

NORTHWEST TERRITORIES

School Health Program

GRADE NINE



Northwest
Territories

Education, Culture and Employment
Health and Social Services

NORTHWEST TERRITORIES

School Health Program

GRADE 9



Education, Culture and Employment
Health and Social Services

August, 1996

NORTHWEST TERRITORIES

School Health Program

INTRODUCTION

TABLE OF CONTENTS

| | |
|---|----|
| Acknowledgements | i |
| Members of the Advisory Committees..... | ii |
| PHILOSOPHY AND RATIONALE | |
| The Rationale for Health Education | 1 |
| The Need for a Health Program in N.W.T. Schools..... | 1 |
| The History of the N.W.T. School Health Program..... | 2 |
| Assessing the Health Needs of N.W.T. School Children | 3 |
| A Vision of Health..... | 4 |
| The Role of Schools in Health Promotion | 4 |
| References..... | 5 |
| IMPLEMENTATION | |
| Major Goals of the Northwest Territories School Health Program..... | 9 |
| The Units of the Program..... | 10 |
| Scope and Sequence | 12 |
| Time Allocation..... | 17 |
| The Lesson Format..... | 18 |
| Approaches to the Teaching of Health | 18 |
| Building a Positive Classroom Atmosphere | 19 |
| The Teaching of Values | 19 |
| Appropriate Techniques for Teaching Health..... | 20 |
| The Language Development Approach and the N.W.T. School Health Program | 21 |
| Initial Assessment Activities..... | 27 |
| Evaluation | 31 |

ACKNOWLEDGEMENTS

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

Coordinators:

- Robert Imrie - Head, Health Information and Promotion, Department of Health
- Helen Balanoff - Program Specialist, Health, Department of Education

Curriculum Writing/Activity Ideas:

- Cathy Marsollier - Research/Writer, Department of Health
- Wade McLain - former Research/Writer, Department of Health
- Mary Jane Stewart - Contract Writer, Department of Health
- Laura McCormick - School of Dental Therapy, University of Manitoba
- Reiko Trudeau - Teacher, Rae-Edzo
- Catherine Mains - Teacher, Rae-Edzo
- Liv Nygaard - former Teacher, N.W.T.
- Susan Yazdanmehr - Health Information Officer, Department of Health
- Jim Reid - former Teacher, N.W.T.
- Heather Nolsoe - Program Specialist, Social Studies, Department of Education
- Margy Gilmour - Program Specialist, Department of Education

Illustrations:

- Francis Mercredi - Yellowknife
- Heather Imrie - Banff, Alberta
- Elizabeth Lorenz - Yellowknife
- Mary Ann de Wolf - Dallas, Texas

Editing:

- Cathy McGregor - Coordinator, Language Development, Department of Education
- Barbara Hall - Program Specialist, Alternative Programs, Department of Education

Reviewing/Evaluating:

- Dr. Dexter Harvey - Faculty of Education, University of Manitoba
- Dawn White - Health Consultant, Manitoba
- Mary Brown - Curriculum Consultant, Department of Education, Manitoba
- Members of the Northern Nutrition Association
- St. John Ambulance Association
- AIDS Sub-Committee, GNWT Department of Health/Health and Welfare Canada

Photography:

- Tessa McIntosh - Department of Culture and Communications
- Lorne Smith - Education Officer, Department of Education
- Fran Hurcomb - Photographer
- Rene Fumoleau - Photographer

General Assistance/Consultation:

- Don Kindt - Program Specialist, Math/Science, Department of Education
- LuAnn Lovlin - Public Information Officer, Department of Education
- Stella Van Rensburg - former Project Director, School Health Program, Department of Health
- Sarah Kelleher - Program Development, Department of Education
- Barbara Round - Coordinator, Family Life Education, Department of Health
- Jo-Anne Crate Thