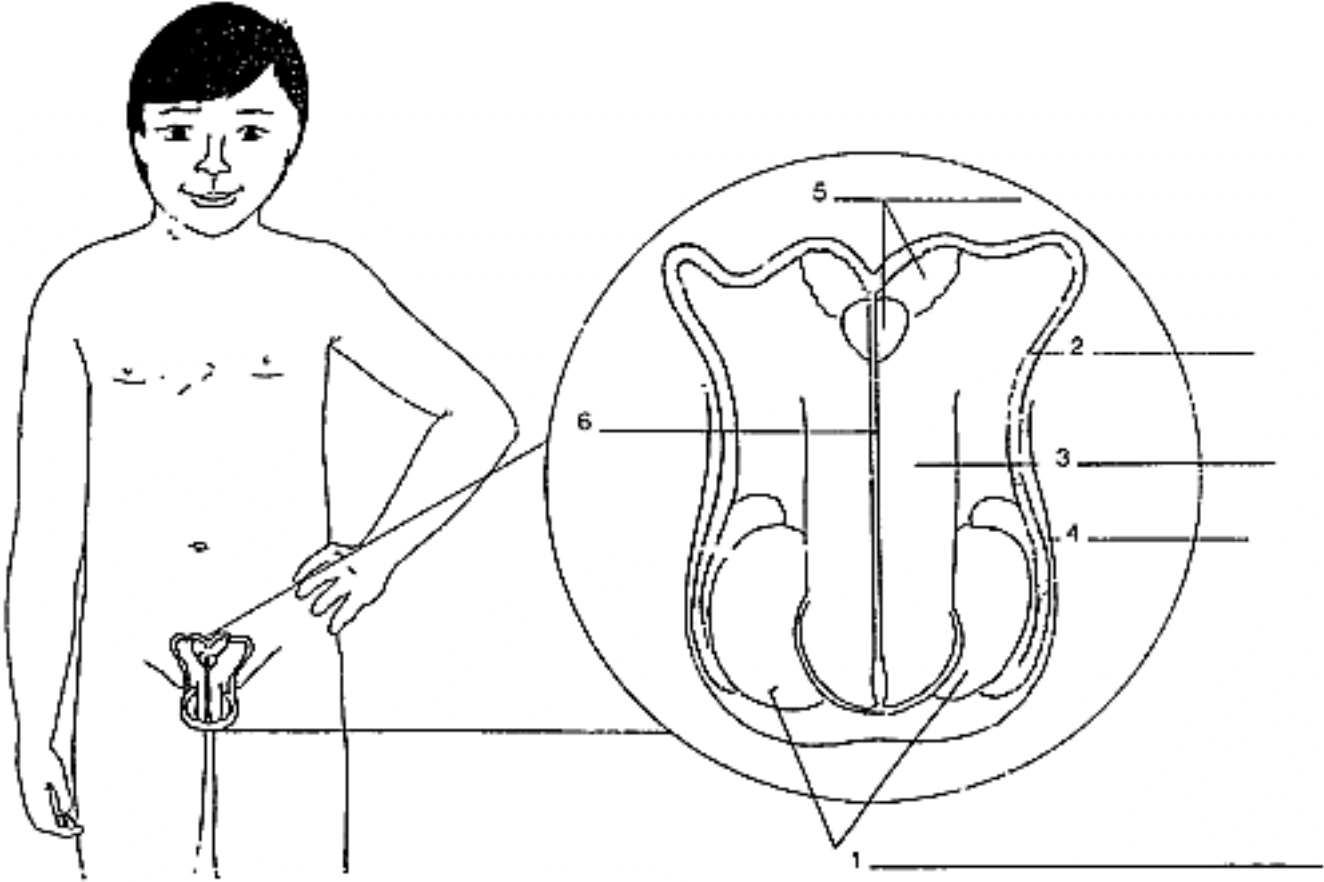
OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
	<p>3. Name and locate the major male reproductive parts</p> <p>4. Unscramble the letters of the major male reproductive parts.</p> <p>5. Complete the Male Reproductive System worksheet.</p>	<p>Refer to Activity Sheet FL32.</p> <p>Use the overhead transparency to identify the main parts.</p> <p>Have students respond using the sentence pattern:</p> <p style="padding-left: 40px;">The (<u>penis</u>) is/are part of the reproductive system.</p> <p>Major male reproductive parts are:</p> <ul style="list-style-type: none"> - tubes - penis - testicles - scrotum - urethra - glands <p>Write the words on the chalkboard. Have students unscramble the letters e.g.,</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> - spnie - mstuorc - sladgn </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> - ittselecs - ebsut - tauhrer </td> </tr> </table> <p>Refer to Activity Sheet FL33.</p> <p>Have students complete the worksheets by labelling the parts.</p>	<ul style="list-style-type: none"> - spnie - mstuorc - sladgn 	<ul style="list-style-type: none"> - ittselecs - ebsut - tauhrer
<ul style="list-style-type: none"> - spnie - mstuorc - sladgn 	<ul style="list-style-type: none"> - ittselecs - ebsut - tauhrer 			

MALE REPRODUCTIVE SYSTEM



MALE REPRODUCTIVE SYSTEM

Fill in the blanks with the names of the body parts: testicles, tubes, penis, scrotum, glands and urethra.



FAMILY LIFE**GRADE: 4****LESSON: 6****THEME: HUMAN DEVELOPMENT
AND REPRODUCTION**

CONCEPT: THE REPRODUCTIVE SYSTEM ENABLES HUMAN LIFE TO BEGIN

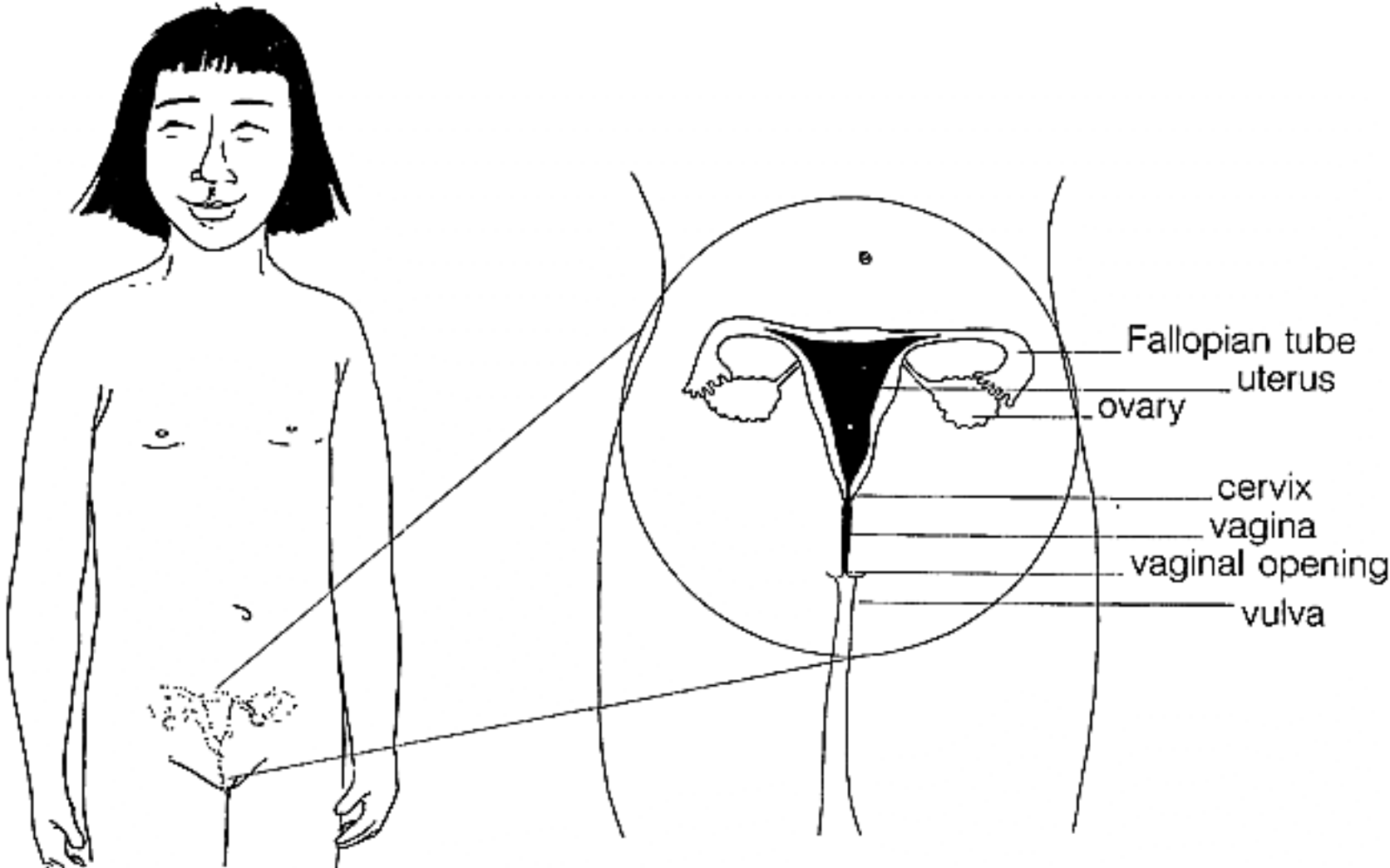
- PREPARATION:**
1. Overhead transparency of Activity Sheet FL34
 2. Prepare enough for one between two students of Female Reproductive Parts (Activity Sheet FL35)
Cut the words into two parts
 3. Prepare a class set of Female Reproductive System worksheets (Activity Sheet FL36)
-

VOCABULARY: Fallopian tubes, cervix, uterus, vagina, vulva, ovaries

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) name and locate the major female reproductive parts	Students: 1. Name and locate the major female reproductive parts.	Background Information Page FL62 to FL65 Refer to Activity Sheet FL34. Use the overhead transparency to identify the main parts. Have students respond using the sentence pattern: The _____ is/are part of the reproductive system.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Match the parts to complete the names of the female reproductive organs.</p> <p>3. Complete the Female Reproductive System worksheet.</p>	<p>Major female reproductive parts are</p> <ul style="list-style-type: none"> - Fallopian tubes - ovaries - uterus - vagina - cervix - vulva <p>Refer to Activity Sheet FL35.</p> <p>Prior to the lesson, cut the names of the female reproductive parts into two. Distribute them among the students. Have students look for their partners to complete the name of one of the parts. Say the name of the part.</p> <p>Refer to Activity Sheet FL36.</p> <p>Have students complete the worksheet by labelling the parts.</p>

FEMALE REPRODUCTIVE SYSTEM



FEMALE REPRODUCTIVE PARTS

ova ries

vul va

cer vix

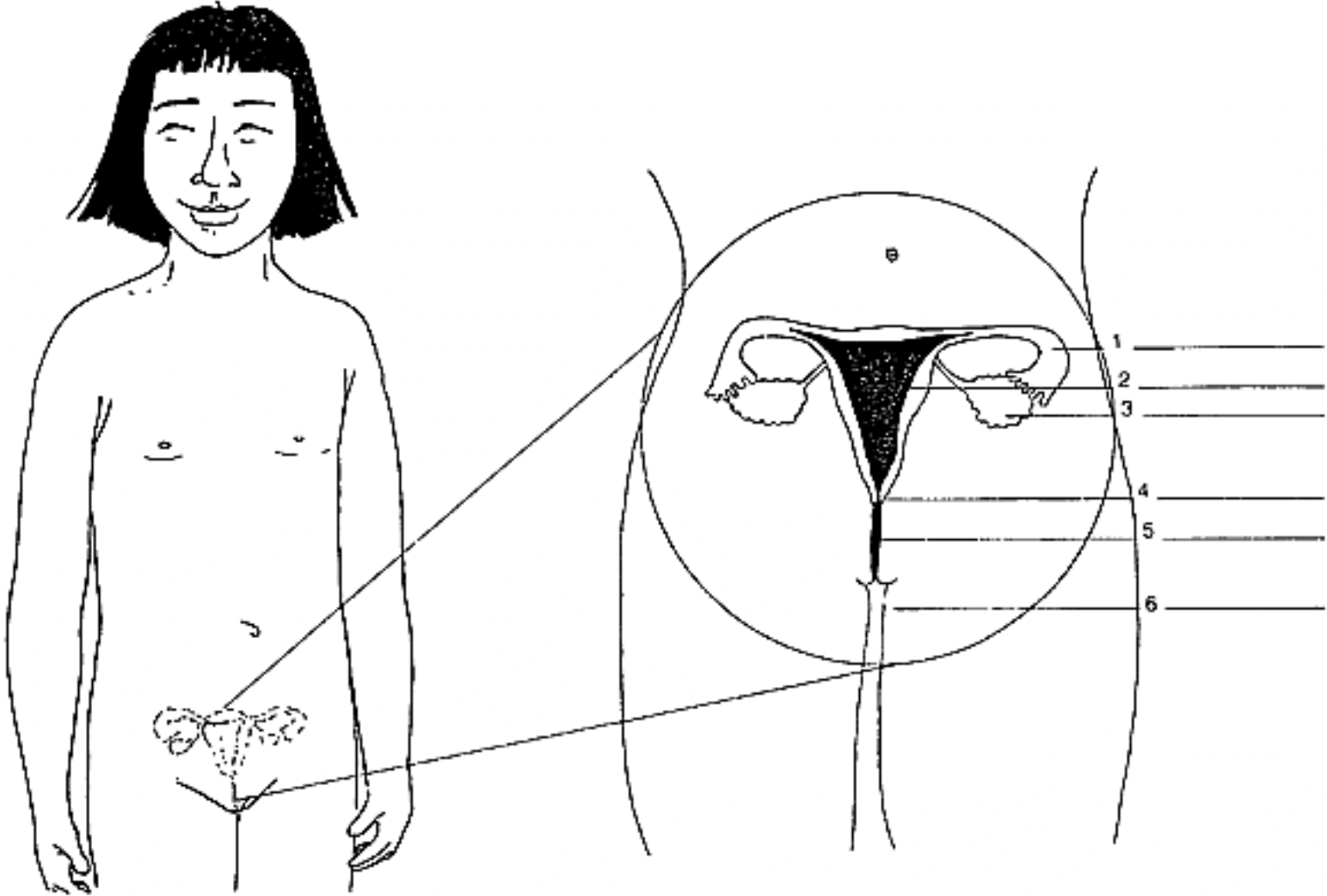
Fallopian tubes

uter us

vagi na

FEMALE REPRODUCTIVE SYSTEM

Fill in the blanks with the names of the body parts:
ovary, Fallopian tubes, uterus, vulva, cervix and vagina.



FAMILY LIFE**GRADE: 4****LESSON: 7 (optional)****THEME: HUMAN DEVELOPMENT
AND REPRODUCTION**

CONCEPT: MENSTRUATION IS A NATURAL OCCURRENCE IN FEMALES

- PREPARATION:**
1. Overhead transparency of Activity Sheet FI-37
 2. The word menstruation in large individual letters
 3. A collage of menstrual products
 4. Prepare a class set of What Does It Mean? worksheets (Activity Sheet FL38A)
-

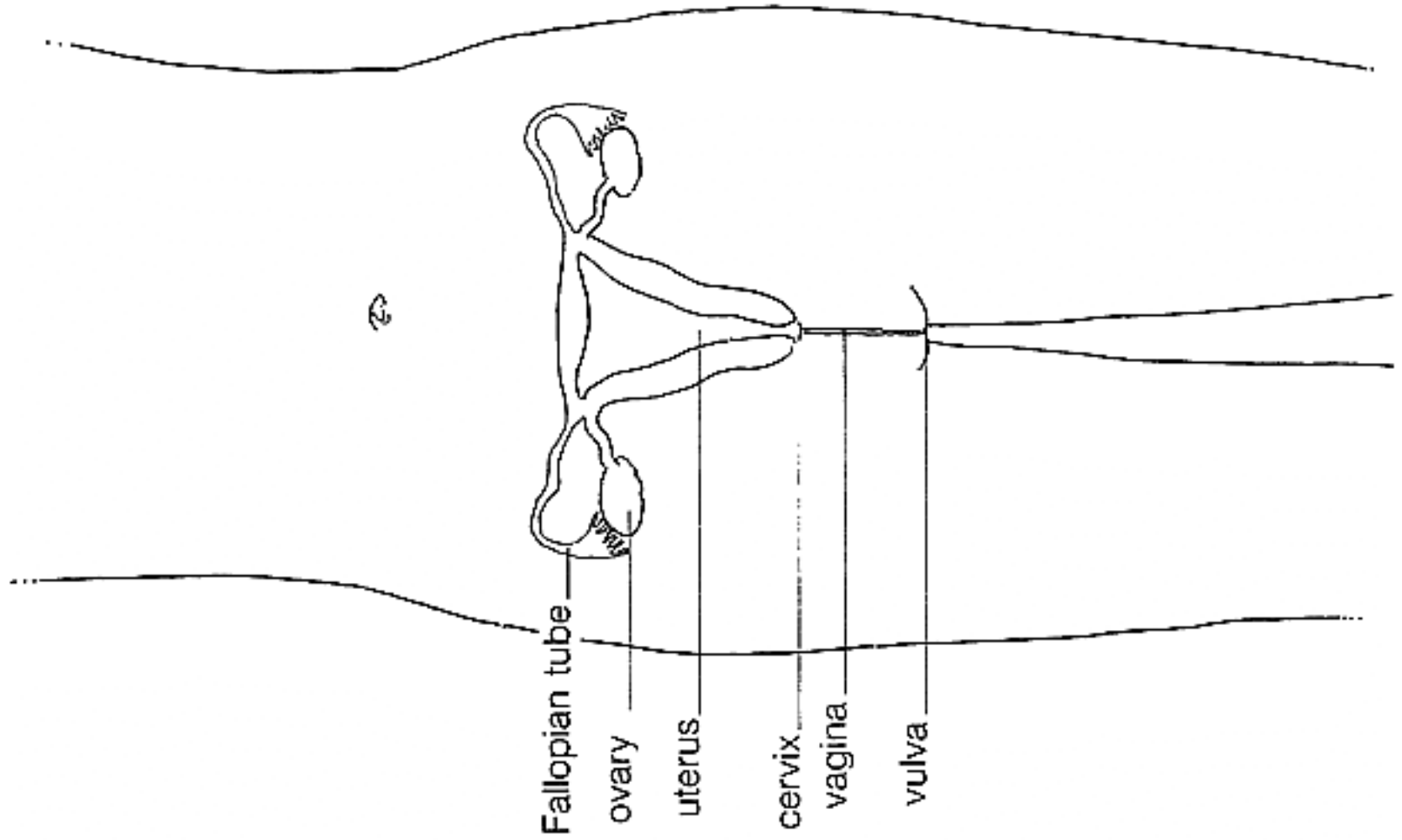
VOCABULARY: menstruation, period, pad, dissolves

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify menstruation as a natural occurrence	Students: 1. Review the female reproductive organs.	Background Information Page FL66 to FL69 * This lesson is an optional lesson intended for girls only. Teachers should use this lesson if they have girls in their class who may be starting to menstruate. Refer to Activity Sheet FL37. Use the overhead transparency to review This is a review of Grade 4, Lesson 6.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Describe the process of egg production.</p> <p>3. Define the term menstruation.</p> <p>4. Unscramble the letters to make the word menstruation.</p> <p>5. Brainstorm other names for menstruation.</p>	<p>Have students respond using the sentence pattern:</p> <p>Every month _____</p> <ul style="list-style-type: none"> - an egg leaves the ovaries - the uterus makes a thick lining for an egg - the egg dissolves if it does not join with a sperm the body gets rid of the lining of the uterus - a new egg leaves the ovaries - this happens in women <p>Emphasize that this is a natural process.</p> <p>Use the dictionary to define the term.</p> <p>Menstruation is a regularly occurring process during which the lining of the uterus is shed from the body.</p> <p>Write the word menstruation in large individual letters. Distribute the letters among the students. Have them move around the room holding their letter. When told, have students sort themselves into order to spell out the word menstruation.</p> <p>Let students suggest names they may have heard. Suggestions might include:</p> <ul style="list-style-type: none"> - monthlies - periods - the curse - that time of the month - etc.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe body hygiene and personal products related to menstruation</p>	<p>6. Describe ways to maintain personal hygiene during menstruation.</p> <p>7. Identify where pads may be obtained in school in an emergency.</p> <p>8. Complete What Does It Mean worksheet.</p>	<p>Teachers should have a collage of different package fronts of sanitary hygiene aids.</p> <p>Using a sanitary pad prevents the blood from getting on to clothes.</p> <p>Have students respond using the sentence pattern:</p> <p>During menstruation I should _____.</p> <ul style="list-style-type: none"> - wash the vulva regularly from front to back - use a sanitary pad - change sanitary pads several times every day - bathe/shower regularly wrap used sanitary pads and put them in the garbage - know where to get sanitary pads at school <p>Note: Students may be aware that tampons are available however health professionals do not recommend the use of tampons by younger females.</p> <p>Schools should have an emergency supply of pads available for girls. Teachers should be aware of where this supply is located.</p> <p>Refer to Activity Sheet FL38A (Answer Sheet is Activity Sheet FL38B).</p> <p>Have students complete the What Does It Mean worksheet by matching the correct beginning and end of sentences.</p>

FEMALE REPRODUCTIVE SYSTEM



WHAT DOES IT MEAN?

Draw a line to match the beginning and end of each sentence.

- | | |
|---|---------------------------|
| 1. Every month an egg | the lining of the uterus. |
| 2. To keep myself clean during my period | leaves the ovaries. |
| 3. If the egg does not join with a sperm, | I must wash twice a day. |
| 4. I must change sanitary pads | to all women. |
| 5. The body gets rid of | the egg dissolves. |
| 6. Menstruation happens | several times a day. |
| 7. Period is another name for | at all different ages. |
| 8. Women start menstruating | menstruation. |

WHAT DOES IT MEAN?

Draw a line to match the beginning and end of each sentence.

- | | |
|---|---------------------------|
| 1. Every month an egg | the lining of the uterus. |
| 2. To keep myself clean during my period | leaves the ovaries. |
| 3. If the egg does not join with a sperm, | I must wash twice a day. |
| 4. I must change sanitary pads | to all women. |
| 5. The body gets rid of | the egg dissolves. |
| 6. Menstruation happens | several times a day. |
| 7. Period is another name for | at all different ages. |
| 8. Women start menstruating | menstruation. |

FAMILY LIFE**GRADE: 4****LESSON: 8****THEME: ABUSE PREVENTION**

CONCEPT: TOUCH PRODUCES DIFFERENT FEELINGS

- PREPARATION:**
1. Collect a number of pictures of different touches
 2. Pocket chart and sentence strips
 3. Prepare one set of situation cards for each group (Activity Sheet FL39)
 4. Materials for a zig-zag book
-

VOCABULARY: comfortable, uncomfortable, confused

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES								
<p>Students will be able to:</p> <p>i) identify feelings associated with touch</p>	<p>Students:</p> <ol style="list-style-type: none">1. Brainstorm different kinds of touch. 2. Categorize the touches into comfortable, uncomfortable and confused.	<p>Background Information Page FL69 to FL70</p> <p>Have a number of pictures showing different kinds of touch. Touches might include:</p> <table><tbody><tr><td>- hitting</td><td>- kissing</td></tr><tr><td>- kicking</td><td>- hugging</td></tr><tr><td>- slapping</td><td>- cuddling</td></tr><tr><td>- punching</td><td>- tickling</td></tr></tbody></table> <p>Explain what is meant by comfortable, uncomfortable and confused. Students could work in pairs to categorize the touches before discussing them with the whole class.</p>	- hitting	- kissing	- kicking	- hugging	- slapping	- cuddling	- punching	- tickling
- hitting	- kissing									
- kicking	- hugging									
- slapping	- cuddling									
- punching	- tickling									

OBJECTIVES**STUDENT ACTIVITIES****TEACHER NOTES**

Record student responses on an experience chart as illustrated using the sentence pattern:

When someone _____ me. I feel _____.

comfortable	uncomfortable	confused
- kisses - hugs - holds hands with	- hits - tickles - punches	- kisses - cuddles

Discuss with students if they feel different about the touching if the person is someone they don't know/like. Use the sentence patterns:

When someone I don't like _____ me.
I feel _____.

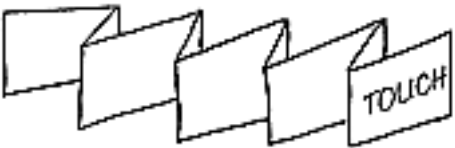
When someone I don't know _____ me.
I feel _____.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) identify how to deal with touches that produce negative or confused feelings</p>	<p>3. Describe different ways of dealing with touches that produce uncomfortable or confused feelings.</p> <p>4. Roleplay different ways of dealing with these touches.</p>	<p>Use a pocket chart:</p> <div data-bbox="1096 367 1934 459" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>If I feel uncomfortable, (confused) I can</p> </div> <div data-bbox="1184 472 1598 565" style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;"> <p>say no</p> </div> <div data-bbox="1184 581 1598 673" style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;"> <p>ask them to stop</p> </div> <div data-bbox="1184 690 1598 782" style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;"> <p>tell them I don't like it</p> </div> <div data-bbox="1184 799 1598 891" style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;"> <p>tell an adult I trust</p> </div> <div data-bbox="1184 907 1598 1000" style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;"> <p>not keep it a secret</p> </div> <p>Refer to Activity Sheet FL39.</p> <p>Distribute situation cards to small groups.</p> <p>Have groups practise roleplaying refusing touches before demonstrating to the rest of the class.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
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5. Make a touches zig zag book.

Have students make a zig zag book.



On one side write a touch that makes them feel uncomfortable or confused. On the other side write a way of dealing with it.

E.g.,

When someone _____ me, I feel _____
--

I can _____ _____

iii) identify trusted people in the community who can help

6. Brainstorm family and community support people.

Ask students who they can talk to if someone is making them uncomfortable by touching them. Remind them they should talk to an adult they trust. Make an experience chart:

family	community
<ul style="list-style-type: none"> - parents - grandparents 	<ul style="list-style-type: none"> - nurse - elder - teacher - minister

SITUATION CARDS

<p>1. Jean is combing Barb's hair. She is hurting Barb because her hair has lots of tangles.</p>	<p>2. Billy's friend's father is showing Billy his model plane. When he bends over to look at it, the man touches Billy's bum. He says it is a secret.</p>
<p>3. Jim's aunt is always tickling him on his private parts. He doesn't like it.</p>	<p>4. Jack's brother is always punching him. He hates it.</p>
<p>5. Betty's uncle tries to kiss her when her mother is not in the room. She feels uncomfortable.</p>	<p>6. Sara's babysitter slaps her when she doesn't pick up her toys.</p>

GRADE 4

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 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.

PUBERTY

Puberty is the stage of life when the body changes from that of a child into that of an adult. It is the time when the male/female body develops the capacity to reproduce. Puberty begins at different times for different people and progresses at different rates among individuals. Girls can begin puberty between eight and ten years of age. Boys generally enter puberty two years later at ten to twelve years. The production of hormones stops the growth of girls at approximately sixteen years of age, boys at eighteen years.

Puberty signals the beginning of adolescence, the period of development which leads to adulthood. During this period, young people experience a number of physical, emotional, social and mental changes.

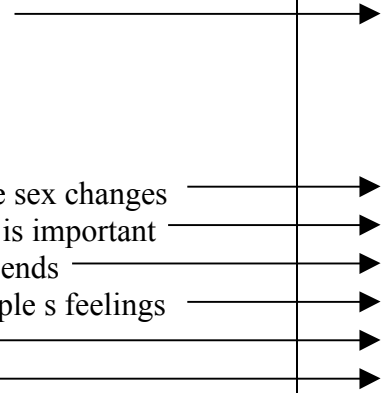
Males

Females

	Males	Females
Changes related to reproduction	<ul style="list-style-type: none"> - penis, scrotum and testicles get bigger and mature - endocrine glands secrete hormones which produce sperm - erections may occur - ejaculation may occur 	<ul style="list-style-type: none"> - vulva, vagina and uterus get bigger - endocrine glands secrete hormones which trigger the beginning of ovulation and menstruation - eggs (ova) develop in the ovaries - cervix produces mucus
General Changes	<ul style="list-style-type: none"> - height and weight increase - shoulders get broader - muscles develop - growth of body hair <ul style="list-style-type: none"> - on upper lip, face - chest - under arms - in pubic areas - skin changes <ul style="list-style-type: none"> - becomes oilier and coarser - increased chance of pimples and acne - increased body perspiration and odour - voice breaks and deepens 	<ul style="list-style-type: none"> - height and weight increase - body fat and supporting tissue increase, especially around hips - breasts develop - growth of body hair <ul style="list-style-type: none"> - under arms - on arms and legs - in pubic areas - skin changes <ul style="list-style-type: none"> - becomes oilier and coarser - increased chance of pimples and acne - increased body perspiration and odour - voice deepens, but not as much as in males - face becomes fuller - nipples stand out

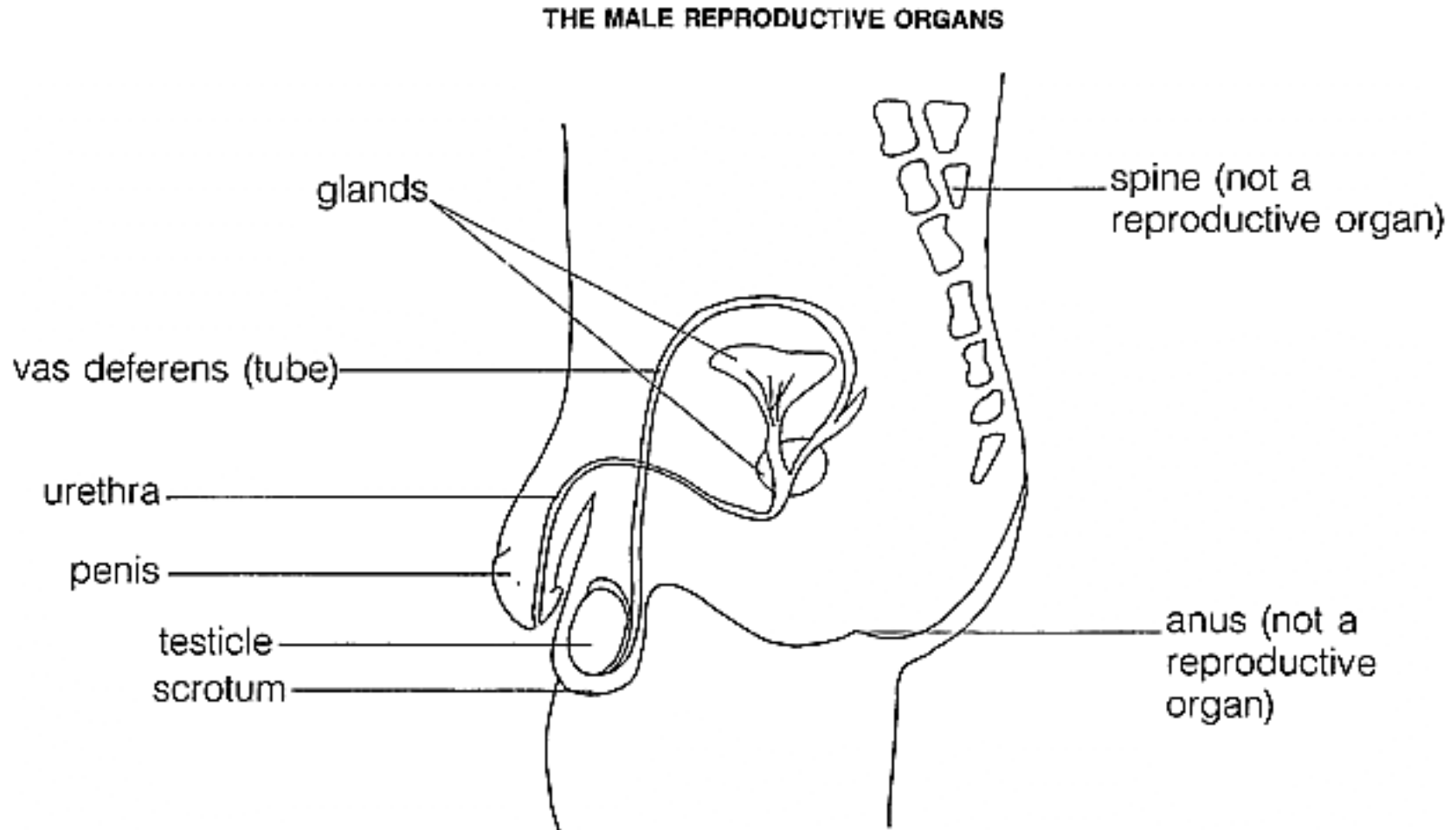
Males

Females

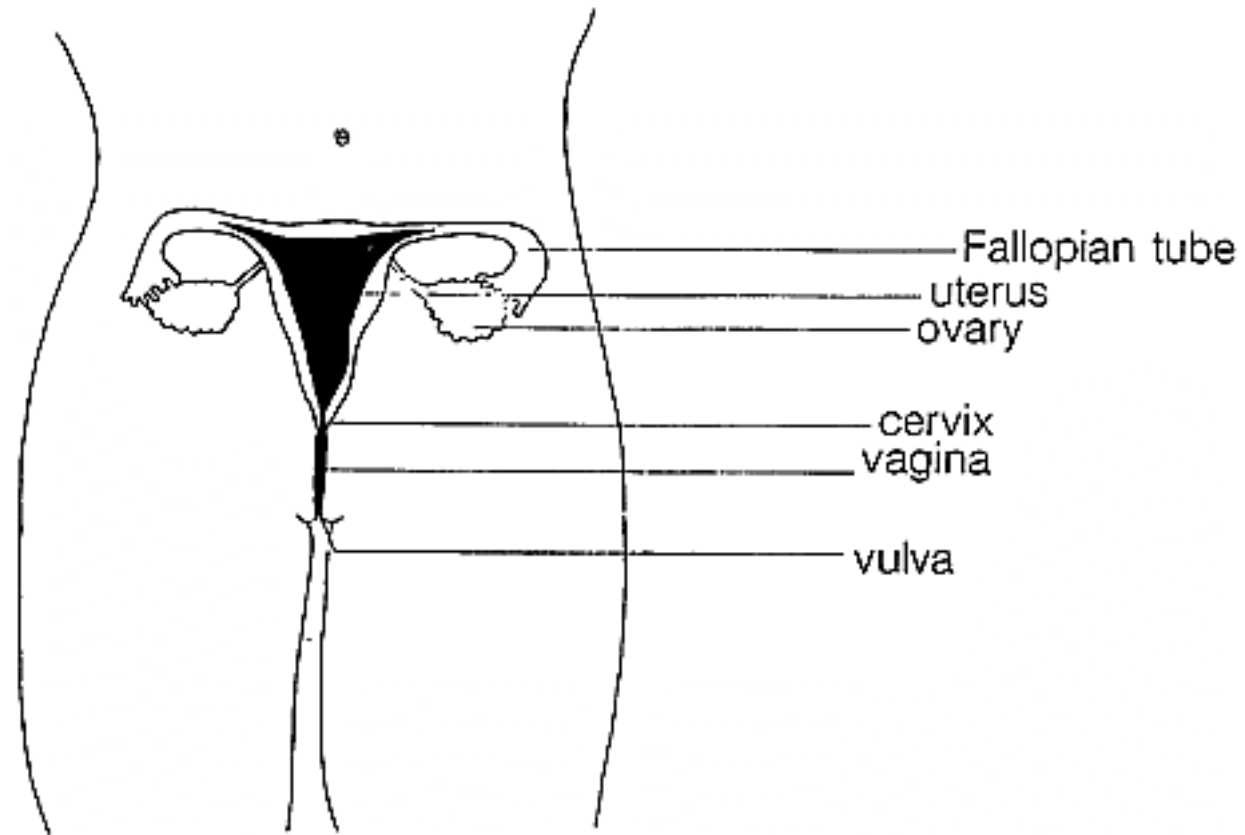
Mental/Emotional/Social Changes	<ul style="list-style-type: none">- skills develop over time- planning- decision-making- thinking- communication- attitude towards opposite sex changes- acceptance by the group is important- spend more time with friends- more aware of other people s feelings- mood swings- sexual feelings develop	

THE REPRODUCTIVE SYSTEM

The reproductive system is the system which begins to develop during puberty. It is the system which, when fully matured, allows new life to begin.



THE FEMALE REPRODUCTIVE ORGANS



TERMS RELATED TO THE MALE REPRODUCTIVE SYSTEM

<i>sperm</i>	the male reproductive cell, it generally lives for 24 to 72 hours, males do not begin to produce sperm until puberty
<i>scrotum:</i>	the outer sac or bag which holds the testicles
<i>testicles:</i> where	two glands located inside the scrotum, these are where sperm are produced, it is common for each testicle to be slightly different in size
<i>vas deferens:</i>	the tube which leads from each testicle to the urethra, sperm travels along this tube from the testicle to the urethra
<i>glands:</i>	the sperm passes many glands, these glands produce fluids which protect and lubricate the sperm, the mixture of sperm and fluids is called semen
<i>urethra:</i>	a tube inside the penis which carries both urine and semen to outside of the body, semen and urine do not travel down the urethra at the same time
<i>penis:</i> sperm	an external body organ through which urine and sperm leave the body

Although the following topics are not covered in lessons for Grade 4 students may ask questions about them. Information has been provided so that teachers can discuss them if the need arises.

<i>ejaculation:</i>	the discharging of semen from the body through the penis
<i>erection:</i> from	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.
<i>wet dreams:</i> dream	ejaculations which occur at night as a result of a dream
<i>masturbation:</i>	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.

TERMS RELATED TO THE FEMALE REPRODUCTIVE SYSTEMS

<i>egg:</i>	the female reproductive cell; it generally lives for 48 to 72 hours; 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
<i>vulva:</i>	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
<i>vagina:</i>	the opening through which blood leaves the body at menstruation; the opening through which the male penis enters during sexual intercourse; the opening through which a baby is born
<i>cervix:</i>	the neck of the uterus
<i>uterus:</i>	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
<i>ovaries:</i>	the organs where the eggs develop and are stored; once a month; an egg is released from the ovaries; the ovaries contain thousands of tiny, undeveloped egg sacs
<i>Fallopian tubes:</i>	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

THE REPRODUCTIVE PROCESSES

<i>Sex cell development:</i>	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.
<i>The pathway of the sperm:</i>	The sperm travels from the testicles along the tube (the vas deferens) to the urethra, to the outside of the body.
<i>The pathway of the ovum:</i>	The ovum travels from the ovary along the Fallopian tube to the uterus.
<i>Sexual intercourse:</i>	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.
<i>Fertilization (Conception):</i>	When a sperm cell and an egg cell join together, fertilization takes place
<i>Implantation:</i>	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.
<i>Gestation:</i>	The time during which the fetus develops in the uterus for approximately 40 weeks. This is also called pregnancy
<i>Birth:</i>	At the end of that time, the baby is ready to leave the uterus, through the cervix and vagina into the world.

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 from then until menopause, usually around 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 twelve to sixteen days before the menstrual flow occurs 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.

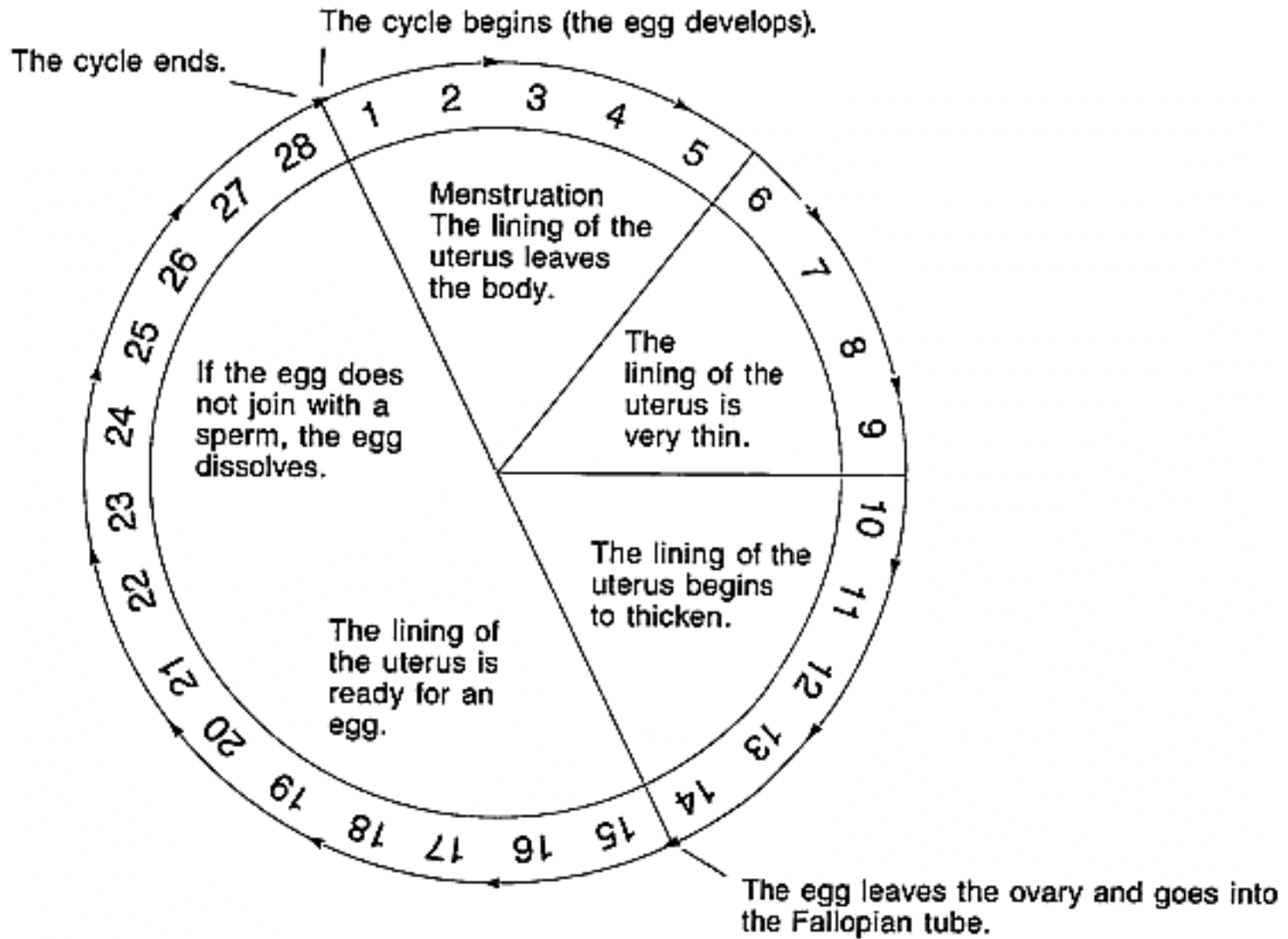
If the egg is not fertilized, it dissolves. The lining of the uterus is not needed to nourish and protect a baby, and so it is shed and leaves the body through the vagina. The flow of blood and tissue is called menstruation, a menstrual period, or a monthly period.

The menstrual cycle begins on the first day of menstruation and ends the day before the next menstrual period begins. It is usually about twenty-eight 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.

THE MENSTRUAL CYCLE



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.

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

Still in some primitive tribes, menstruating women 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.

ABUSE PREVENTION

The lessons in Grade 4 do not deal specifically with sexual abuse, but they do serve as an introduction to the topic.

Students evaluate different touches by the positive or negative feelings they produce. Students may experience touches which make them feel comfortable, some which make them feel uncomfortable and some which make them confused. Confused feelings are generally created when students experience a touch which usually makes them feel comfortable, but in this particular situation or from this particular person, produces uncomfortable feelings.

Students are encouraged to develop their own family and community support systems so that, should they be at risk, they know who to approach and how to contact them.

Teachers must approach the topic of Abuse Prevention with sensitivity. They may have an abused child in the class. When teachers teach about abuse, they may be told about an abuse. To ensure they know the correct procedures to follow if they suspect child abuse, they should become familiar with the N.W.T. Department of Education 'Procedures for Reporting Suspected Child Abuse' available in all schools (see next page).

Staff should also become familiar with local support people in the community. Schools should advise agencies involved in the investigation and treatment of child abuse that they will be using materials on abuse prevention in the schools.

**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
Boy 1320
Yellowknife, X1A 2L9
(403-873-7709)

GRADE 4

NUTRITION

NUTRITION

GRADE: 4

LESSON: 1

THEME: FOOD CLASSIFICATION

CONCEPT: FOODS ARE CLASSIFIED INTO FOUR FOOD GROUPS ON THE BASIS OF NUTRIENT CONTENT

- PREPARATION:
1. Invite a mother with a newborn to come to class
 2. Prepare cards with the names of one major nutrient for half the students, and with functions for the other half (Activity Sheet N30)
 3. Materials for experiments, 4 adults to help
 4. Prepare a class set of My Observations worksheet (Activity Sheet N31)
-

VOCABULARY: nutrients, vitamins, minerals, protein, carbohydrates

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify six major nutrients found in foods and their functions	Students: 1. Explain what nutrients are.	Background information: Page N45 to N50 Prior to allowing students to eat food in class, teachers should check with parents to find out if any students have food allergies. Ask a mother with a new baby to come and feed her baby in class (or show a picture of a mother feeding her baby). Ask students what the baby is doing and why. When students respond that the baby is drinking milk/formula so that s/he will live and grow and so that s/he won't be hungry ask them if the baby could live and grow on water, or pop, or juice? Students will know that babies can only live on milk/formula and not on any other liquid.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES												
	<p>2. State the results of eating foods high in nutrients.</p>	<p>Explain to students that the milk/formula contains things that the baby needs to grow, be healthy, and have energy. These things are called nutrients. Explain that milk/formula is healthy for a baby because it contains all the nutrients s/he needs. Children and adults need a variety of foods to make sure they get all the nutrients they need.</p> <p>In earlier grades students identified foods which belong to one of the four food groups as being nutritious or healthy.</p> <p>Ask them to give examples of nutritious/healthy foods. Record their responses.</p> <ul style="list-style-type: none"> - milk - apples - bannock - fish - etc. <p>Explain that these foods contain a lot of nutrients. Make a chart as illustrated.</p> <table border="1" data-bbox="978 959 2018 1222"> <thead> <tr> <th data-bbox="978 959 1226 1036">Nutrients Make Us...</th> <th data-bbox="1226 959 1738 1036">Why?</th> <th data-bbox="1738 959 2018 1036"></th> </tr> </thead> <tbody> <tr> <td data-bbox="978 1036 1226 1112">Grow</td> <td data-bbox="1226 1036 1738 1112">They build muscles, bones and other tissues.</td> <td data-bbox="1738 1036 2018 1112"></td> </tr> <tr> <td data-bbox="978 1112 1226 1149">Glow</td> <td data-bbox="1226 1112 1738 1149">They make us feel and look healthy.</td> <td data-bbox="1738 1112 2018 1149"></td> </tr> <tr> <td data-bbox="978 1149 1226 1222">Go</td> <td data-bbox="1226 1149 1738 1222">They give us energy to work and play.</td> <td data-bbox="1738 1149 2018 1222"></td> </tr> </tbody> </table> <p>Have students orally practise the sentence pattern.</p> <p>Nutrients make us (<u>go</u>) because (<u>they give us energy to work and play</u>).</p>	Nutrients Make Us...	Why?		Grow	They build muscles, bones and other tissues.		Glow	They make us feel and look healthy.		Go	They give us energy to work and play.	
Nutrients Make Us...	Why?													
Grow	They build muscles, bones and other tissues.													
Glow	They make us feel and look healthy.													
Go	They give us energy to work and play.													

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES												
	<p>3. Learn and sing "Grow, Glow and Go"</p> <p>4. Describe the six major nutrients and their importance.</p> <p>5. Play the Match Up game.</p>	<p>Grow, Glow, Go Grow, glow, go Grow, glow, go Your nutrients will really show. You'll grow like a mushroom, Glow with healthy skin, And go, go, go around the gym. (Tune: This Old Man) Barbara Hall</p> <p>Display the chart from Student Activity 2. Add an extra column as shown.</p> <table border="1" data-bbox="1060 737 2016 1073"> <thead> <tr> <th data-bbox="1060 737 1251 813">Nutrients Make Us</th> <th data-bbox="1251 737 1694 813">Why?</th> <th data-bbox="1694 737 2016 813">Nutrients</th> </tr> </thead> <tbody> <tr> <td data-bbox="1060 813 1251 889">Grow</td> <td data-bbox="1251 813 1694 889">They build muscles, bones, and other tissues.</td> <td data-bbox="1694 813 2016 889">Protein</td> </tr> <tr> <td data-bbox="1060 889 1251 966">Glow</td> <td data-bbox="1251 889 1694 966">They make us feel and look healthy.</td> <td data-bbox="1694 889 2016 966">Minerals Vitamins</td> </tr> <tr> <td data-bbox="1060 966 1251 1073">Go</td> <td data-bbox="1251 966 1694 1073">They give us energy to work and play.</td> <td data-bbox="1694 966 2016 1073">Carbohydrates Fats Water</td> </tr> </tbody> </table> <p>The sixth nutrient is <i>water</i> which keeps the body temperature steady and keeps us from drying out.</p> <p>Refer to Activity Sheet N30. Give half of the students nutrient cards. Give the other half the functions cards. Students have to find their partner by asking questions. e.g., Do you build muscles? Do you give us energy?</p>	Nutrients Make Us	Why?	Nutrients	Grow	They build muscles, bones, and other tissues.	Protein	Glow	They make us feel and look healthy.	Minerals Vitamins	Go	They give us energy to work and play.	Carbohydrates Fats Water
Nutrients Make Us	Why?	Nutrients												
Grow	They build muscles, bones, and other tissues.	Protein												
Glow	They make us feel and look healthy.	Minerals Vitamins												
Go	They give us energy to work and play.	Carbohydrates Fats Water												

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) test for the presence of major nutrients in the four food groups	<p>6. Observe a demonstration that tests for the presence of protein.</p> <p>7. Test for the presence of fats in food.</p> <p>8. Observe a demonstration test for the presence of carbohydrates that are high in sugars.</p>	<p>When students find their partners have them make (and say) a sentence from their two cards. Play the game several times.</p> <p>Refer to Activity Sheet N31. Student Activities 6 through 9 will best be conducted using stations. You will need the assistance of four adults or senior students but students will then be able to participate more fully in the experiments in small groups.</p> <p>The teacher should demonstrate testing for protein.</p> <p>Materials: test tubes or jars, eye dropper, concentrated Nitric Acid (HN03), diluted egg white, diluted gelatin, milk, chicken bouillon, distilled water, other liquids if desired.</p> <p>Procedure: Put each liquid in a test tube or jar and label it accordingly. To each, add 5 to 10 drops of concentrated HN03 (caution: HN03 is corrosive). A yellow colour indicates the presence of protein.</p> <p>Record observations.</p> <p>Divide the class into pairs or small groups.</p> <p>Materials: squares of brown paper, lard, margarine, cheese, chocolate bar, potato.</p> <p>Procedure: Rub lard or margarine on the brown paper. Hold up to the light to observe. Test the other foods in the same way. Compare.</p> <p>Fats will leave a translucent spot on the brown paper. Record observations.</p> <p>The teacher demonstrates testing for carbohydrates that are high in sugar.</p> <p>Materials: Benedict's solution, test tubes, test tube holders, candle, matches, corn syrup, sugar water, cola, chocolate bar, potato, apple, cheese.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>9. Test for the presence of carbohydrates that are high in starch.</p> <p>10. Observe a demonstration for the presence of minerals.</p> <p>11. Test for the presence of water.</p>	<p>Procedure: Place 4 or 5 drops of Benedict's solution in the test tube and add a mixture of corn syrup and water. Heat over the candle. Observe for colour change. Foods that have sugar present turn the solution from blue to orange. Test other foods in the same way. Compare. Record observations.</p> <p>Divide class into pairs or small groups. Materials: measuring spoons, paper cups, water, iodine, eye droppers, cornstarch, bannock, soda crackers, - macaroni, potato, apple. Procedure: Mix a small amount of cornstarch and water. Add a few drops of iodine. Observe for colour change. Foods that have starch present will turn the mixture purple. Test other foods in the same way. Compare. Record observations.</p> <p>The teacher demonstrates testing for minerals. Materials: foil, tongs, candle, matches, food: lettuce, spinach, dandelion leaves. (*Use very small samples.) Procedure: Place a small piece of food on the foil. Heat the sample over the candle until the food is completely burned. Observe for gray ash that indicated the presence of minerals. Test other foods in the same way. Compare. Record observations.</p> <p>Divide class into pairs or small groups. Materials: scales, foods: lettuce, seaweed, apple, grape, cheese. Procedure: Weigh each food and record its mass. Place each food in a warm place for 2 - 4 days. Weigh the foods again after the time period. Compare. Record observations. Water loss is indicated by loss of weight (mass) (the food is drying out).</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	12. List foods that are rich in each nutrient.	Refer to Activity Sheet N31. Have students complete the activity sheet as each experiment is conducted.

MATCH UP

Nutrient cards

protein

carbohydrates

fats

minerals

vitamins

water

Function cards

builds and mends muscles and other tissues

give us energy for work and play

give us energy for work and play

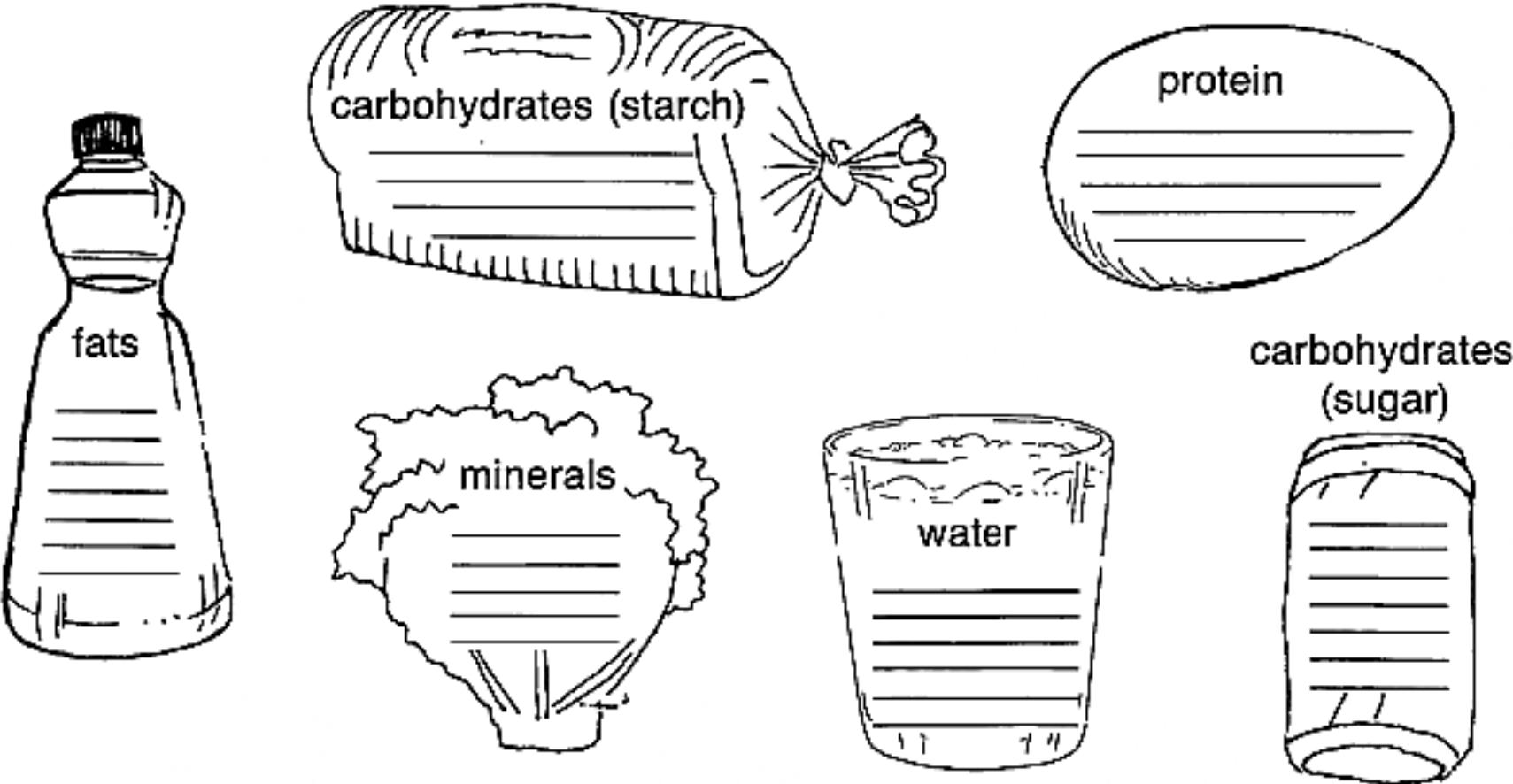
keep the body healthy

keep the body healthy

keeps body temperature steady and stops the body from drying out

MY OBSERVATIONS

As you are doing the experiments list some foods which contain each nutrient.



NUTRITION

GRADE: 4

LESSON: 2

THEME: FOOD CLASSIFICATION

CONCEPT: FOODS ARE CLASSIFIED INTO FOUR FOOD GROUPS ON THE BASIS OF NUTRIENT CONTENT

PREPARATION: 1. Completed My Observations worksheet (Activity Sheet N31) from Lesson 1
2. Prepare a class set of Protein Rich Foods and Fatty Rich Foods worksheets (Activity Sheets N32A and N32C, Teacher Answer Guide N32B and N32D)

VOCABULARY: protein rich foods, carbohydrate rich foods, etc.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES												
Students will be able to: i) identify a variety of foods which are excellent sources of major nutrients	Students: 1. List foods that are rich in the six major nutrients.	Background information: Page N45 to N50; N58 to N66 Make a large experience chart with the following headings:												
		<table border="1"><thead><tr><th data-bbox="1188 971 1335 1040">protein</th><th data-bbox="1335 971 1493 1040">carbo- hydrates</th><th data-bbox="1493 971 1583 1040">fats</th><th data-bbox="1583 971 1740 1040">minerals</th><th data-bbox="1740 971 1887 1040">vitamins</th><th data-bbox="1887 971 2018 1040">water</th></tr></thead><tbody><tr><td data-bbox="1188 1040 1335 1192"></td><td data-bbox="1335 1040 1493 1192"></td><td data-bbox="1493 1040 1583 1192"></td><td data-bbox="1583 1040 1740 1192"></td><td data-bbox="1740 1040 1887 1192"></td><td data-bbox="1887 1040 2018 1192"></td></tr></tbody></table>	protein	carbo- hydrates	fats	minerals	vitamins	water						
		protein	carbo- hydrates	fats	minerals	vitamins	water							

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES																																																																														
	<p>2. Complete the Protein Rich Foods worksheet.</p> <p>3. Identify foods which are rich in carbohydrates.</p>	<p>Ask students to refer to Activity Sheet N31 and to give examples of food rich in protein, carbohydrates, fats, minerals and water. Write these on the chart. Complete the chart by 'showing a variety of food samples and pictures of foods. Students identify which nutrient column each belongs in. For example:</p> <table border="1" data-bbox="1066 516 2020 959"> <thead> <tr> <th>protein</th> <th>carbohydrates</th> <th>fats</th> <th>minerals</th> <th>vitamins</th> <th>water</th> </tr> </thead> <tbody> <tr> <td>fish</td> <td>cereals</td> <td>lard</td> <td>liver</td> <td>carrots</td> <td>juices</td> </tr> <tr> <td>birds</td> <td>bread</td> <td>margarine</td> <td>pork</td> <td>squash</td> <td>lettuce</td> </tr> <tr> <td>meat</td> <td>bannock</td> <td>oil</td> <td>eggs</td> <td>pumpkin</td> <td>soups</td> </tr> <tr> <td>milk</td> <td>pasta</td> <td>mayonnaise</td> <td>green</td> <td>broccoli</td> <td>water</td> </tr> <tr> <td>cheese</td> <td>macaroni</td> <td>butter</td> <td>leafy</td> <td>apples</td> <td>broth</td> </tr> <tr> <td>peanut</td> <td>(*high fibre</td> <td>cream cheese</td> <td>vegetables</td> <td>oranges</td> <td></td> </tr> <tr> <td>butter</td> <td>contents</td> <td>sour cream</td> <td>milk</td> <td>cranberries</td> <td></td> </tr> <tr> <td></td> <td>recommended</td> <td></td> <td>cheese</td> <td>cabbage</td> <td></td> </tr> <tr> <td></td> <td>i.e. whole</td> <td></td> <td>fish soup</td> <td></td> <td></td> </tr> <tr> <td></td> <td>grain foods)</td> <td></td> <td>bones</td> <td></td> <td></td> </tr> <tr> <td></td> <td>fresh fruits</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>and vegetables</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Refer to Activity Sheet N32A. Refer to Activity Sheet N32B for answers.</p> <p>Call out a list of foods. Whenever students hear the name of a food rich in carbohydrates, they have to stand up. If it's not rich in carbohydrates, they sit down. List might include:</p> <ul style="list-style-type: none"> - apple - bread (c) - cheese - chicken leg - macaroni (c) - bannock (c) - banana - milk - spaghetti (c) - fish - porridge (c) - meat 	protein	carbohydrates	fats	minerals	vitamins	water	fish	cereals	lard	liver	carrots	juices	birds	bread	margarine	pork	squash	lettuce	meat	bannock	oil	eggs	pumpkin	soups	milk	pasta	mayonnaise	green	broccoli	water	cheese	macaroni	butter	leafy	apples	broth	peanut	(*high fibre	cream cheese	vegetables	oranges		butter	contents	sour cream	milk	cranberries			recommended		cheese	cabbage			i.e. whole		fish soup				grain foods)		bones				fresh fruits						and vegetables				
protein	carbohydrates	fats	minerals	vitamins	water																																																																											
fish	cereals	lard	liver	carrots	juices																																																																											
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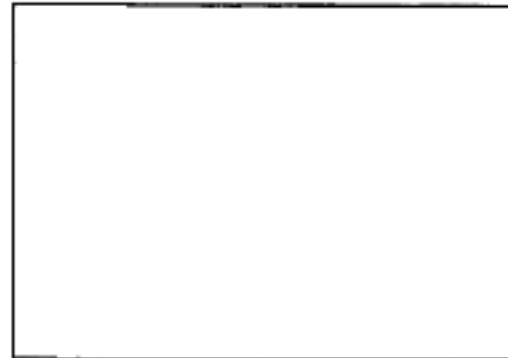
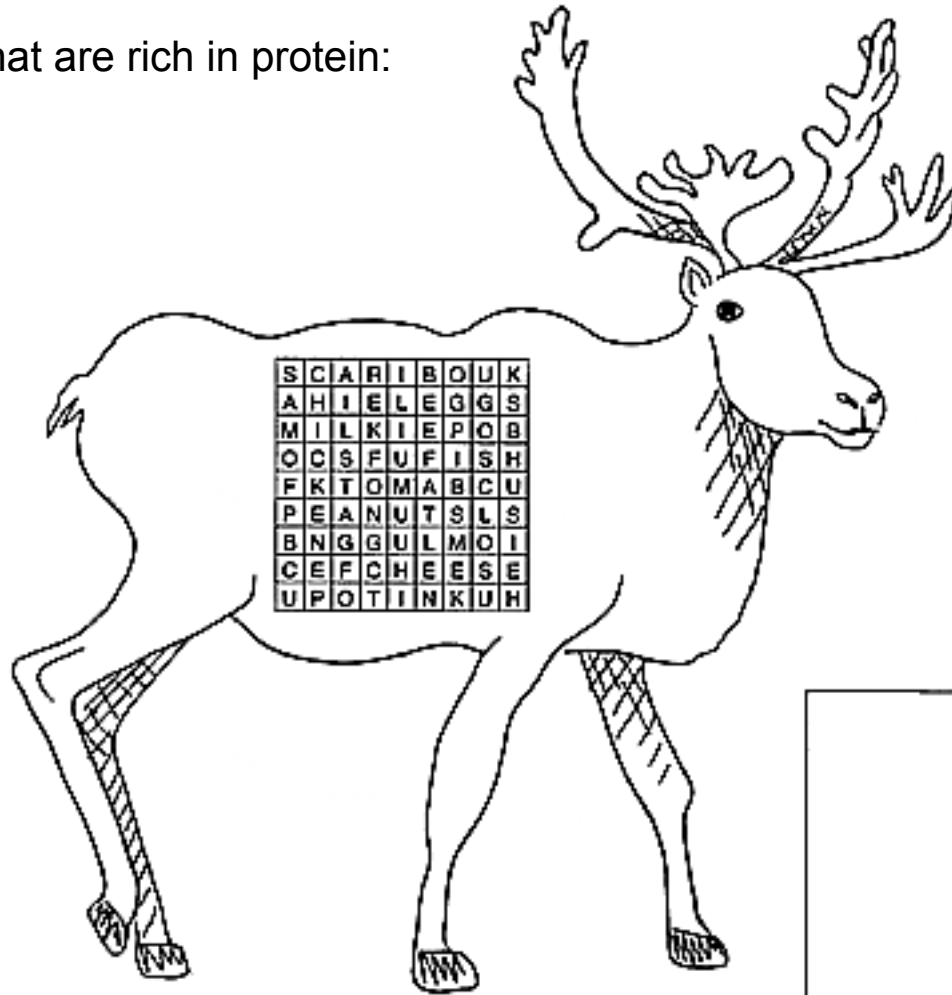
OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	4. Complete the Fatty Rich Foods worksheet.	Refer to Activity Sheet-N32C. Refer to Activity Sheet N32D for answers.

PROTEIN RICH FOODS

Circle these foods that are rich in protein:

eggs
 chicken
 peanuts
 caribou

cheese
 fish
 milk
 beef



Draw a picture of your favourite food that has protein in it.

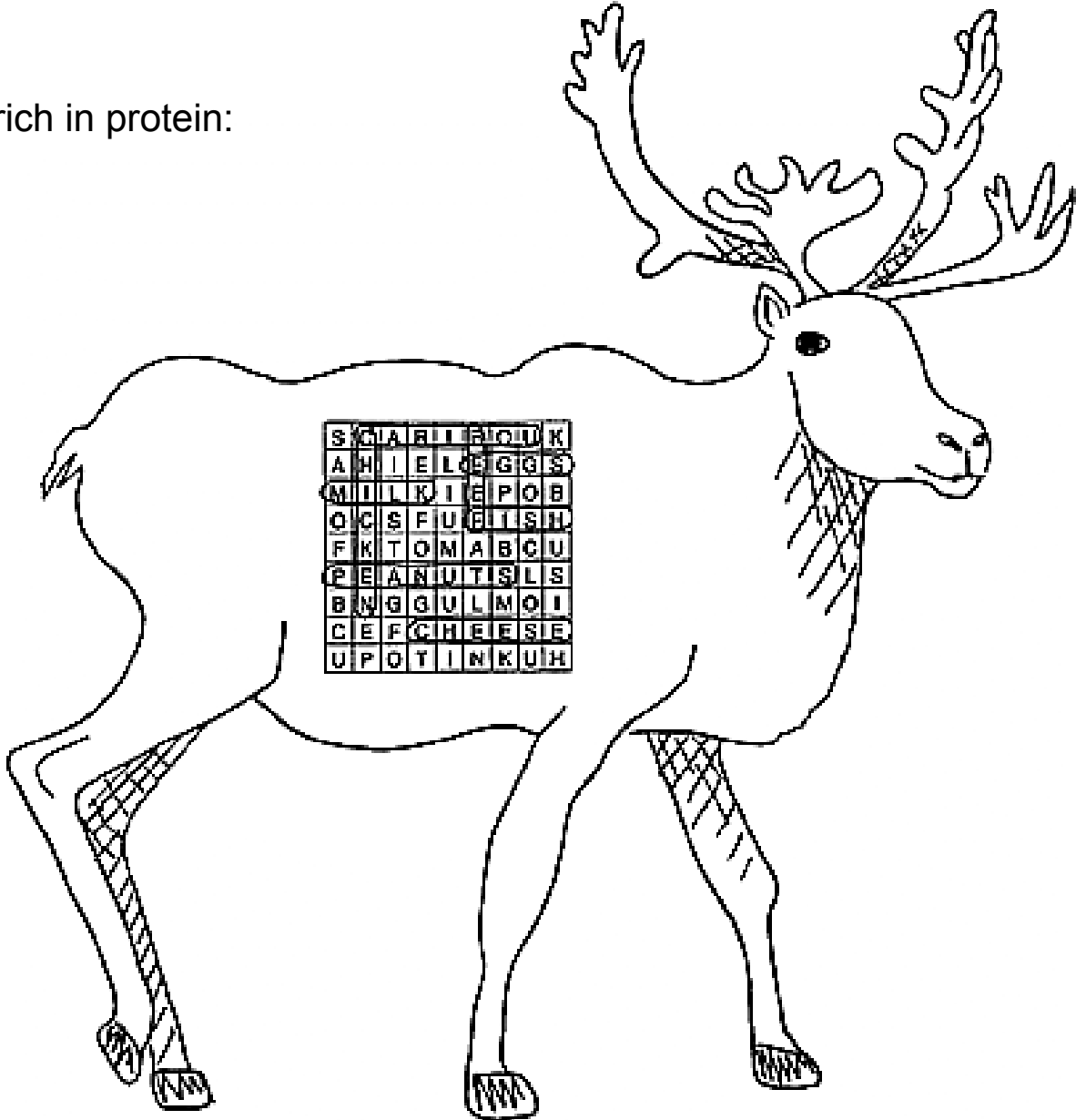
PROTEIN RICH FOODS

(Teacher Answer Guide)

Circle these foods that are rich in protein:

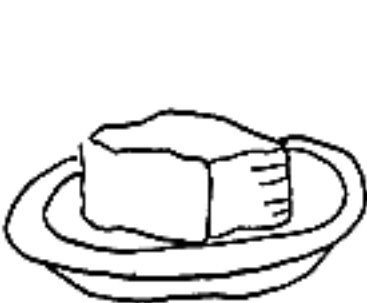
- eggs
- chicken
- peanuts
- caribou

- cheese
- fish
- milk
- beef



FATTY RICH FOODS

Look at these foods. Circle the foods that are rich in fats.



margarine



bacon



oil



butter



cereal



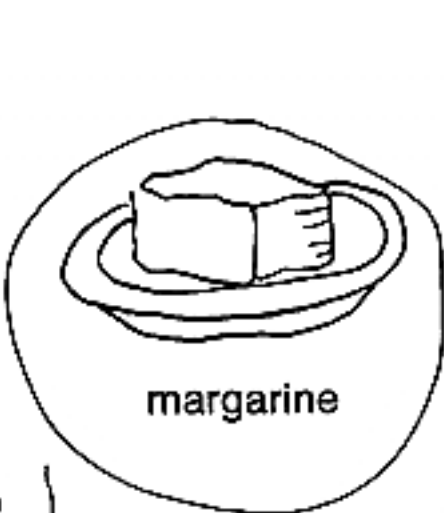
potato chips



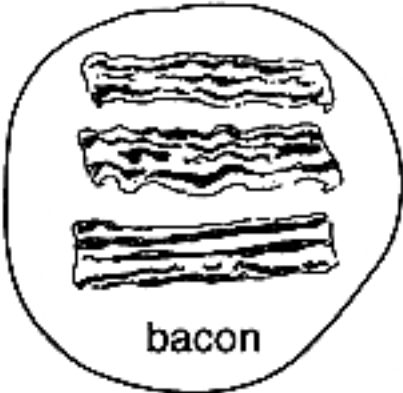
pears

FATTY RICH FOODS

(Teacher Answer Guide)



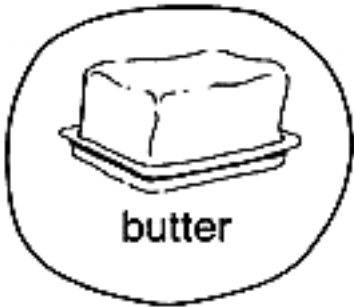
margarine



bacon



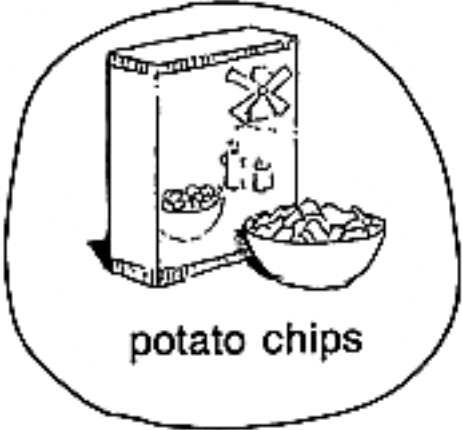
oil



butter



cereal



potato chips



pears

NUTRITION

GRADE: 4

LESSON: 3

THEME: FOOD CLASSIFICATION

CONCEPT: NUTRITIOUS SNACKS ARE HIGH IN NUTRIENT CONTENT AND LOW IN SUGAR, SALT AND FAT

PREPARATION:

1. Prepare a class set of Rate Our Snacks worksheet (Activity Sheet N33)
2. Sticky chocolate bar, apple or bannock, knife
3. Ingredients and equipment to prepare a nutritious snack for Student Activity 5

VOCABULARY: nutritious, non-nutritious

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) classify a variety of snacks as nutritious or non-nutritious	Students: 1. Make a list of favourite snack foods	Background information: Page N53 to N57 Snacks are foods eaten at times other than the three main meals. Snack foods may be nutritious or non-nutritious and are generally ready-to-eat or easily prepared. The concept of snacking varies greatly between families and cultures. In some cases food will always be available for continuous snacking between main meals. In others a snack might be one food item eaten after school. Brainstorm with students what their favourite snacks are. Make a list on the chalk board.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Distinguish between nutritious and non-nutritious snacks.</p> <p>3. Observe a demonstration of how sticky foods cling to the teeth.</p> <p>4. Complete the Rate Our Snacks worksheet.</p> <p>5. Choose, prepare and eat a healthy snack.</p>	<p>The following criteria should be used for identifying nutritious snacks: The food:</p> <ul style="list-style-type: none"> - belongs to one of the food groups (high in nutrients) - is low in sugar - is low in fat - is low in salt - is non-sticky (dentally safe) <p>Non-nutritious snacks are usually foods which:</p> <ul style="list-style-type: none"> - do not belong to one of the food groups - are high in sugar - are high in salt - are high in fat <p>Cut a sticky chocolate bar with a knife. These foods stick to the knife as they do to the teeth. Contrast this example by slicing an apple and bannock with a knife. Sticky foods cling to the teeth and cause tooth decay.</p> <p>Refer to Activity Sheet N33. For each snack listed in Activity 1, have students rate it according to the different criteria. Then decide if the snack is nutritious or non-nutritious. Review and discuss with the whole class.</p> <p>Select one nutritious snack from the list prepared in Student Activity 1. Prepare it with the class, and enjoy!</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) explain how nutritious snacks contribute to health	6. Explain how nutritious snacks contribute to health.	<p>Because a nutritious snack belongs to one or more food groups, nutritious snacks contribute to health. They make us:</p> <p>Grow - by building strong bones and teeth (milk and milk substitutes)</p> <p>Grow - by building and repairing muscles and tissues (meat, fish, birds and eggs)</p> <p>Glow - by helping keep the body, skin and eyes healthy (fruits and vegetables)</p> <p>Go - by providing energy for play and work (bannock, bread and cereals)</p>

RATE OUR SNACKS

Write down all the favourite snacks which the class listed. Write which food group (if any) each belongs to. Decide if they are sticky, sugary, salty or fatty and put a check mark. Then decide if it is nutritious or non-nutritious (the first one is done for you).

Favourite Snacks	Food Group	Sticky	Sugary	Salty	Fatty	Nutritious or Non-nutritious
1. Potato chips	none			✓	✓	non-nutritious

List five nutritious snacks. _____

NUTRITION

GRADE: 4

LESSON: 4

THEME: FOOD SELECTION

CONCEPT: VARIOUS FACTORS AFFECT FOOD CHOICES

PREPARATION: 1. Samples of different kinds of foods
2. Prepare a class set of the Food Choices worksheet (Activity Sheet N34)

VOCABULARY: customs, advertising, available, transport, packaging, convenience

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe some factors that affect food choices	Students: 1. Choose one food from a variety of foods.	Background information: Page - Have a variety of different kinds of foods available (including some unfamiliar foods) and have students choose one that they would like to try. Have them explain why they selected that one. Answers will probably include: <ul style="list-style-type: none">- because they like the taste of that particular food- because they don't like the taste of others- because they liked the look of it, etc.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Brainstorm factors that affect food choices.</p> <p>3. Complete the Food Choices worksheet.</p>	<p>Have students think about why we choose some foods and not others. Make a list of factors as they are identified and keep for use with Student Activity 4.</p> <p>Factors might include:</p> <ul style="list-style-type: none">- hunger- customs and traditions- family likes and dislikes- special occasions, e.g., turkey at Christmas- how much money a family spends on food- advertising, e.g., on TV- whether stores have the food, e.g., the Bay may not have pizza- unpredictable weather, e.g., frost in Florida damaging orange crops- high cost of transporting food North, e.g., food may be expensive- when food comes into the community, e.g., barge, air once a week- season of the year, e.g., berries may not be available in winter- hunting/food gathering habits- packaging, e.g., whether the food looks attractive- convenience foods- amount of time it takes to prepare the food- storage facilities, e.g., is there a freezer?- cooking appliances. <p>Discuss.</p> <p>Refer to Activity Sheet N34.</p> <p>Have students complete the worksheet and think about factors that affect their choices of food.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>4. Play What Food Am I?</p>	<p>Divide students into small groups. One student in each group thinks of a food and says, "I am from the (Bannock, Bread and Cereal Group)." The other students have to identify the food by asking up to 10 questions from the factors that affect food choices list developed in Student Activity 2; e.g.,</p> <ul style="list-style-type: none"> - Are you for special occasions? No - Are you expensive? No - Are you a convenience food? Yes - Are you a traditional food? Yes - Are you for sale at the store? Yes - Are you pilot biscuits? Yes <p>Students take turns thinking of and guessing foods.</p>

FOOD CHOICES

1. Name two foods you like: _____
2. Describe a family custom which relates to food: _____
3. Name one food which your whole family likes: _____
4. Name one food which your whole family dislikes: _____
5. Name a food you eat on a special occasion: _____
6. Name a food which you have seen advertised on TV or in a magazine you would like to buy: _____
7. Name a food you can't get in your community: _____
8. Name a fresh food you can't get in winter: _____
9. Name a food you can hunt or trap only at certain seasons: _____
10. Attach a label or package which you think looks nice and would make you buy the food: _____
11. Name a convenience food you like: _____
12. Name a food you like which takes a long time to prepare: _____

NUTRITION

GRADE: 4

LESSON: 5

THEME: FOOD APPRECIATION

CONCEPT: A WILLINGNESS TO TASTE NUTRITIOUS SNACKS PROMOTES FOOD APPRECIATION AND HEALTH

- PREPARATION:
1. Ingredients for nutritious snacks
 2. Prepare a class set of Nutritious Snack recipes or write out on individual cards (Activity Sheet N35)
 3. Materials for mobile or collage (labels, drawings, etc.)
 4. Prepare a class set of The Baby Prune song (Activity Sheet N36)
-

VOCABULARY: customs, advertising, available, transport, packaging, convenience

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) prepare nutritious snacks	Students: 1. Prepare a peanut butter-banana milkshake. 2. Prepare fruit flavoured popsicles. 3. Prepare a vegetable dip and vegetables.	Background information: Page N53 to N57 Refer to Activity Sheet N35. Divide class into small groups. Students can either prepare enough just for their own group to taste and then proceed to a different snack, or else each group can prepare enough for the class to taste. Refer to Activity Sheet N35. Refer to Activity Sheet N35.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES					
ii) demonstrate a willingness to taste nutritious snacks	4. Prepare stuffed celery and stuffed prunes. 5. Prepare trail mix. 6. Participate in a Nutritious Snack Party. 7. Describe the nutritious snacks.	Refer to Activity Sheet N35. Refer to Activity Sheet N35. Prepare five snack stations and have students sample the nutritious snacks. At each snack station, have a sheet of flip chart paper. As students taste each snack, they have to write down one word to describe it, e.g.. <table border="1" data-bbox="1325 703 1671 889" style="margin-left: auto; margin-right: auto;"> <tr><td>milk shake</td></tr> <tr><td>smooth</td></tr> <tr><td>creamy</td></tr> <tr><td>delicious</td></tr> <tr><td>yukky!</td></tr> </table> Review with the whole class.	milk shake	smooth	creamy	delicious	yukky!
milk shake							
smooth							
creamy							
delicious							
yukky!							
iii) state the importance of nutritious snacks	8. Learn and sing "The Baby Prune" song. 9. List reasons for eating nutritious snack foods.	Refer to Activity Sheet N36. Reinforce the importance of developing habits of eating snack foods that belong to a food group. These foods supply energy and nutrients for a healthy body, i.e., Grow, Glow and Go.					

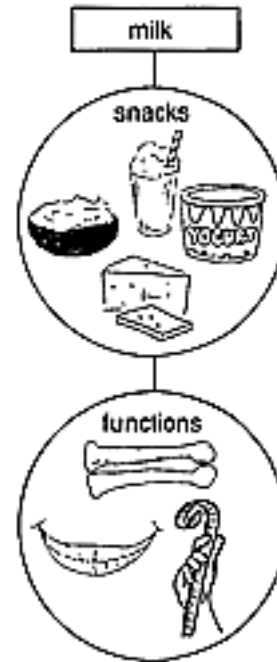
OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

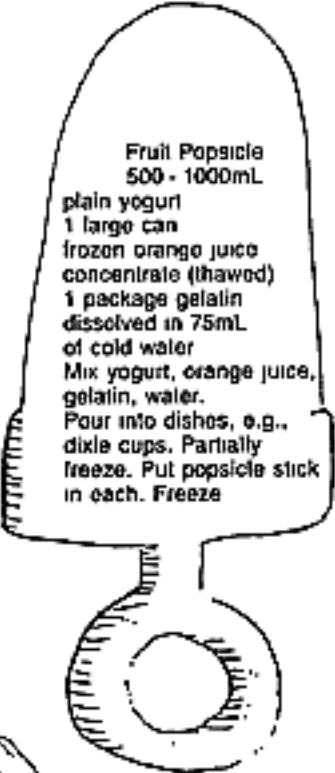
10. Make a mobile/collage of nutritious snacks from each food group.

Divide the class into four groups. Have each group take one of the food groups and make a mobile/collage of nutritious snacks and their functions for that food group. Students can use labels, packages, drawings, recipes, etc.

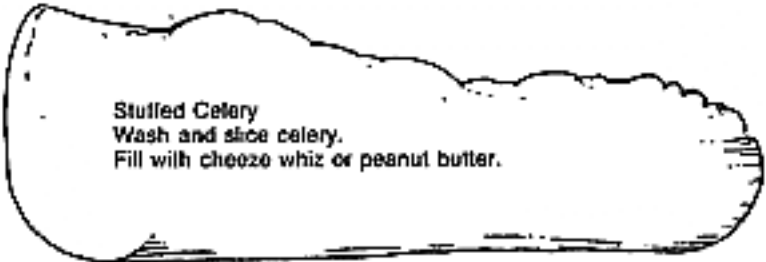


Display mobiles or collages in the classroom.

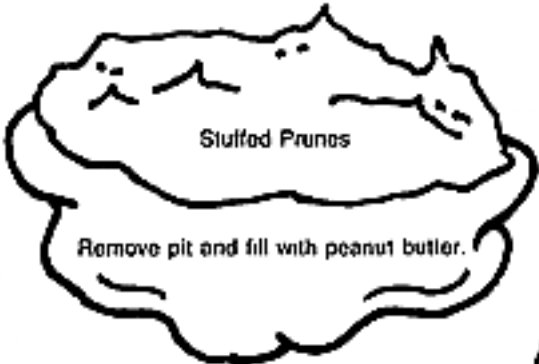
NUTRITIOUS SNACK RECIPES



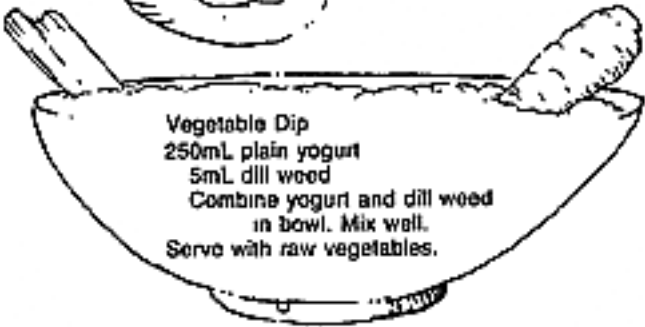
Fruit Popsicle
 500 - 1000mL
 plain yogurt
 1 large can
 frozen orange juice
 concentrate (thawed)
 1 package gelatin
 dissolved in 75mL
 of cold water
 Mix yogurt, orange juice,
 gelatin, water.
 Pour into dishes, e.g.,
 Dixie cups. Partially
 freeze. Put popsicle stick
 in each. Freeze



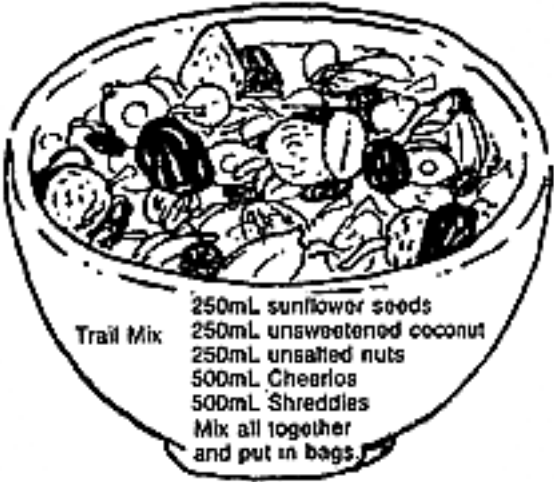
Stuffed Celery
 Wash and slice celery.
 Fill with cheese whiz or peanut butter.



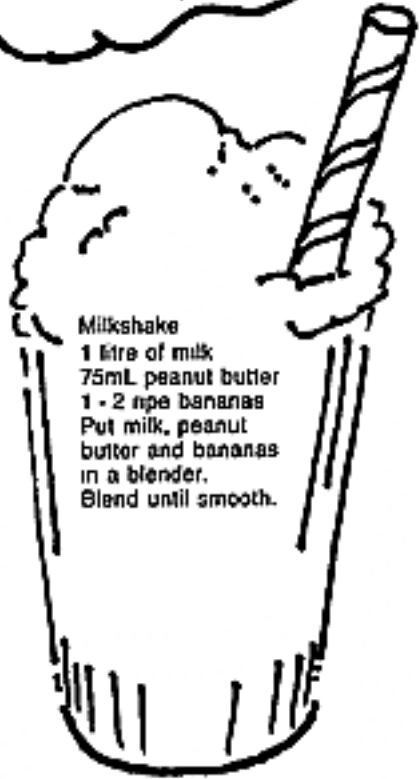
Stuffed Prunes
 Remove pit and fill with peanut butter.



Vegetable Dip
 250mL plain yogurt
 5mL dill weed
 Combine yogurt and dill weed
 in bowl. Mix well.
 Serve with raw vegetables.



Trail Mix
 250mL sunflower seeds
 250mL unsweetened coconut
 250mL unsalted nuts
 500mL Cheerios
 500mL Shreddies
 Mix all together
 and put in bags.



Milkshake
 1 litre of milk
 75mL peanut butter
 1 - 2 ripe bananas
 Put milk, peanut
 butter and bananas
 in a blender.
 Blend until smooth.

THE BABY PRUNE

No matter how young a prune may be
He's always full of wrinkles.
A baby prune is like his dad
But he's not wrinkled quite as bad.
We have wrinkles on our face
But a prune has wrinkles every place!
No matter how young a prune may be
He's always full of wrinkles.

Same song, second verse,
A little bit louder
And a little bit worse.

Reprinted from "Kids Can Cook"

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GRADE 4

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

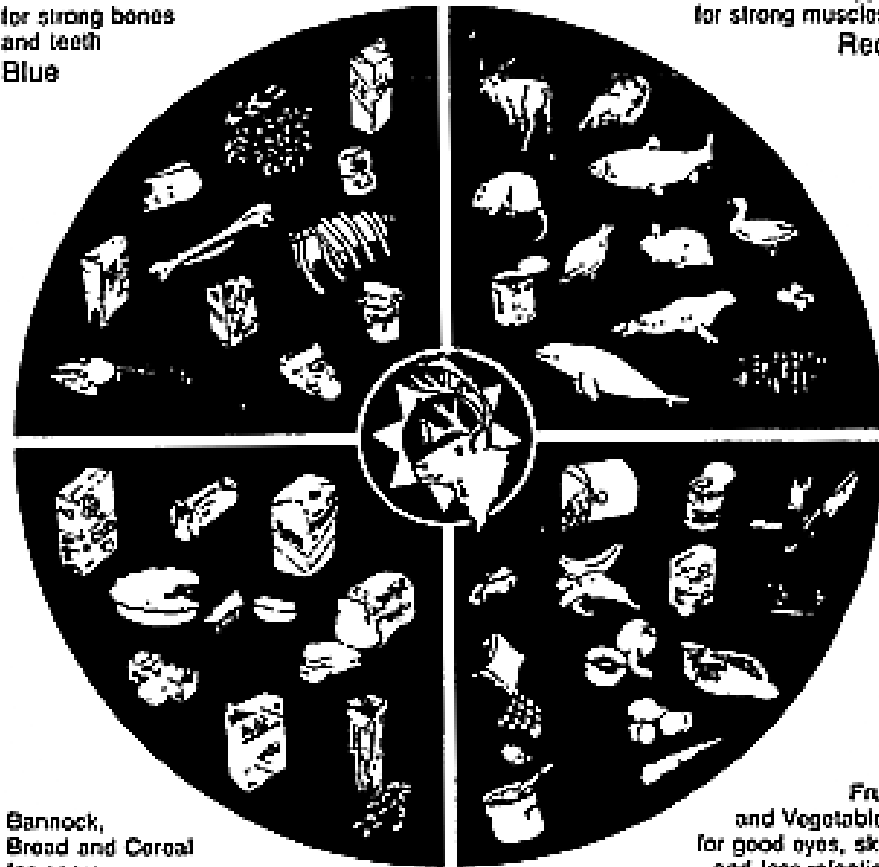
animal brains
 bannock*
 bone marrow
 bread *
 flour *
 liver
 macaroni *
 muffins
 muktuk
 oatmeal *
 pancakes
 pilot biscuits *
 rice *
 soda crackers *
 spaghetti *
 whole wheat
 wild rice

N.W.T. FOOD GUIDE

Eat foods from each group every day for health.

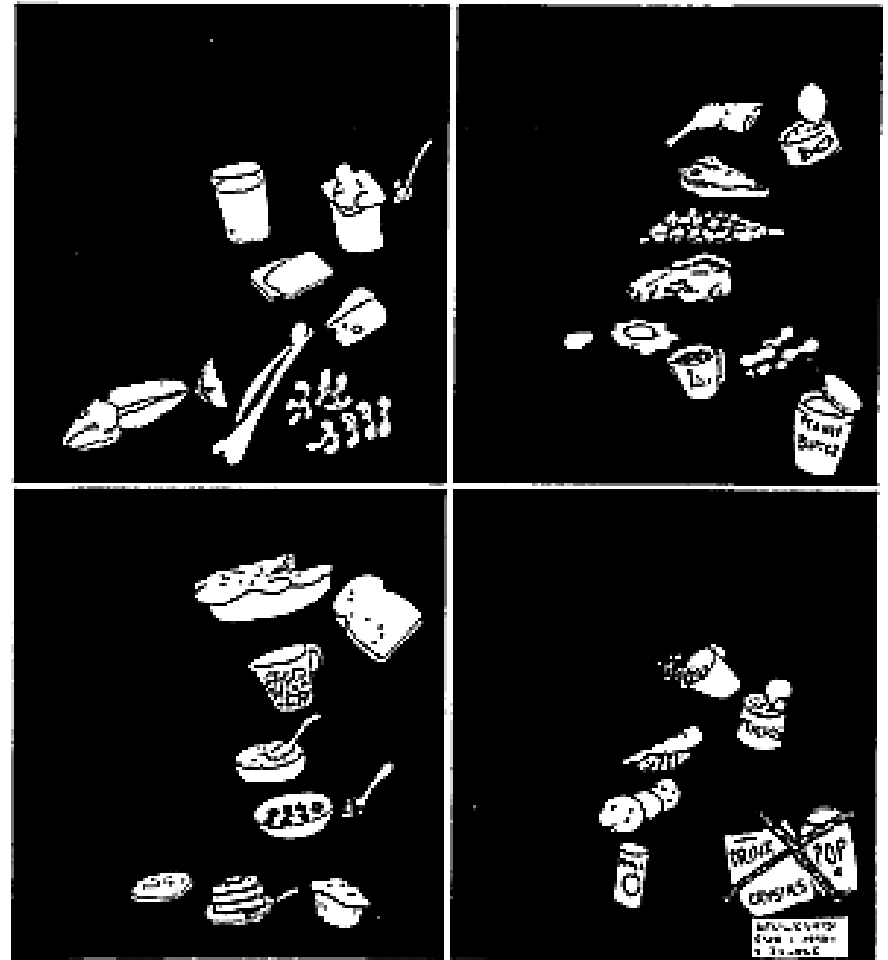
Milk and milk substitutes
for strong bones
and teeth
Blue

Meat, Fish, Birds and Eggs
for strong muscles
Red



Bannock,
Bread and Cereal
for energy
Orange

Fruit
and Vegetables
for good eyes, skin
and less infection
Green



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 at:

- 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, home-made; 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, sugar-free soft drinks, sugar-free 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 (the word "juice" must 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, fried, frozen or smoked; hard cooked egg; peanut butter; nuts and seeds - sunflower and pumpkin; cheese; meat - sliced, cold, cooked, canned, dried, smoked.



COMBINATION SNACKS

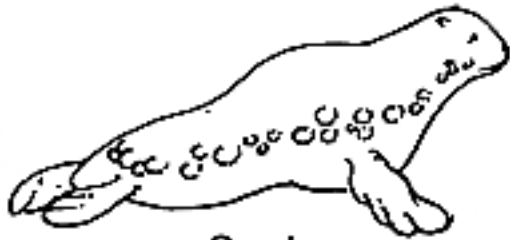
Bannock with peanut butter, cheese, berries, raisins, etc.; celery sticks with peanut butter or cheese; mini pizza (English muffin or roll with tomato or spaghetti sauce and cheese); peanut butter on toast or bread; cheese on toast or bread; cheese and crackers; cheese and fruit; raw fruits or vegetables with a yogurt dip; cereal with milk and fruit.



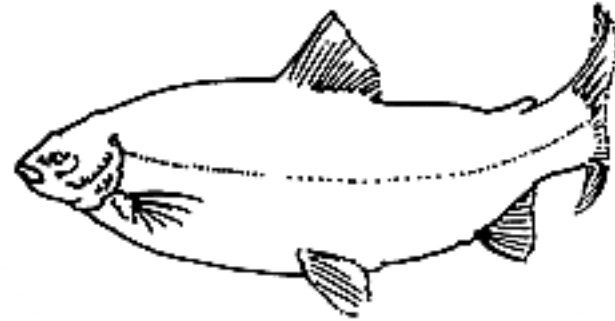
Snacks can be served with unsweetened fruit juice or milk as a beverage. To quench thirst, water is the best!

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Seal



Fish



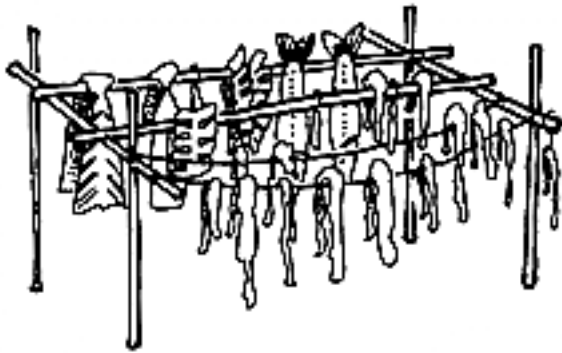
Rabbit



Whale

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

Leader Nutrients: Protein, Iron



Dried Meat and Fish



Caribou



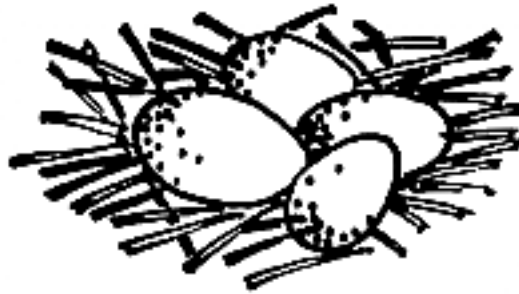
Muskrat

COUNTRY FOODS FROM THE MEAT, FISH, BIRDS AND EGGS AND ALL EDIBLE PARTS GROUP

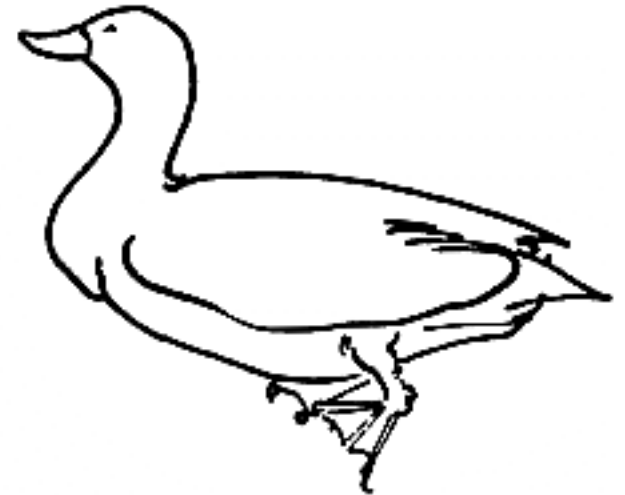
Leader Nutrients: Protein, Iron



Ptarmigan



Eggs



Duck

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



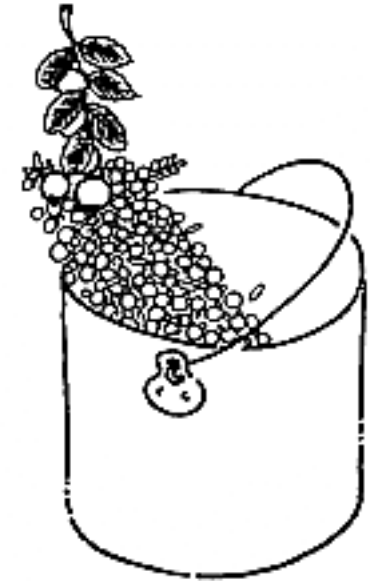
Seaweed



Clover



Dock



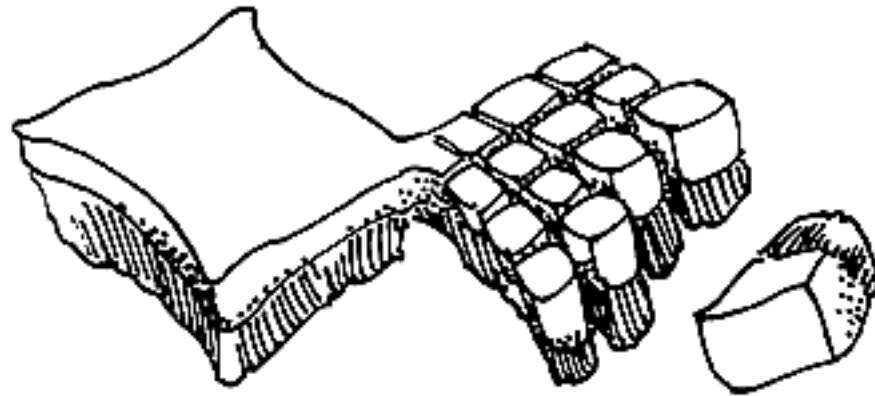
Berries

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



Seal Fat

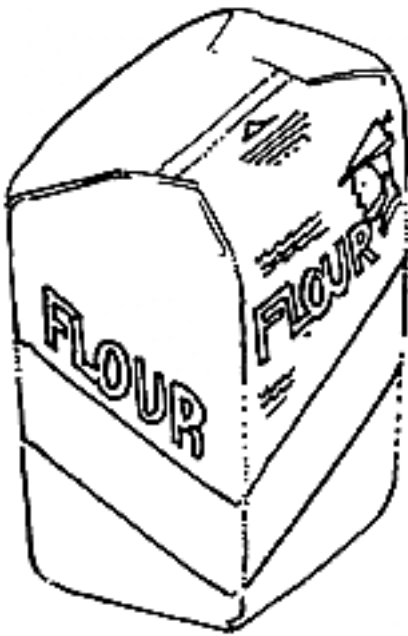


Muktuk

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



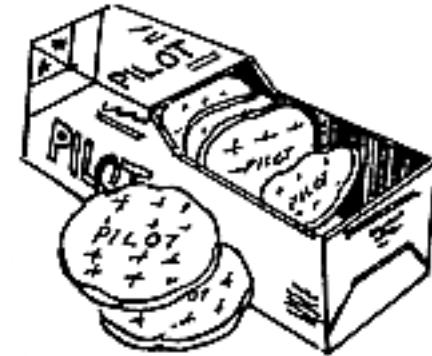
Flour



Oats



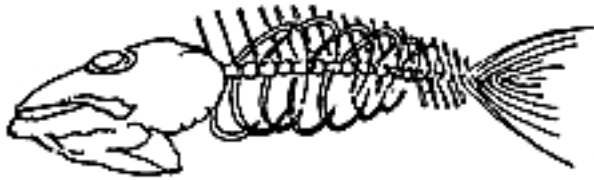
Bannock



Pilot Biscuits

COUNTRY FOODS FROM THE MILK AND MILK SUBSTITUTES GROUP

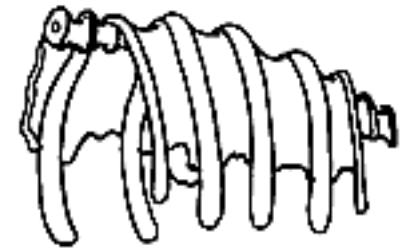
Leader Nutrient: Calcium



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 812 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.

GRADE 4

DENTAL HEALTH

DENTAL HEALTH

GRADE 4

LESSON NO.	THEME	CONCEPT	OBJECTIVES
			Students will be able to:
1	STRUCTURE AND FUNCTION	The structure of a tooth is related to its function	i) label the structure of a tooth ii) state the functions of each part of a tooth iii) name the four tooth groups and their functions in a mixed set of teeth
2	ORAL HYGIENE	Regular practice of effective oral hygiene skills promotes dental health	i) illustrate how effective oral hygiene skills promote dental health ii) identify behaviours that promote healthy teeth for a lifetime
3	FACTORS AFFECTING DENTAL HEALTH	Positive behaviours around hazards can prevent dental injuries	i) identify dental health hazards at home, at school and in the community ii) explain safe behaviours that prevent dental injuries at home, at school and in the community
4	DENTAL DISEASE	Tooth decay is a dental disease that can be prevented	i) describe the process of tooth decay ii) describe the importance of fluoride
5	DENTAL SERVICES AND PRODUCTS	Dental health workers play an important role in dental health care	i) describe how dental health workers treat tooth decay and remove plaque




DENTAL HEALTH**GRADE: 4****LESSON: 1****THEME: STRUCTURE AND FUNCTION**

CONCEPT: THE STRUCTURE OF A TOOTH IS RELATED TO ITS FUNCTION

- PREPARATION:**
- 1 Prepare an overhead transparency or a poster size model of A Molar Tooth (Activity Sheet D28)
 - 2 Prepare word cards and sentence strips for Student Activities 2 and 3
 - 3 Prepare a class set of Parts and Functions Of A Molar Tooth (Activity Sheet D29)
 - 4 Hand mirrors to view teeth
 - 5 Prepare an overhead transparency of Types of Teeth (Activity Sheet D30), or obtain a large dentiform model
 - 6 Prepare a class set of My Mouth and Teeth (Activity Sheet D31 A, D31 B)
 - 7 Prepare a class set of Secret Message (Activity Sheet D32A - Teacher Answer Guide D32B)
-

VOCABULARY: mixed set of teeth, incisor, premolar, cuspid, molar, crown, enamel, root, anchor, function

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) label the structure of a tooth	Students: 1. Name and locate the main parts of a tooth.	Background Information Page - D66 to D69, D72 Refer to Activity Sheet D28. Use the overhead transparency to discuss the three main parts of a tooth - crown, enamel and root.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
ii) state the functions of each part of a tooth	2. Explain the functions of each part of a tooth.	Develop an experience chart, as shown. Prior to class write each word or sentence on a separate card or sentence strip. (These will be reused for Student Activity 3.)		
		Part Crown 	Where is it? It is the part of the tooth you can see. It is above the gums.	What does it do? It helps you chew food. It helps you say words properly. It gives you a nice smile. It spaces your teeth properly.
		Enamel 	It is the outside cover of the tooth. It is hard and white.	It protects the inside of the tooth.
		Root 	It is the part of the tooth you can't see. It is below the gums.	It anchors the tooth to the jawbone.
		" eg , words with "th", "s", "l"		

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES															
iii) name the four tooth groups and their functions in a mixed set of teeth	3. Match each tooth part with its location and function.	<p>Randomly distribute each word card or sentence strip from Student Activity 2, making sure each student can read his/her card/strip. Have students form themselves into three groups - "crown", "enamel" and "root", according to the card/strip each has. Each group reads its cards, while other students check to ensure proper groupings.</p> <p>Repeat the activity two or three times.</p>															
	4. Complete Parts and Functions Of A Molar Tooth worksheet.	Refer to Activity Sheet D29.															
	5. Observe their teeth and state that not all teeth are the same size and shape.	<p>A mixed set of teeth has some baby teeth and some permanent teeth. Have students work in pairs to observe their teeth in a hand mirror. They should be able to state that:</p> <ul style="list-style-type: none"> - the front teeth are thin - the side teeth are more pointed - the back teeth are big and flat <p>Explain that there are different types of teeth for different purposes.</p> <p>Refer to Activity Sheet D30.</p>															
	6. Name the four tooth groups and their functions.	Use the overhead transparency to discuss the tooth groups and their functions. Alternatively, use a large dentiform model, if available															
		<table border="1"> <thead> <tr> <th data-bbox="940 1222 1457 1260">Group</th> <th data-bbox="1457 1222 1738 1260">What they do</th> <th data-bbox="1738 1222 2018 1260">Where they are</th> </tr> </thead> <tbody> <tr> <td data-bbox="940 1260 1457 1297">incisors</td> <td data-bbox="1457 1260 1738 1297">- cut</td> <td data-bbox="1738 1260 2018 1297">- front</td> </tr> <tr> <td data-bbox="940 1297 1457 1334">cuspids</td> <td data-bbox="1457 1297 1738 1334">- tear, grasp</td> <td data-bbox="1738 1297 2018 1334">- side</td> </tr> <tr> <td data-bbox="940 1334 1457 1372">premolar*</td> <td data-bbox="1457 1334 1738 1372">- crush, grind</td> <td data-bbox="1738 1334 2018 1372">- back</td> </tr> <tr> <td data-bbox="940 1372 1457 1409">molar</td> <td data-bbox="1457 1372 1738 1409">- grind</td> <td data-bbox="1738 1372 2018 1409">- back</td> </tr> </tbody> </table>	Group	What they do	Where they are	incisors	- cut	- front	cuspids	- tear, grasp	- side	premolar*	- crush, grind	- back	molar	- grind	- back
Group	What they do	Where they are															
incisors	- cut	- front															
cuspids	- tear, grasp	- side															
premolar*	- crush, grind	- back															
molar	- grind	- back															
		* Premolars make up part of the permanent set of teeth. They erupt around age 10-12															

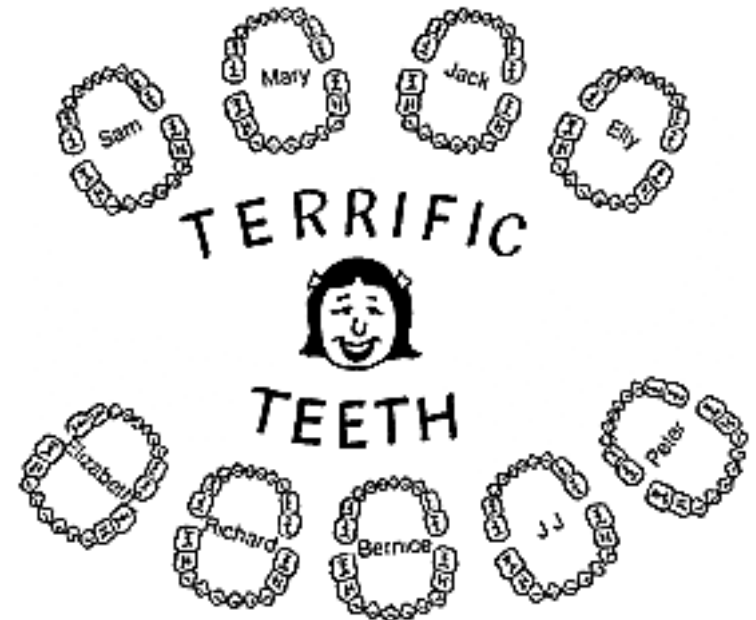
OBJECTIVES**STUDENT ACTIVITIES****TEACHER NOTES**

7. Complete My Mouth and Teeth worksheet.

Refer to Activity Sheet D31 A and D31B.

Have students work in pairs with a mirror to code the different types of teeth in their mouths.

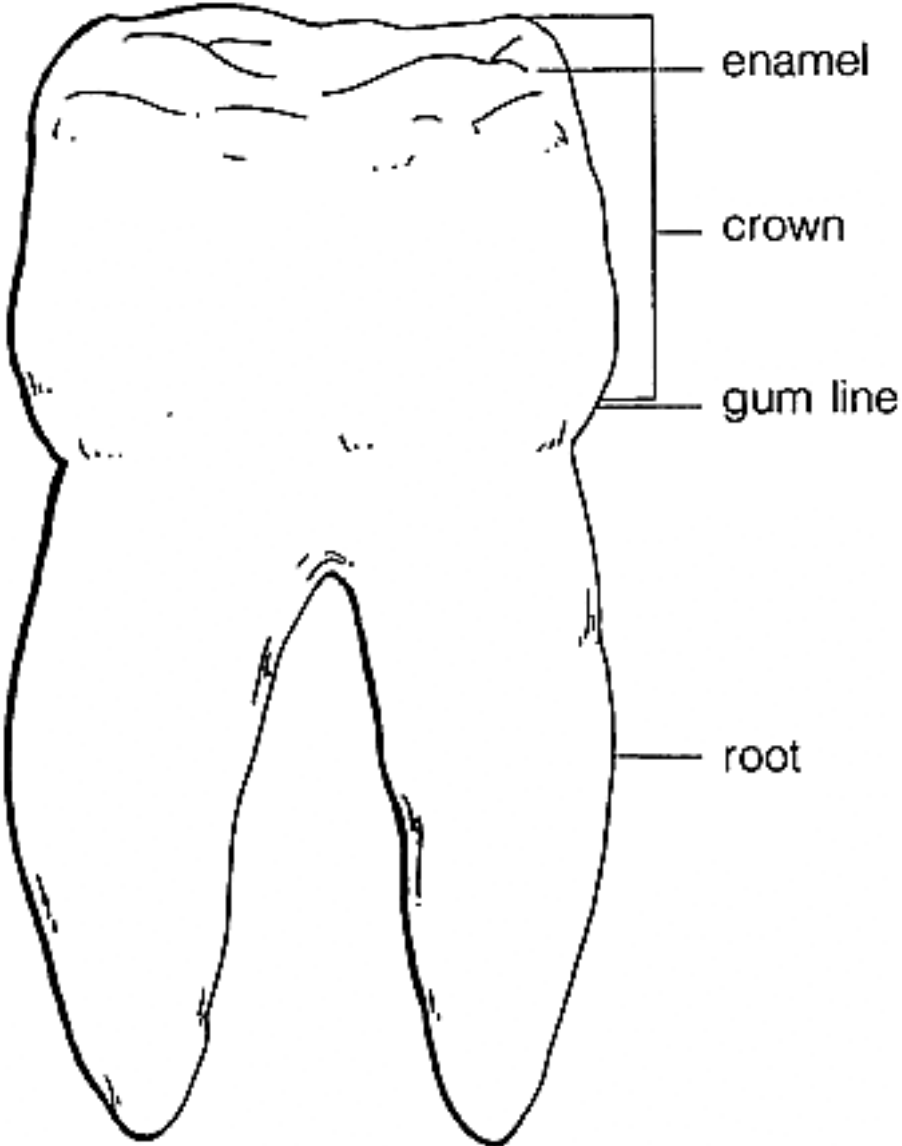
Display student teeth charts on a bulletin board around a smiling face with the heading Terrific Teeth.



8. Complete Secret Message work sheet.

Refer to Activity Sheet D32A and answer guide D32B.

A MOLAR TOOTH



PARTS AND FUNCTIONS OF A MOLAR TOOTH

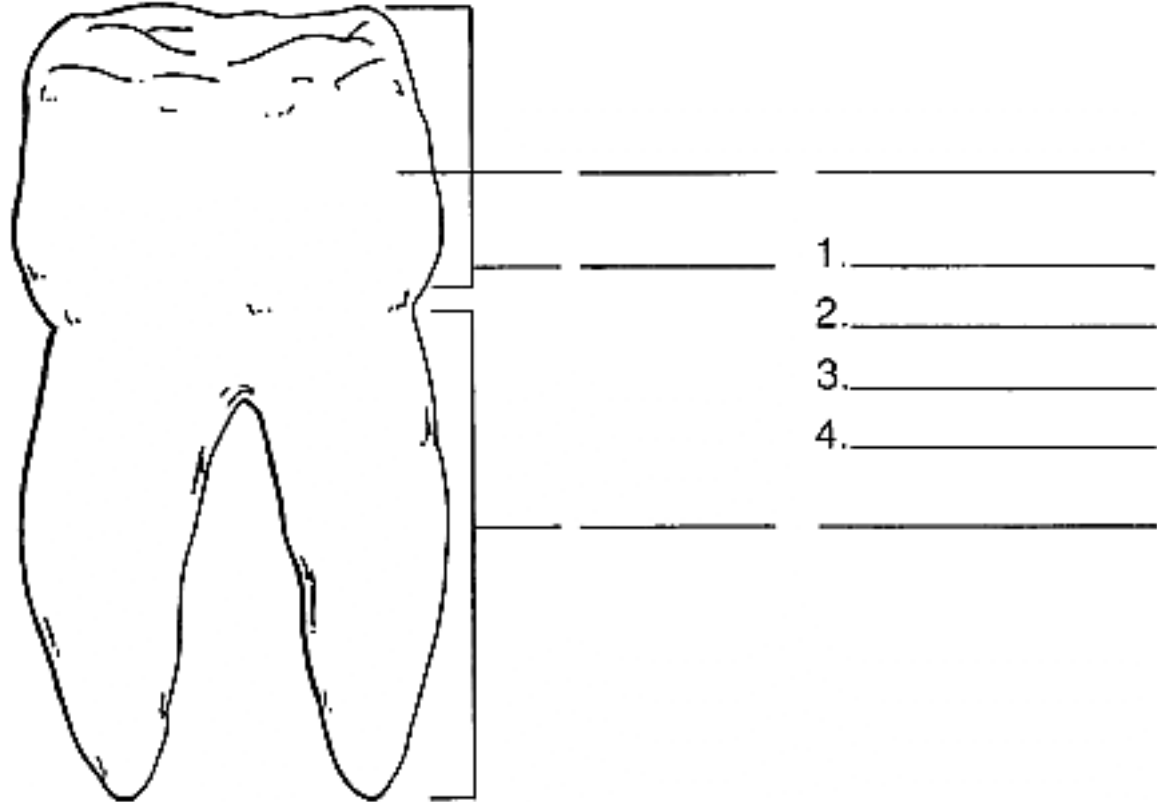
Instructions:

1. Label the three parts of this tooth.

name

function

2. Tell what each part does.



TYPES OF TEETH



Incisors = I



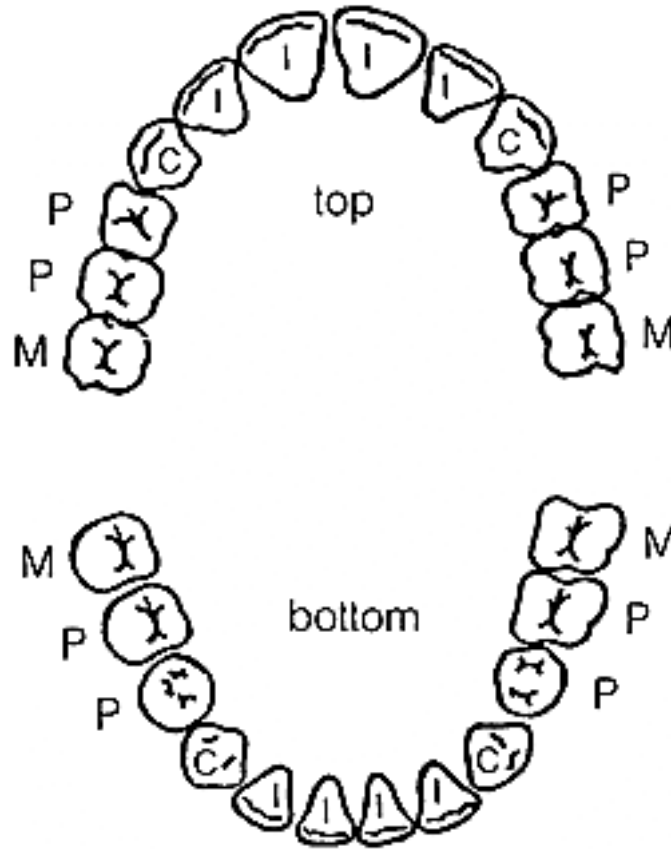
Cuspids = C



Molars = M



Premolars = P



name:

incisor

cuspid

premolar

molar

function:

cut

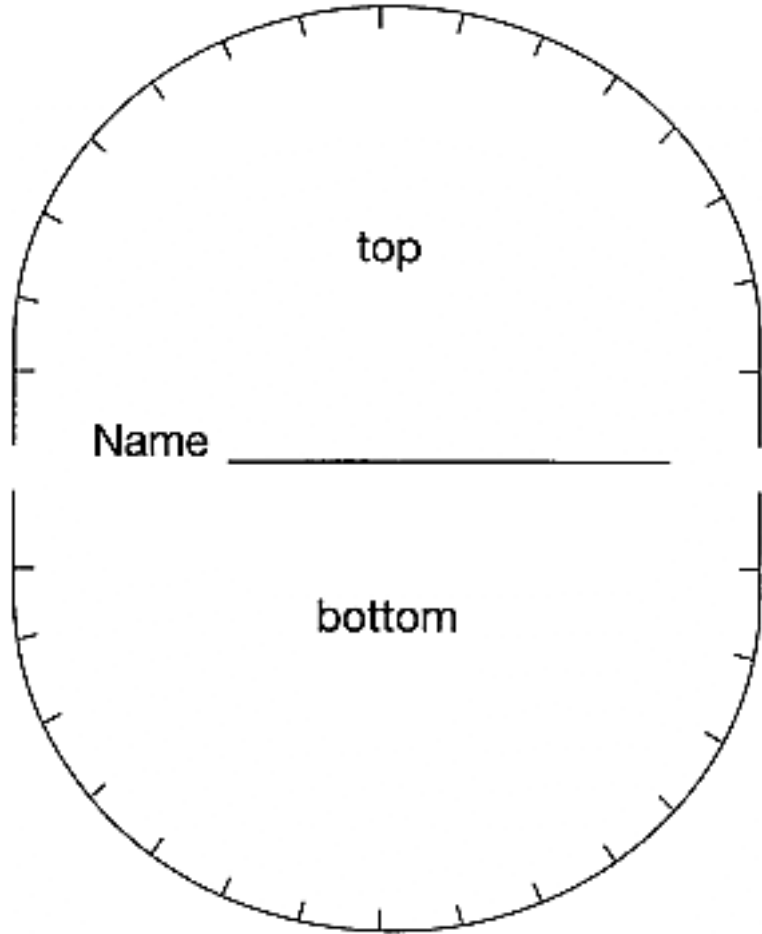
tear
grasp

crush
grind

grind

MY MOUTH AND TEETH

Use this outline to record the different types of teeth in your mouth.



I have _____ incisors.
I have _____ cuspids.
I have _____ premolars.
I have _____ molars.
_____ teeth are missing.

MY MOUTH AND TEETH cont'd

Directions

- 1) Cut out the number of each tooth type in your mouth and glue each one onto the mouth outline.
- 2) Leave blank spaces if teeth are missing.
- 3) Colour teeth using these colours -
incisor - red
cuspid - blue
premolar - yellow
molar - green

Incisors



Cuspids



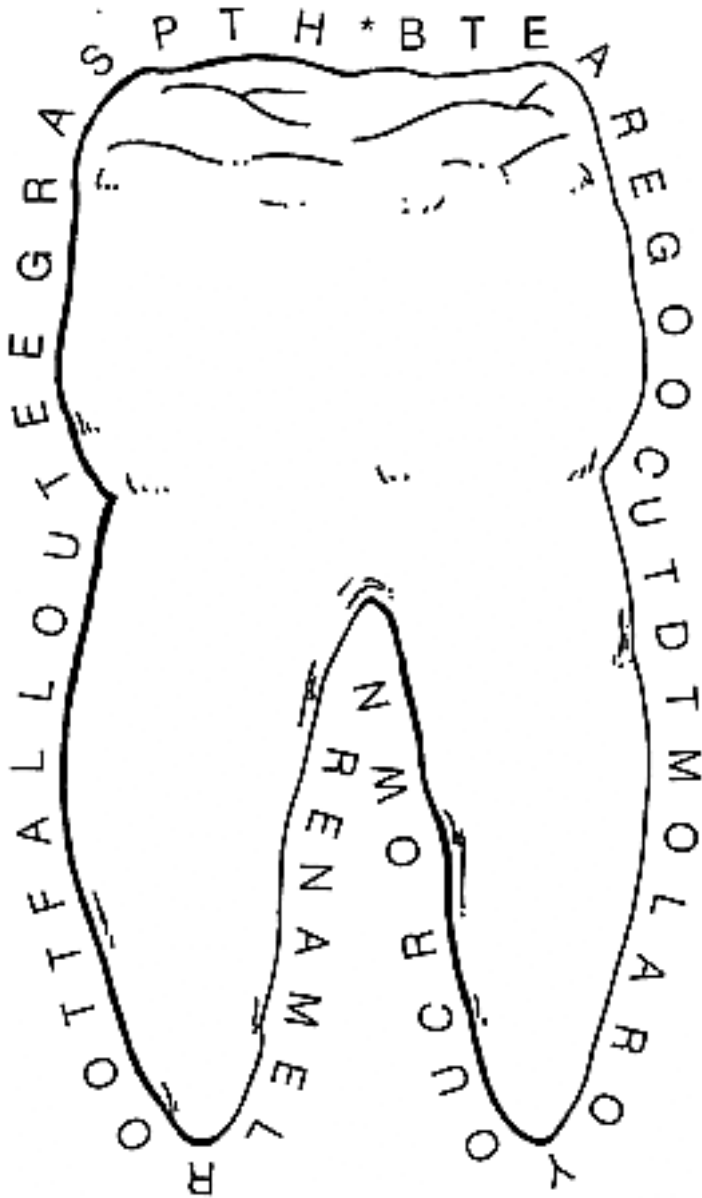
Premolars



Molars



SECRET MESSAGE



Directions

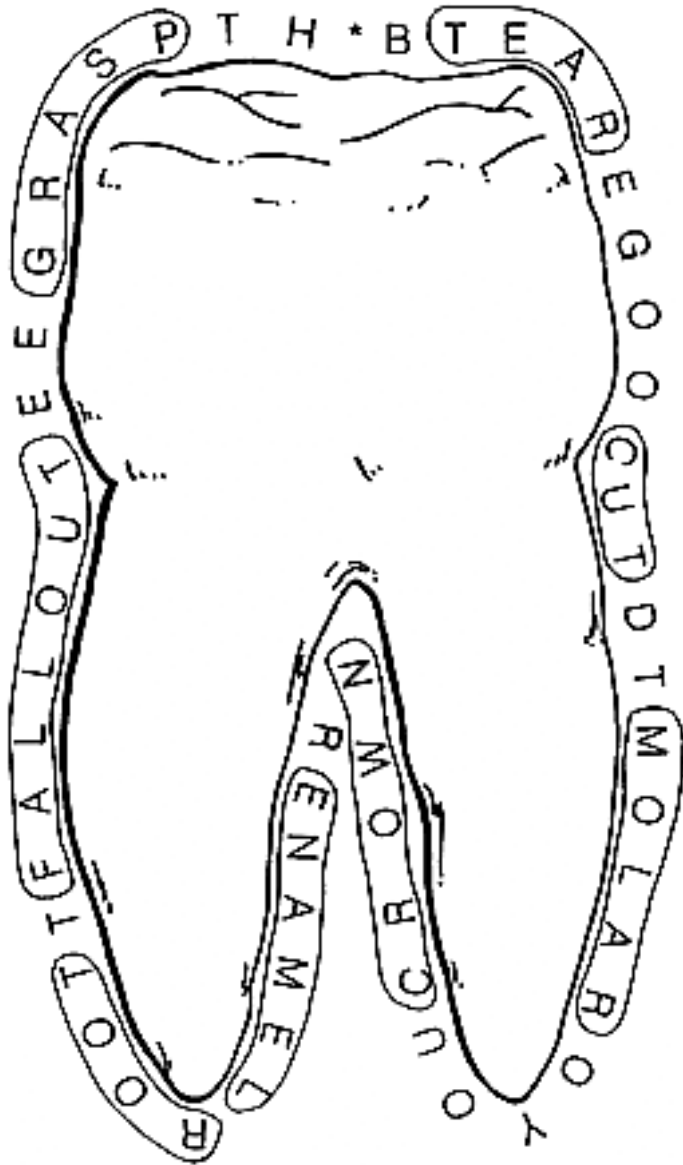
1. Find the secret message by answering the following questions.
2. Circle answers around the tooth.
3. The remaining uncircled letters fit into the blanks
4. Start at the star and go clockwise.

Questions

1. These teeth are flat and wide so they can grind.
2. Anchors the tooth.
3. Protects the tooth.
4. Gum disease can make teeth loosen and ____.
5. Cuspids do two things to our food.
6. The part of the tooth above the gum.
7. Incisors do this when we bite.

SECRET MESSAGE

(Teacher Answer Guide)



Directions

1. Find the secret message by answering the following questions.
2. Circle answers around the tooth.
3. The remaining uncircled letters fit into the blanks
4. Start at the star and go clockwise

 B E G O O D T O Y O U R
 T E E T H

Questions

1. These teeth are flat and wide so they can grind.
2. Anchors the tooth. (root)
3. Protects the tooth (enamel)
4. Gum disease can make teeth loosen and (fall out)
5. Cuspids do two things to our food (tear, grasp)
6. The part of the tooth above the gum (crown)
7. Incisors do this when we bite (cut)

DENTAL HEALTH**GRADE: 4****LESSON: 2****THEME: ORAL HYGIENE**

CONCEPT: REGULAR PRACTICE OF EFFECTIVE ORAL HYGIENE SKILLS PROMOTES DENTAL HEALTH

PREPARATION: 1. Chocolate cookies, carrot sticks, toothbrushes, toothpaste, dental floss, water in cups, disclosing tablets
2. Props and pictures for Student Activity 3
3. Puppet props for Saved By The Brush (Activity Sheet D33)
4. Prepare several copies of Saved By The Brush (Activity Sheet D33)

VOCABULARY: disclosing tablets, oral hygiene, plaque, control group, food debris, flossing, observations, effectiveness

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) illustrate how effective oral hygiene skills promote dental health	Students: 1. Participate in an experiment to determine the most effective method of removing food debris from the teeth.	Background Information: Page - D70 to D71 Divide the students into six groups. Groups: 1. brushing with toothpaste 2. flossing 3. rinsing with water 4. eating carrot sticks 5. brushing with toothpaste and flossing 6. control group (does nothing) Have students eat a chocolate cookie. Students then perform the assigned method for 2 minutes.

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

2. Practise proper toothbrushing and flossing skills.

Have students use a disclosing tablet to stain food debris red.

Spit out remaining dye in a sink.


Record student observations on an experience chart as illustrated.

Method	observations	effectiveness
brushing with toothpaste		
flossing		
rinsing with water		
etc.		

Review the observations and draw conclusions. Number the methods in order of effectiveness.

Note: The best method of removing food debris may not be observed as the best, due to individual improper brushing and flossing techniques or because some students may have brushed and flossed thoroughly prior to class.

Review proper brushing and flossing techniques. It is recommended that daily brushing and flossing occur at school to support the home in promoting positive dental health behaviours.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES	
ii) identify behaviours that promote healthy teeth for a lifetime	3. List behaviours that promote healthy teeth for a lifetime.	Brainstorm healthy dental behaviours using props and pictures to stimulate student responses. Record on an experience chart as shown.	
		Prop or Picture	Ways To Keep Your Teeth Healthy
		Picture of dentist	Visit a dentist or dental health worker if you injure your teeth or mouth
		Calendar	Visit a dentist or dental health worker twice a year for check-ups
		Toothbrush/Floss	Floss and brush teeth really well every day
		Toothpaste (bearing CDA seal)	Use products which have the Canadian Dental Association seal on them. 
		Food Samples	Eat foods that are low in sugar and don't stick to the teeth. Don't eat sweet, sticky foods
		Playground Equipment	Watch your step and look where you're going Don't push or trip other people
Worn out toothbrush	Get a new toothbrush when your old one is worn out		
Picture of hockey goalie with mask	Wear proper equipment when playing sports		

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<ol style="list-style-type: none"> 4. Prepare a class mural illustrating behaviours that promote healthy teeth for a lifetime. 5. Learn and perform Saved By The Brush puppet play. 	<p>Have each student draw a behaviour that promotes healthy teeth for a lifetime. Make them into a class collage.</p> <p>Refer to Activity Sheet D33.</p> <p>Divide the class into two groups (or work with the class as a whole). Have students practise the play and set the props and stage. Perform for children in earlier grades.</p> <p>Have students write out the verses of the chorus on chart paper to teach to the audience. The audience can also learn the actions being performed by the puppets.</p>

PUPPET PLAY "SAVED BY THE BRUSH"

The characters in the play are:

HERBIE HYGIENE: A boy with clean teeth (YEAH!)

BETH BRUSHIN'FLOSS: A girl with clean teeth (YEAH!)

and

PETER PLAQUE: A boy who never brushed his teeth (BOO!)

CHORUS

The scene is Herbie Hygiene and Beth Brushin'Floss cleaning and flossing their teeth.

CHORUS:

Brush, brush, brush we must

Brush our teeth without a fuss.

Brush, floss, make them shine.

Then my teeth will stay all mine!

HERBIE:

Oh, hi there! We were just brushing our teeth. Did you brush your teeth today? I love brushing mine. I was at the dental therapist's the other day and she taught me how to brush and floss properly. It was fun! My teeth are so clean and shiny now.

(Puppet sniffs air)

HERBIE:

What's that? I smell something funny!

BETH: (Giggling)

Oh, I know what that is, that's my friend Peter Plaque. Pssst! H_ a has the worst breath in town. I don't think he ever brushes his teeth.

(Beth looking around)

BETH:

Peter, is that you Peter?

(Peter taps on Herbie's shoulder)

PETER:

Boo!

(Herbie jumps)

HERBIE:

Gosh, you scared me!

PETER:

Sorry, Herbie. Say, could you guys help me?

BETH:

Why Peter, what's the problem?

PETER:

Oh, I don't know. It's just, just that everytime I talk to people, they turn and face away. Tommy Goodteeth won't even speak to me anymore.

BETH:

Well, Peter, I don't know how to say this, but I think I know the problem.

(Psssst. Whisper, whisper in Peter's ear.)

PETER:

I don't have bad breath, do I? Some friend you are, telling me I have bad breath! Oh no, what am I going to do?

HERBIE:

Well, you can start by brushing and flossing your teeth at least once a day, after you eat sticky foods, and especially before bed.

PETER:

Brush and floss my teeth once a day, after I eat sticky foods, and especially before bed?

HERBIE:

Yes, then you'll remove all those smelly germs from your teeth.

PETER:

But how? I've never brushed or flossed my teeth before.

HERBIE:

It's easy. Listen I'll tell you:.

CHORUS:

Jiggle and jiggle and brush we go
So your teeth will really glow.
Do the front and do the back
Look at you, you've got the knack.

Jiggle and brush all over the place
Then you'll wear a happy face
On your gums, tongue and cheek
This is what we wish to seek.

Clean teeth give a smile that's wide
And make you feel so full of pride
So smile and say, "My teeth are clean!
This will be my only dream."

PETER:

Oh, I like that. Just a minute and I'll go get my toothbrush.

BETH:

Boy, I sure hope he knows what you're talking about. Brushing and flossing your teeth is so important. Here he comes.

(Peter trips and uses the toothbrush to stop from falling.)

BETH:

Whoops! Are you all right?

PETER:

Yep, lucky I had my brush; otherwise, I could have fallen and knocked out my teeth or something.

Would you brush my teeth for me?

HERBIE:

Sure.

(Herbie starts to brush Peter's teeth.)

PETER:

Oh, that feels really nice. Oh, I like that. - It tickles, hee hee! That smell, those marks, they are gone! Hurray! Thank you Herbie Hygiene. You sure are nice.

HERBIE:

You're quite welcome.

BETH:

Thank you Peter Plaque for brushing your teeth. I don't know how much longer my nose could stand it. Ha! Ha!

HERBIE, BETH & PETER:

Brush, brush, brush we must
Brush our teeth without a fuss.
Brush, floss, make them shine.
Then my teeth will stay all mine!

Bye boys and girls. Bye-Bye.

DENTAL HEALTH**GRADE: 4****LESSON: 3****THEME: FACTORS AFFECTING
DENTAL HEALTH**


CONCEPT: POSITIVE BEHAVIOURS AROUND HAZARDS CAN PREVENT DENTAL INJURIES

PREPARATION: 1. Materials to make big books

VOCABULARY: hazard, dental hazard, dental injury, obstacles

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) identify dental health hazards at home, at school and in the community	Students: 1. Identify potential dental hazards at various locations in the community.	Background Information Page - D81 Brainstorm various mouth and teeth injuries such as: <ul style="list-style-type: none">- broken teeth- chipped teeth- teeth knocked out- broken law- biting your tongue- biting your lip- tongue frozen to metal- something wedged between teeth Take students on a tour of the school to identify possible dental hazards in and around the school, e.g., drinking fountains, gym equipment, playground equipment, stairs, boots at entrances.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES										
<p>ii) explain safe behaviours that prevent dental injuries at home, at school and in the community</p>	<p>2. Discuss potential dental hazards identified and safe behaviours that prevent dental injuries around these hazards.</p>	<p>Divide students into small groups and assign each group one location in which to dental hazard hunt. Include homes, stores, offices, public buildings.</p> <p>Have each group list the hazards and report back to other students.</p> <p>Based on dental hazards reported in Student Activity 1 develop a list of behaviours to prevent dental injuries. Record student responses on an experience chart as shown</p> <p style="text-align: center;">Ways To Prevent Dental Injuries</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 50%; border: 1px solid black; padding: 5px;">DO (✓)</td> <td style="text-align: center; width: 50%; border: 1px solid black; padding: 5px;">DON'T (X)</td> </tr> <tr> <td style="padding: 5px;">Put toys and books away</td> <td style="padding: 5px;">Push and play rough.</td> </tr> <tr> <td style="padding: 5px;">Be sure steps and doorways are well lighted</td> <td style="padding: 5px;">Play with firearms, ammunition or fireworks</td> </tr> <tr> <td style="padding: 5px;">Clear snow and other obstacles from steps and doorways.</td> <td style="padding: 5px;">Throw stones at people</td> </tr> <tr> <td style="padding: 5px;">Etc</td> <td style="padding: 5px;">etc.</td> </tr> </table> <p>Next day, cover key words on the experience chart – eg., Put _____ and boots _____. Students try to recall the covered words – put toys and boots away.</p> <p>Prepare a second copy of the experience chart above. Divide students into two teams Give each team a felt marker. Read one item from the experience chart – eg., Don't throw stones at people .One member from each team runs to cross out that item on his/her team's chart.</p>	DO (✓)	DON'T (X)	Put toys and books away	Push and play rough.	Be sure steps and doorways are well lighted	Play with firearms, ammunition or fireworks	Clear snow and other obstacles from steps and doorways.	Throw stones at people	Etc	etc.
DO (✓)	DON'T (X)											
Put toys and books away	Push and play rough.											
Be sure steps and doorways are well lighted	Play with firearms, ammunition or fireworks											
Clear snow and other obstacles from steps and doorways.	Throw stones at people											
Etc	etc.											

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. Prepare big books explaining ways to prevent dental injuries.</p>	<p>Depending upon how many responses were recorded on the experience chart in Student Activity 2, divide class into 1, 2 or 3 groups, and have each group develop a big book to be placed at the nursing station. Each student prepares one page for the booklet, using a response from the experience chart and illustrating it accordingly.</p> <p>Make the books large and tooth shaped.</p> <p>Have different groups write their books in languages appropriate to the community.</p> 

DENTAL HEALTH**GRADE: 4****LESSON: 4****THEME: DENTAL DISEASE**

CONCEPT: TOOTH DECAY IS A DENTAL DISEASE THAT CAN BE PREVENTED

- PREPARATION:**
1. Prepare an overhead transparency of Tooth Decay Process (Activity Sheet D34)
 2. Index cards, felt pens and clues for Student Activity 2
 3. Prepare a class set of the Food Code worksheet (Activity Sheet D35A - Answer Sheet D35B)
 4. A variety of products which contain fluoride
 5. Prior to class invite a dental health worker to discuss fluoride and fluoride products
 6. Prepare a class set of Wolf Word Puzzle Activity Sheet D36A - Teacher Answer Guide D36B)
-

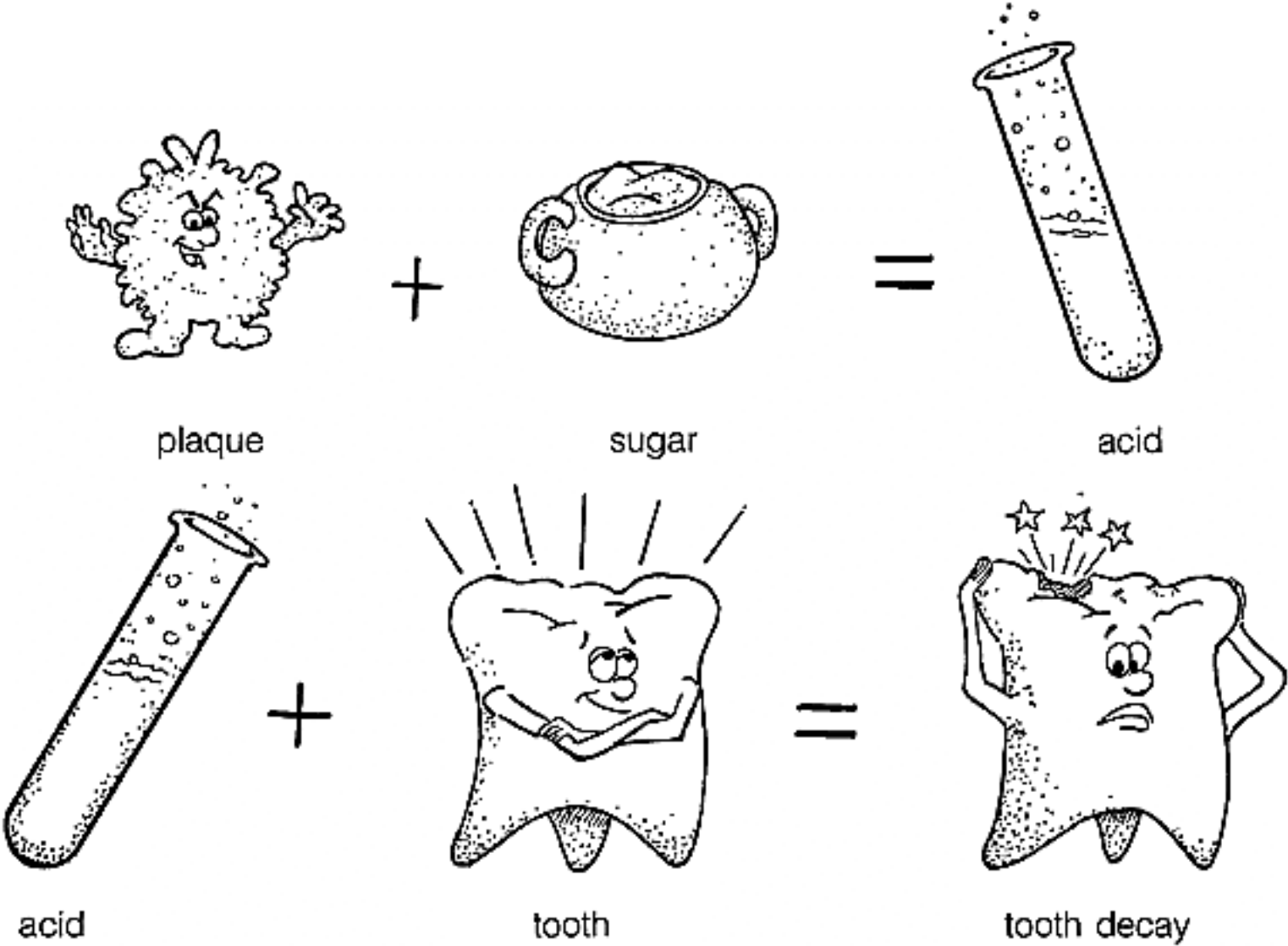
VOCABULARY: fluoride, calcium, tooth decay

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES						
Students will be able to: i) describe the process of tooth decay	Students: 1. Discuss the process of tooth decay. 2. Make sentences using the key words in the tooth decay process	Background Information Page --- D65, D69, D73 to D76 Refer to Activity Sheet D34. Use the overhead transparency to discuss the process of tooth decay. Divide students into two groups. Give each group a set of clues (below), a felt marker, and index cards numbered 1 through 10. Give each group 3 minutes to decide on the answer to each clue and write it on the corresponding index card. All answers are words from the tooth decay "equation" <table data-bbox="997 1339 1753 1453"><tr><td>Who Am I?</td><td>Answers</td></tr><tr><td>1. I am in candy</td><td>sugar</td></tr><tr><td>2. I come from plaque and sugar</td><td>acid</td></tr></table>	Who Am I?	Answers	1. I am in candy	sugar	2. I come from plaque and sugar	acid
Who Am I?	Answers							
1. I am in candy	sugar							
2. I come from plaque and sugar	acid							

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
ii) describe the importance of fluoride	<ol style="list-style-type: none"> 3. Identify dentally safe and dentally unsafe foods 4. Discuss the importance of fluoride. 	<ol style="list-style-type: none"> 3. I am white and stick to teeth. plaque 4. I can be removed by brushing and flossing. plaque 5. I am rotten. tooth decay 6. I am growing in your mouth. tooth 7. I am very sweet. sugar 8. I help chew your food. tooth 9. I can make your teeth decay. acid 10. I need a dentist to help me. tooth decay <p>Randomly select students to read each clue while group reporters show their group's answers.</p> <p>After ensuring that each group has all cards correct, give each group 10 additional cards.</p> <p style="text-align: right;">2 - acid cards 4 - + cards 4 - = cards</p> <p>The task is to use all of the cards to make four sentences - each sentence (or equation) from the tooth decay process, twice</p> <p>e.g. plaque + sugar = acid</p> <p>Refer to Activity Sheet D35A.</p> <p>Refer to Activity Sheet D35B for answers</p> <p>Prior to class invite the dental health worker to discuss how fluoride protects and strengthens tooth enamel.</p> <p>Display products that contain fluoride.</p>

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>5. List behaviours that remove plaque and reduce sugar intake to prevent the tooth decay process.</p> <p>6. Complete Wolf Word Puzzle worksheet.</p>	<p>Behaviours that remove plaque and eliminate acid attacks on teeth include:</p> <ul style="list-style-type: none"> - proper daily brushing and flossing - avoiding sticky foods with sugar - eating a nutritious diet - using fluoride products approved by the Canadian Dental Association (ie., those bearing the Canadian Dental Association seal) - having regular dental check-ups <p>Refer to Activity Sheet D36A.</p> <p>Refer to Activity Sheet D36B for answers.</p>

TOOTH DECAY PROCESS



FOOD CODE

Directions: Using the code below find out which foods are safe for your teeth and which ones are unsafe for your teeth.

SAFE

4 6 18 18 20 18

 2 25 21 20

 18 1 1 20

 10 16 17 26

 4 11 19 16 22 5 25

 9 16 20 6

 4 11 19 19 5 21 20



UNSAFE

4 11 2 14 8

 4 5 5 26 16 18 20

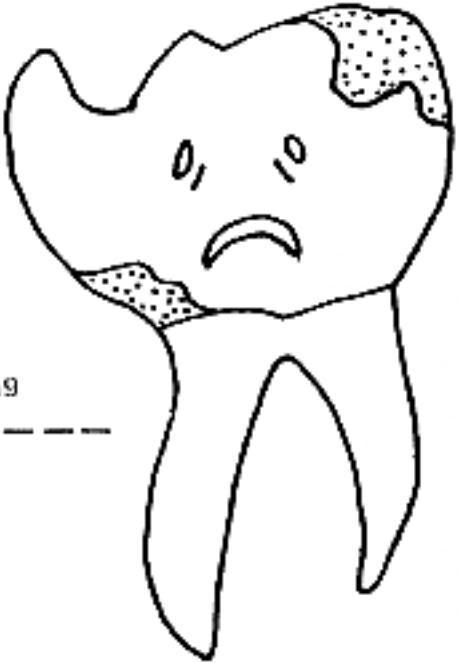
 4 11 26 18

 4 6 5 4 5 17 11 21 18 22 11 19

 13 5 13

 21 11 2 1

 22 25 22 22 17 18 1 25 10



Code:

1 G	2 N	3 V	4 C	5 O	6 H	7 O	8 Y
9 F	10 M	11 A	12 J	13 P	14 D	15 X	16 I
17 L	18 E	19 R	20 S	21 T	22 B	23 W	24 Z
25 U	26 K						

Make up your own! See if your neighbour can crack-the code!

FOOD CODE (Answer Sheet)

Directions: Using the code below find out which foods are safe for your teeth and which ones are unsafe for your teeth.

SAFE



UNSAFE



4.6.18.18.20.18. (cheese)

2.25.21.20. (nuts)

18.1.1.20. (eggs)

10.16.17.26. (milk)

4.11.19.16.22.5.25. (caribou)

9.16.20.6. (fish)

4.11.19.19.5.21.20. (carrots)

4.11.2.14.8. (candy)

4.5.5.26.16.18.20. (cookies)

4.11.26.18. (cake)

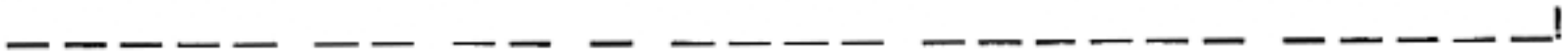
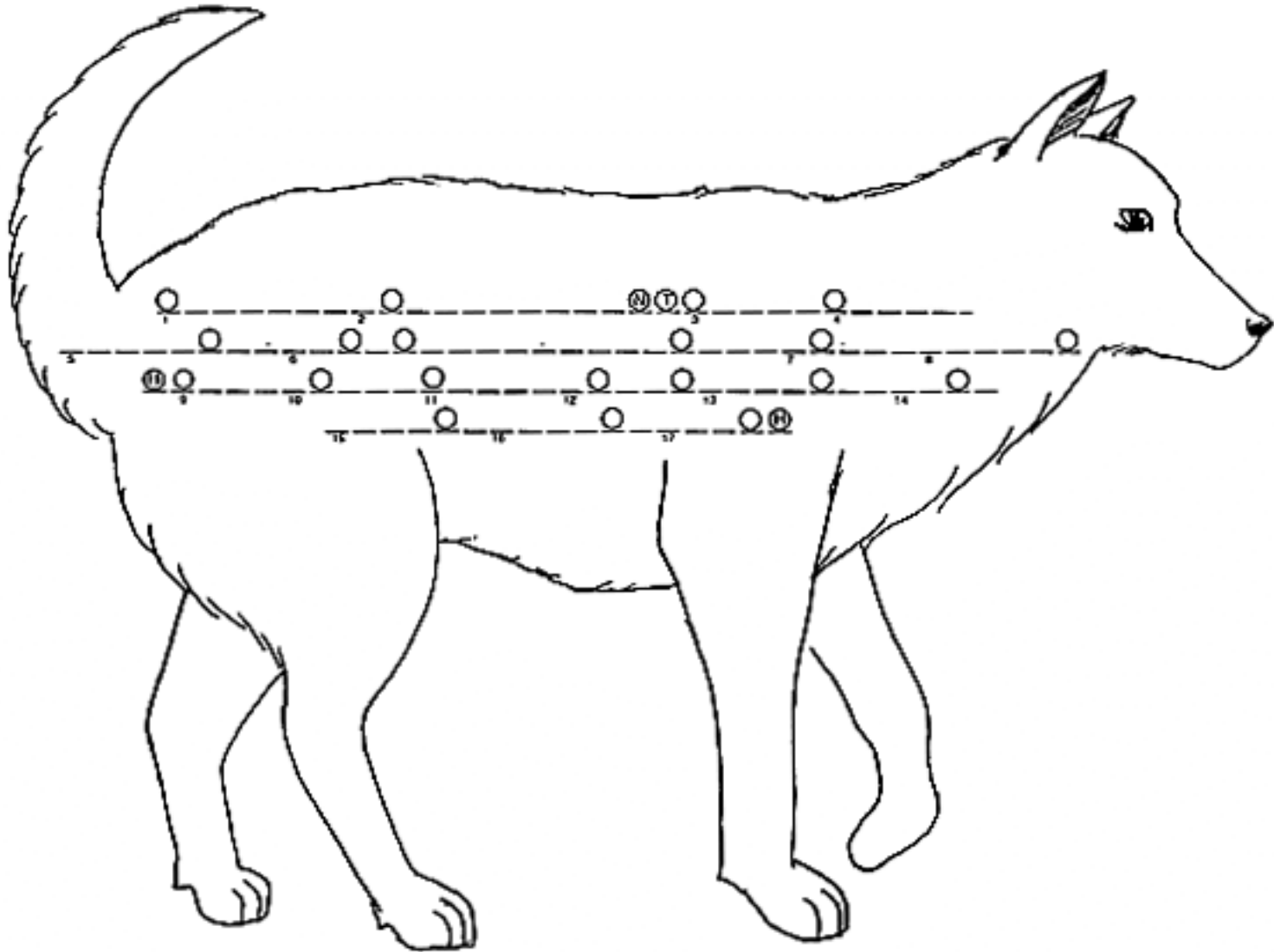
4.6.5.4.5.17.11.21.18. 22.11.19. (chocolate bar)

13.5.13. (pop)

21.11.2.1. (tang)

22.25.22.22.17.18. 1.25.10. (bubble gum)

WOLF WORD PUZZLE



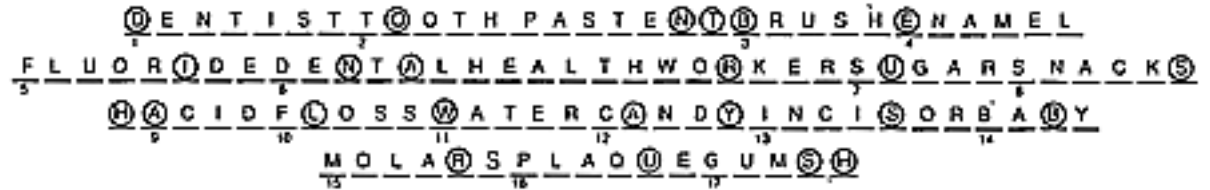
Directions:

1. Answer the questions below.
2. Put answers in blanks in wolf.
3. Use circled letters to write the message in the blanks below the wolf.

Questions

1. You visit this person twice a year.
2. You put this on your toothbrush.
3. Always do this after eating sticky foods.
4. The hard layer of the tooth.
5. Helps to protect teeth from acid.
6. Person who teaches about teeth.
7. Foods with _____ should be avoided.
8. Foods eaten between meals.
9. It attacks tooth enamel.
10. Kind of string used to remove plaque.
11. Rinse with _____ if it's not possible to brush.
12. Something very sweet.
13. Tooth that cuts.
14. The teeth that fall out when you are a child are called _____ teeth.
15. The teeth used for grinding.
16. Forms on the teeth.
17. Surrounds the roots of teeth.

WOLF WORD PUZZLE (Teacher Answer Guide)



Questions

1. You visit this person twice a year. (dentist)
2. You put this on your toothbrush. (toothpaste)
3. Always do this after eating sticky foods. (brush)
4. The hard layer of the tooth. (enamel)
5. Helps to protect teeth from acid. (fluoride)
6. Person who teaches about teeth. (dental health worker)
7. Foods with _____ should be avoided. (sugar)
8. Foods eaten between meals. (snacks)
9. It attacks tooth enamel. (acid)
10. Kind of string used to remove plaque. (floss)
11. Rinse with _____ if it's not possible to brush. (water)
12. Something very sweet. (candy)
13. Tooth that cuts. (incisor)
14. The teeth that fallout when you are a child are called _____ teeth. (baby)
15. The teeth used for grinding. (molars)
16. Forms on the teeth. (plaque)
17. Surrounds the roots-of teeth. (gums)

D O N ' T B E I N A R U S H A L W A Y S B R U S H

DENTAL HEALTH**GRADE: 4****LESSON: 5****THEME: DENTAL SERVICE AND
PRODUCTS**

CONCEPT: DENTAL HEALTH WORKERS PLAY AN IMPORTANT ROLE IN DENTAL HEALTH CARE

PREPARATION: 1. Prepare overhead transparencies of the illustrations from Flossie The Tooth (Activity Sheet D37)
2. Sentence strips for several groups for Student Activity 2
3. Schedule hygiene appointments for Student Activity 3

VOCABULARY: sobbing, horrified, sighed with relief, whirring, matured, sympathize, unpleasant

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
Students will be able to: i) describe how dental health workers treat tooth decay and remove plaque	Students: 1. Listen to the story "Flossie The Tooth" Discuss the story questions.	Background Information Page - D77 to D78 Refer to Activity Sheet D37. Read the story to the class showing overhead transparencies of the illustrations as you read. Sequentially review the key story elements by making a series of statements. If the statement is true (ie., part of the story) students signal "thumbs up". If the statement is not true they signal "thumbs down", and offer a correct statement. e.g., 1. Flossie's enamel got chipped when she bit a hard candy. - Thumbs down

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>2. Describe how the dentist treated tooth decay in the story "Flossie The Tooth".</p> <p>3. Write a story about a dental health worker removing plaque from teeth.</p>	<p>Possible correct statement Flossie/had a cavity which got bigger and bigger</p> <p>2. Flossie was in a lot of pain so she chewed as little as possible - Thumbs up</p> <p>Write a simple paragraph describing the steps the dentist used to treat Flossie's cavity. Write each sentence on a strip of paper. (For a more difficult task, add a sentence which does not belong.)</p> <p>Randomly distribute strips to small groups of students who have to organize the sentences into a paragraph (and eliminate the extra sentence).</p> <p>For example:</p> <p style="border: 1px solid black; padding: 2px; display: inline-block;">The dentist looked at Flossie with a little mirror.</p> <p style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 100px;">He gave her a needle so he would not hurt her.</p> <p style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 100px;">He drilled the cavity to get rid of the decay.</p> <p style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 100px;">He put a filling in the hole.</p> <p style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 100px;">Flossie felt better with her new filling.</p> <p>extra sentence Flossie felt awful afterwards.</p> <p>If students have never had their teeth cleaned by a dental health worker try to schedule appointments accordingly.</p> <p>In pairs, have students write a story, from a tooth's point of view, describing how dental health workers remove plaque from teeth.</p>

FLOSSIE THE TOOTH

Once upon a time there was a beautiful tooth named Flossie. She was a good tooth that always took her job of chewing and biting seriously.

But the time came when something sad happened. One day she noticed a dark spot in her enamel. As the weeks went by it got bigger and uglier. It went deeper and deeper until one day when Flossie was squishing a candy...

WHAMMO! The sugar touched a raw nerve. She hurt for days and days. It was enough to make Flossie forget all about her friends, the other teeth next to her. She began to feel over-sensitive, and terribly sorry for herself. She quit chewing whenever she could.

It was a very lonely feeling. And it made her really crabby. It got so that whenever someone offered to help, she brushed them off and hid under her enamel.

But there was a good side to Flossie's problem. It gave her time to think. She began to ask some pretty hard questions. Why had she ever grown up in the first place? Why did she have to have



that weak spot in her enamel? Why had she chewed all that candy when she was younger? And why hadn't she cleaned up after, like she was supposed to? But it was too late now. The damage was done. If only she could be fixed up again.

One day a wise old molar heard her sobbing. "Hey, little tooth," he said. "I've noticed your cavity. You must be hurting a lot. Why don't you go to a dentist? He'll fix you up." At first Flossie resented the idea. She was afraid of what might happen to her at the dentist. But the pain was becoming so great that finally she broke down and went to see a dentist.

"Oh, oh," he said softly as, he looked at her from all directions with his little mirror. Then he reached for a needle. It hurt just a bit. Then he pulled down a drill, and began to poke away, at Flossie. She was horrified! As if the cavity wasn't big enough already, he was making it even bigger.

He stopped for a while; then he drilled some more. Finally the whirring came to a stop, and Flossie sighed with relief.



The dentist put something with a funny taste into the hole. He packed in something hard and pushed it into the farthest corners. Flossie thought her sides would split from the pressure. She was starting to feel better, though. And then it struck her.

She was going to be a complete tooth again. The pain was gone. Maybe, just maybe, she'd end up being thankful for this experience after all.

And so it was. Because of what she went through, Flossie matured. She found it easier to ask others for help. She found it easier to sympathize with others and... she even decided to take better care of herself. Even though the experience was unpleasant for a while, it all worked out, for the good in the end.



Adapted from: Dental Health Services, Department of Health Services, Department of Health, Province of Manitoba.

GRADE 4

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.

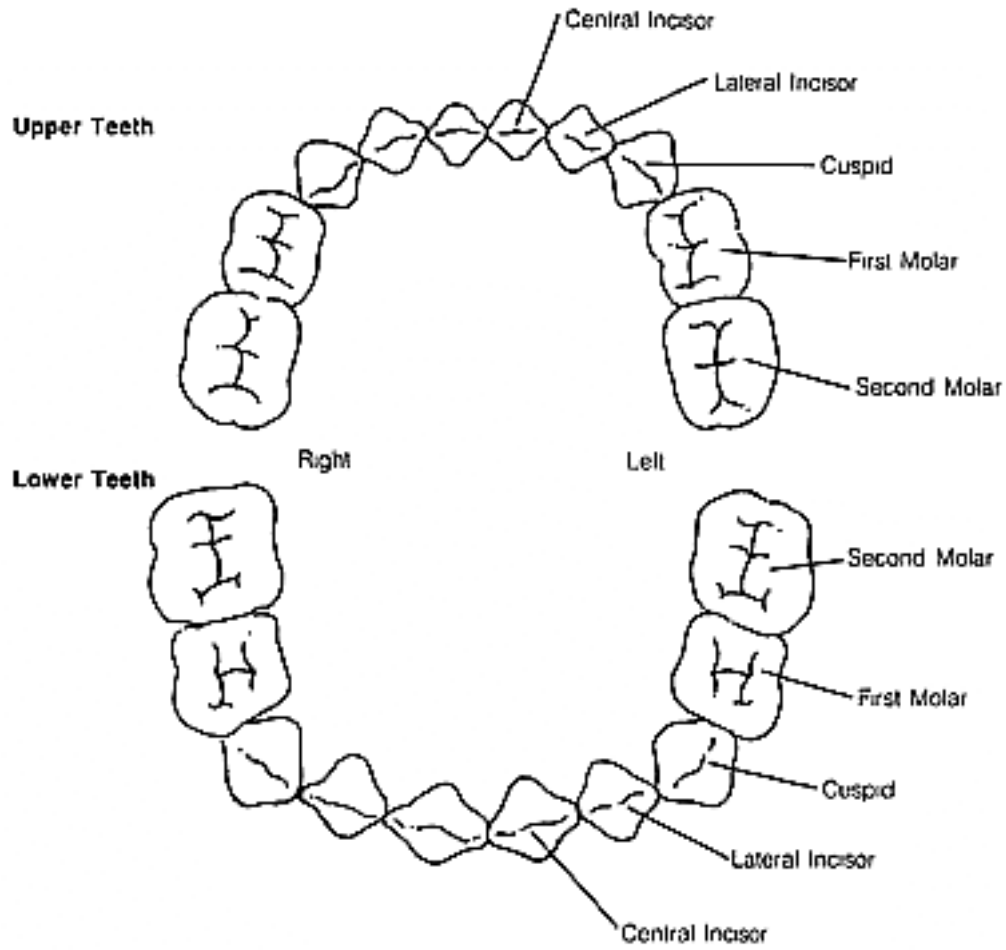
It is apparent that diet is an important factor in decay. The typical Canadian diet is high in refined carbohydrates, and is highly conducive to dental decay. Sticky candies or confections which adhere to the teeth or hard candies which are kept in the mouth for long periods of time are particularly 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.

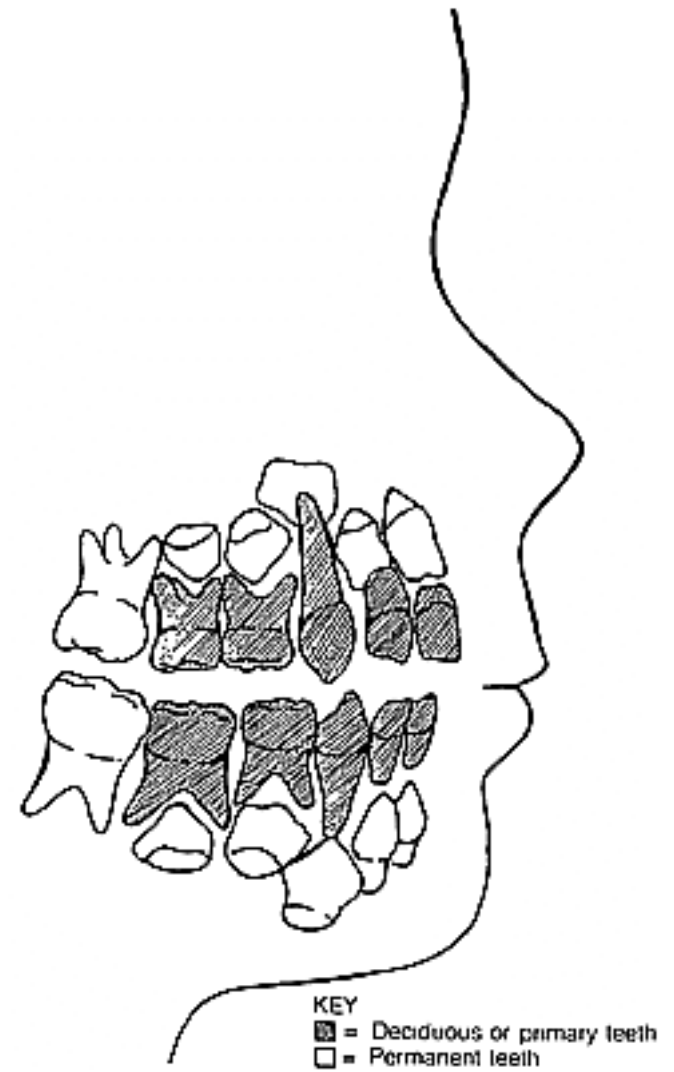
Good oral hygiene (proper brushing after each meal and brushing and flossing prior to going to bed) is difficult enough for adults to establish, for children, it is doubly difficult. Not only do young children lack the dexterity to brush and floss their teeth properly, but the benefits of such skills 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

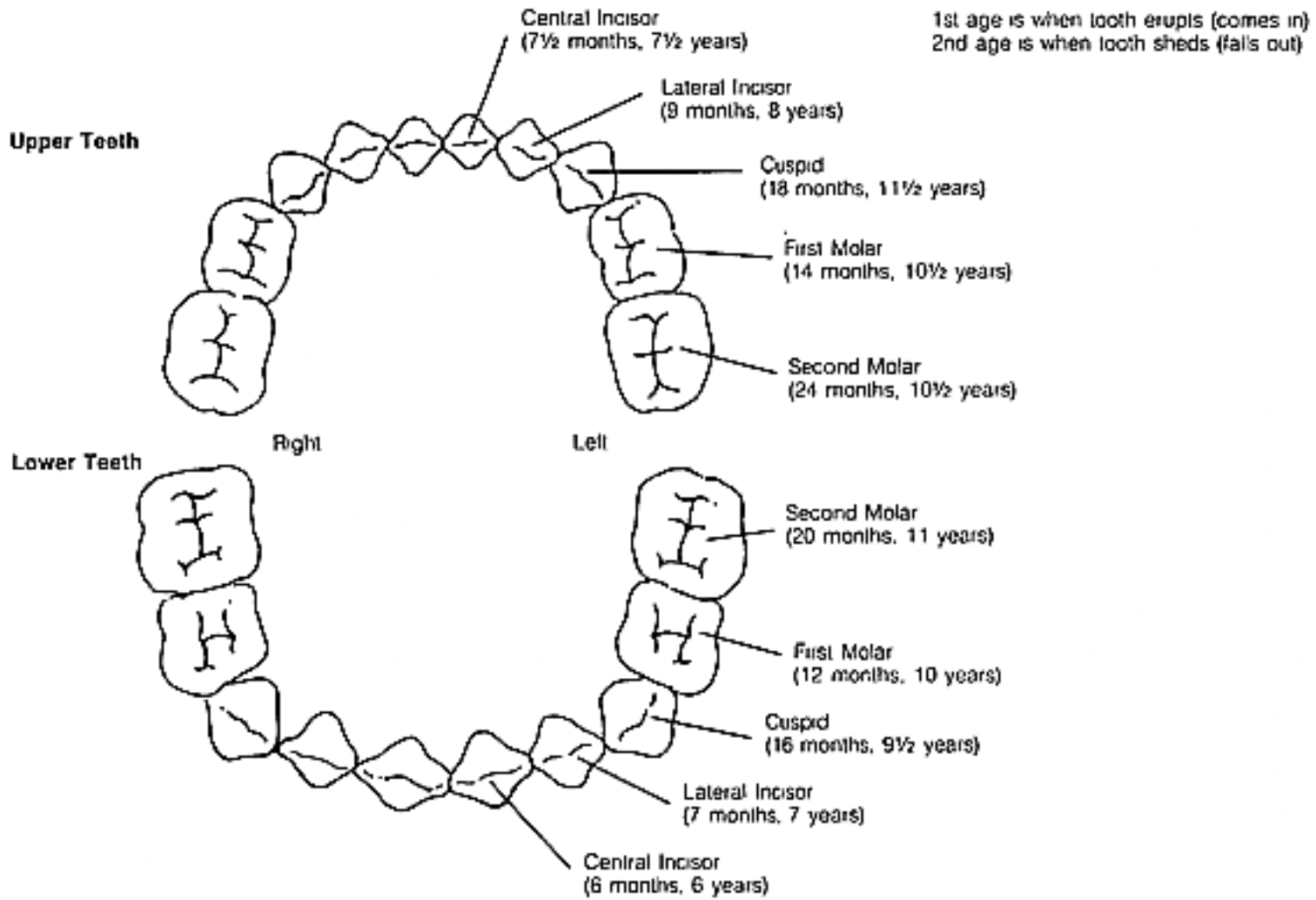


LOCATION OF TEETH AT 6 YEARS OF AGE



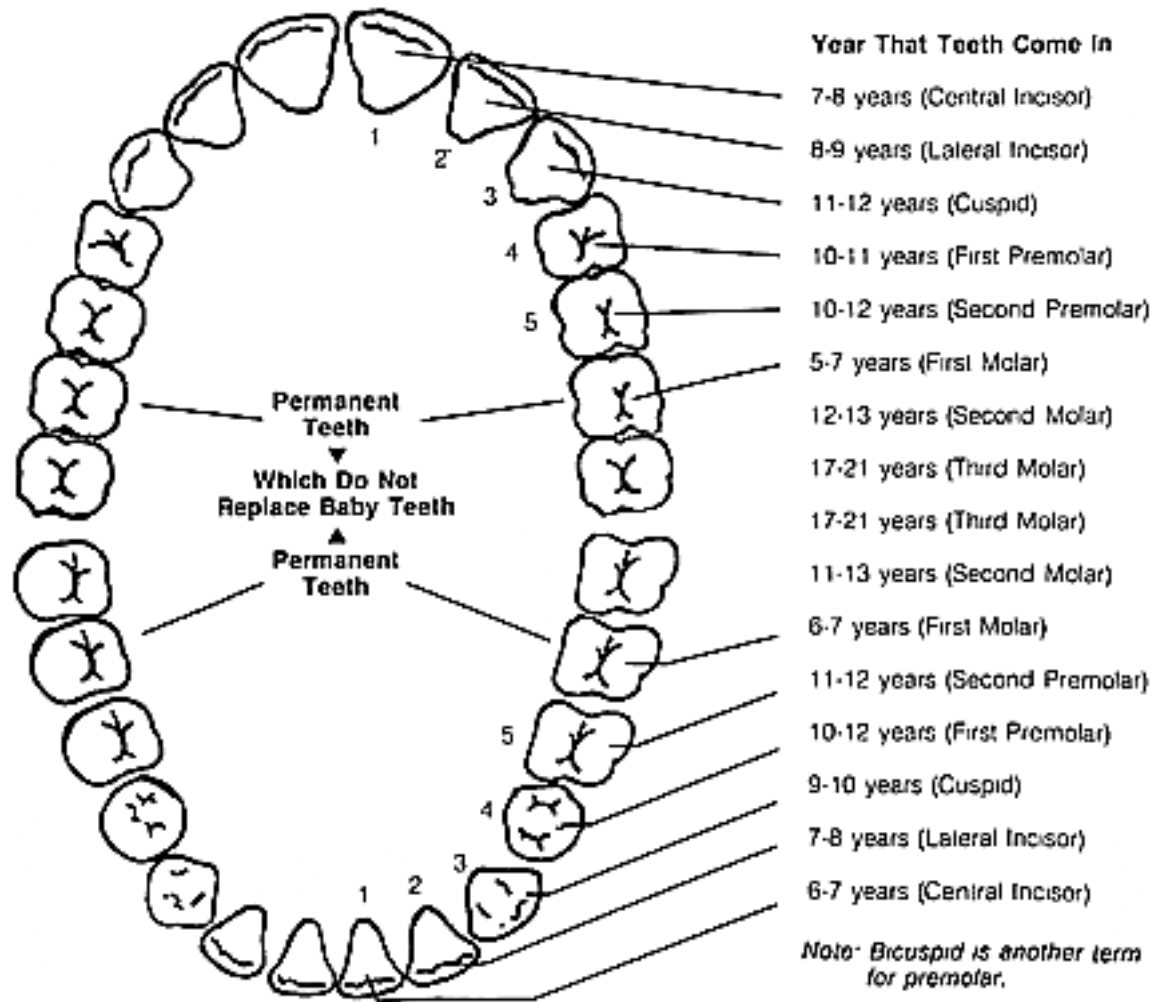
AGE SCHEDULE FOR PRIMARY TEETH

PRIMARY (BABY) TEETH



AGE SCHEDULE FOR PERMANENT TEETH

(Teeth numbered 1 to 5 replace baby teeth)



DENTALLY SAFE FOOD

and

DENTALLY UNSAFE FOOD



unsweetened fruit juice
unsweetened vegetable juice
raw vegetables and salads
raw fruits
nuts, seeds
cheese
plain milk
plain yogurt
enriched, whole wheat bread
and bannock
whole grain cereals
crackers
bran muffin
pizza
popcorn
meats



raisins, dried fruits
ice cream, milkshakes
sweetened juice and canned fruits
flavoured yogurt
chocolate milk
puddings
popsicles/fudgsicles/revelos
sugar lumps
cake
candy
jam
chocolate bars
cookies
jelly, jam, honey
soft drinks (sweetened)
fruit drinks
sweetened powdered drink mixes
gum
lozenges

*** Teeth should always be brushed after eating sticky food.**

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.

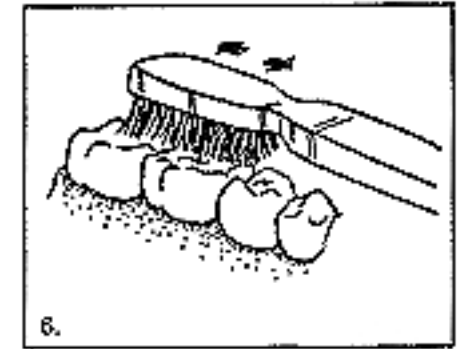
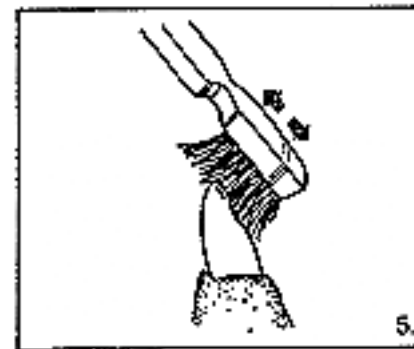
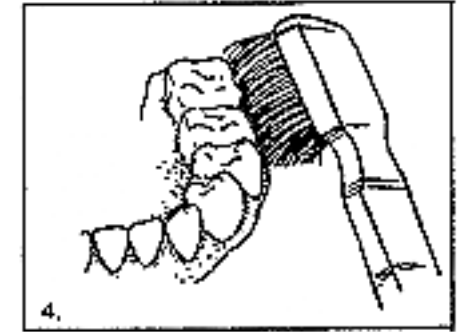
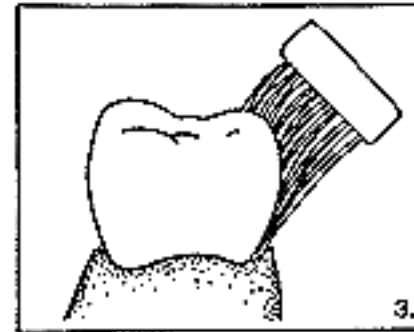
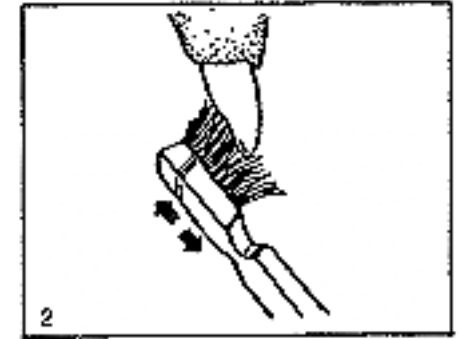
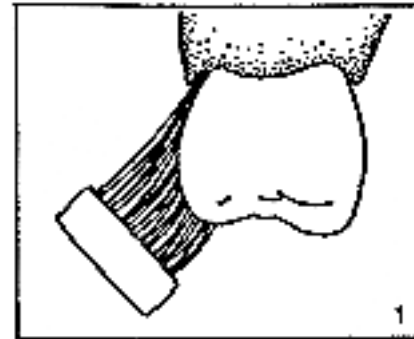
All inside and outside surfaces of teeth are cleaned in this way. The top surfaces of the back teeth are cleaned with a back and forth motion the bristles directly on top of the teeth.

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

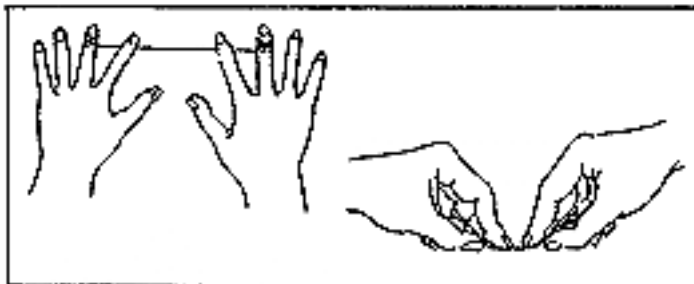
Flossing - Removal of Plaque

How to Floss

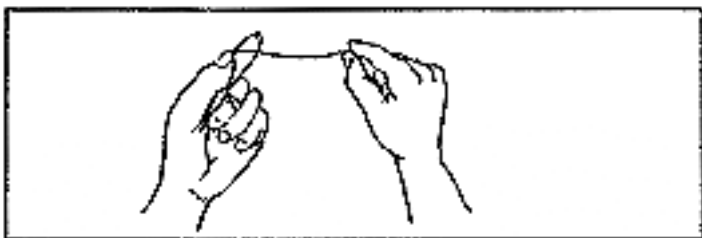
Flossing disrupts and removes plaque between the teeth and under the edges of the gums

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

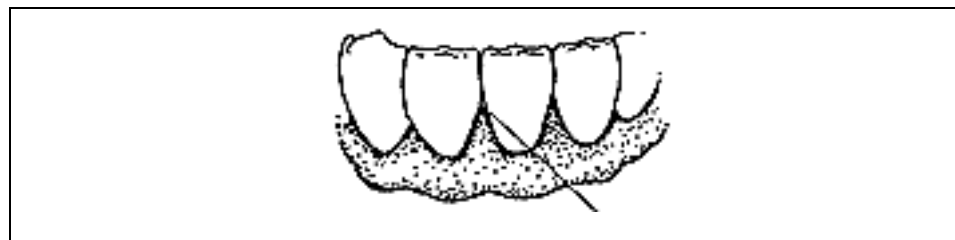
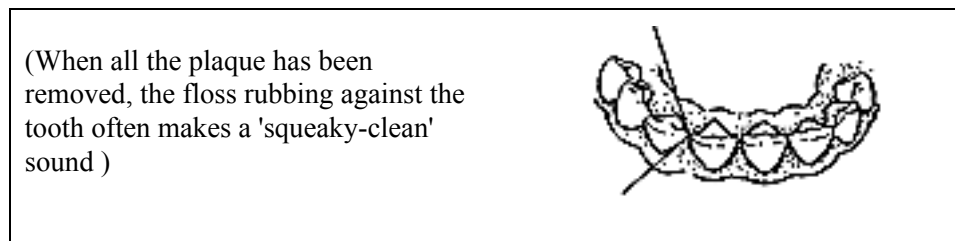
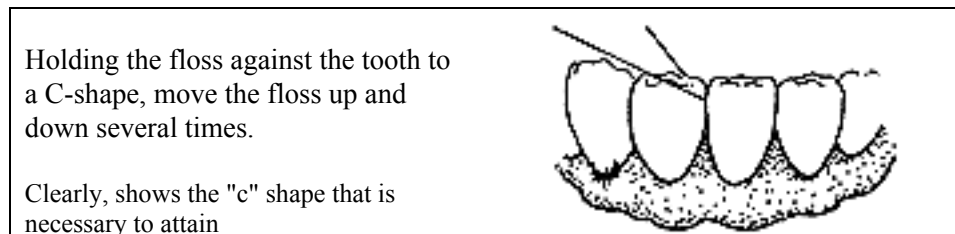
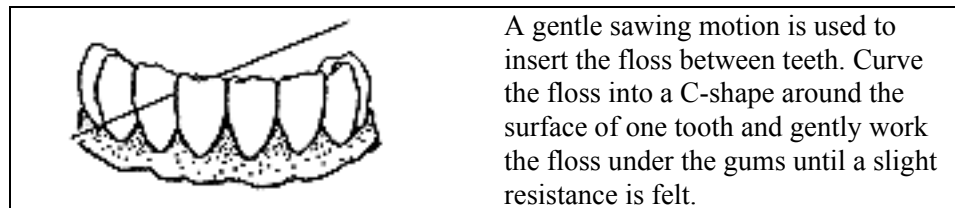
The free part of the floss is grasped with the thumbs and 1st fingers of each hand leaving about 2.5 cm as the 'working portion' of the floss



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.

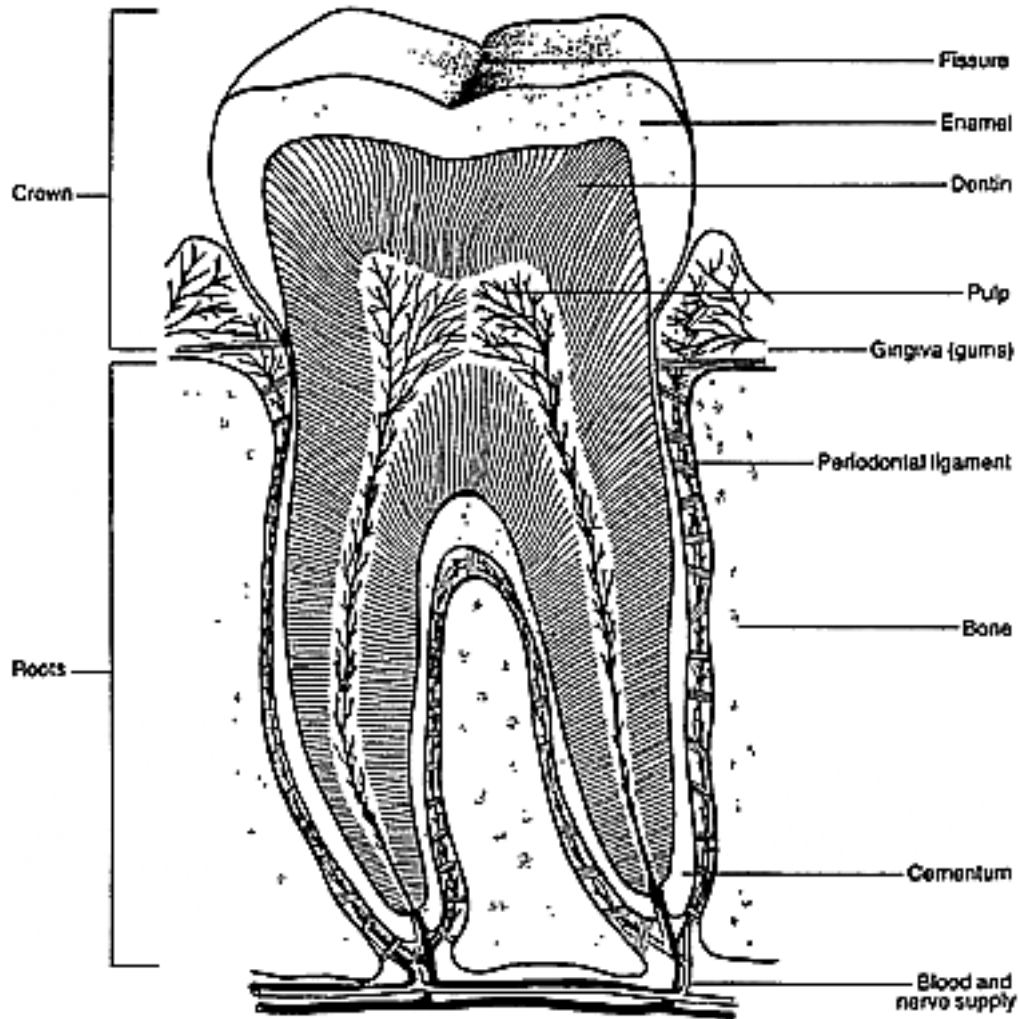


Repeat the procedure on the adjacent tooth surface at the same site.

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.

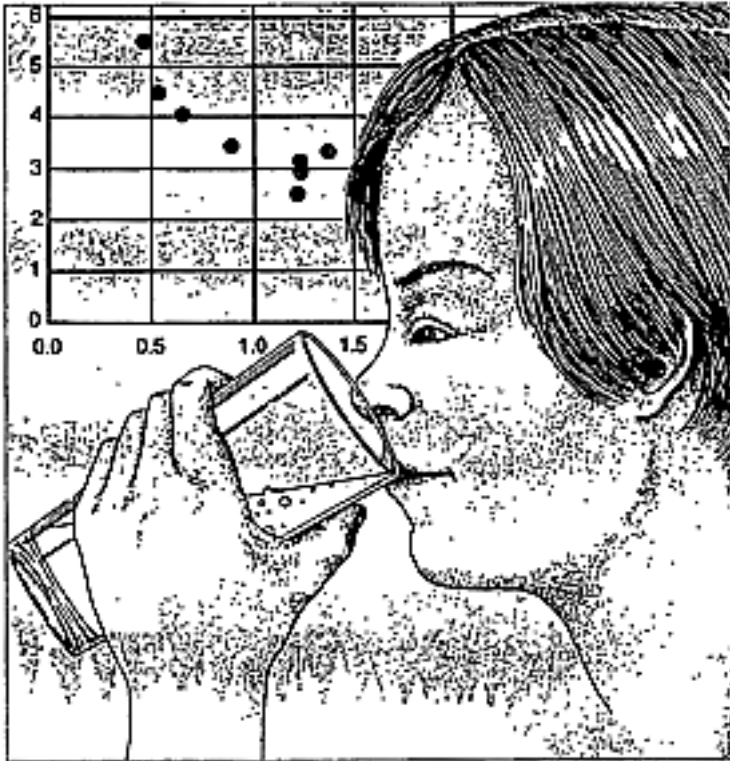
Jawbone: the bone surrounding and supporting the roots of the teeth

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

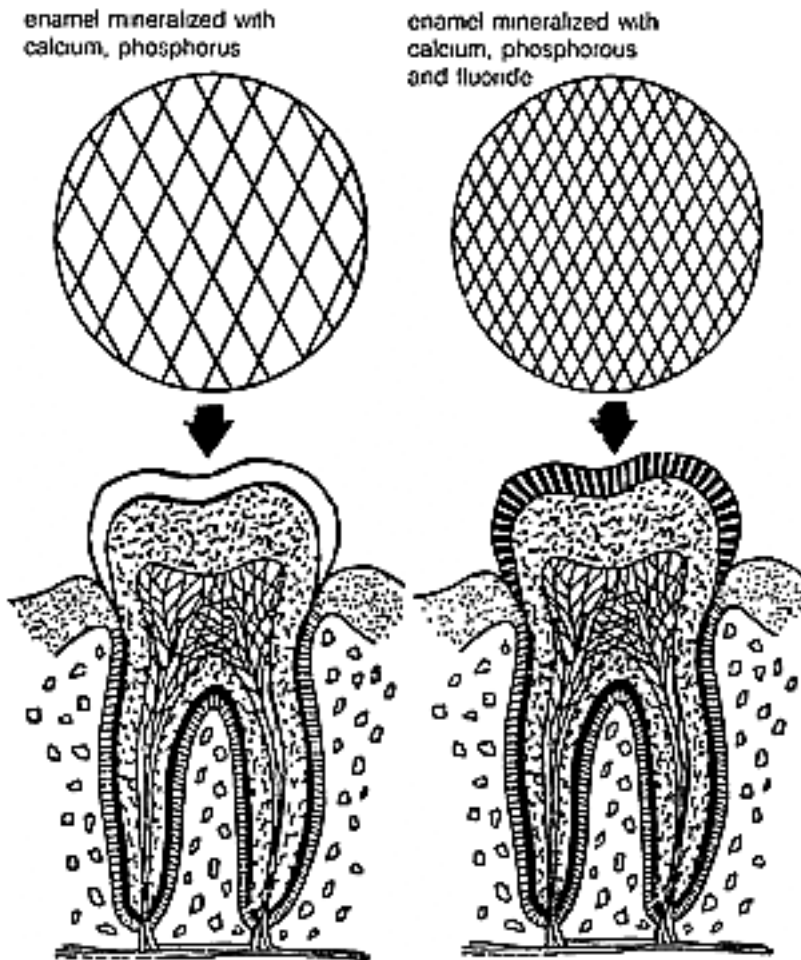
Fluorides in the form of water fluoridation, a good diet with sugar consumption kept to a minimum, especially for between-meal snacks, brushing and flossing thoroughly each day and brushing after meals if possible (fluoride toothpaste) will prevent most dental decay and gum disease. These four preventive 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

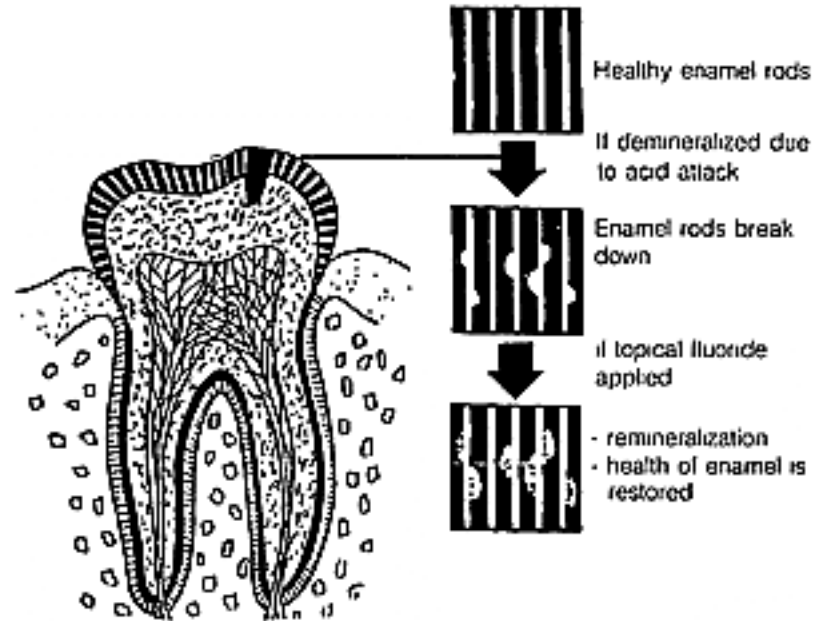
Systemic Fluoride

- 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



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 style="text-align: center;">plaque + sugar = acid tooth = 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 checkups
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.

GLOSSARY OF TERMS

<i>Amalgam</i>	- an alloy of mercury and silver used as a dental filling	<i>Orthodontal</i>	- a branch of dentistry dealing with correcting alignment or malocclusion
<i>Bruxism</i>	- a habit, usually unconscious, of grinding one's teeth	<i>Orthodontist</i>	- a dentist who specializes in orthodontal problems
<i>Bicuspid</i>	- premolar	<i>Overbite</i>	- upper incisors and cuspids project abnormally over lower incisors and cuspids
<i>Calculus</i>	- hardened (calcified) plaque	<i>Periodontal</i>	- refers to the supporting structure of the teeth - gums and underlying bone
<i>Canine</i>	- cuspid, eye tooth	<i>Periodontist</i>	- a dentist who specializes in Periodontal disease
<i>Carie</i>	- decay in tooth - synonym for cavity	<i>Periodontitis</i>	- an inflammation around teeth affecting the support of the tooth
<i>Cavity</i>	- a hollow space in a tooth caused by decay	<i>Premolar</i>	- any of eight adult teeth with 2 pointed crowns, bicuspid
<i>Fissure Sealant</i>	- acrylic like material that bonds to the surface of a tooth to protect it against acid attack - applied on children's permanent molars and premolars to cover the depressions and grooves to prevent decay - lasts from six months to a number of years	<i>Permanent set of teeth</i>	- the first (baby) set of teeth are shed and replaced by the permanent (adult) teeth
<i>Gingiva</i>	- gums	<i>Prophylaxis</i>	- preventative treatment removal of plaque and calculus, and cleaning and polishing of teeth by dental health professional
<i>Gingivitis</i>	- inflammation of the Gingiva	<i>Plaque</i>	- made up of living bacteria and food particles, sticks to teeth, forms in mouth every 24 hours
<i>Malocclusion</i>	- crowded or poorly aligned teeth, "bad bite"	<i>Primary Teeth</i>	- baby teeth, later replaced by permanent teeth
<i>Mixed set of teeth</i>	- some primary and some permanent teeth in one set of teeth	<i>Root Canal</i>	- dental procedure to remove the nerve and decay
<i>Nursing Bottle Mouth</i>	- tooth decay caused by prolonged sucking on a baby bottle containing any liquid except water	<i>Underbite</i>	- lower incisors and cuspids project abnormally over upper incisors and cuspids
<i>Occlusal</i>	- the biting surface of the tooth	<i>Wisdom Tooth</i>	- a permanent molar that erupts at 17-19 years of age, a third molar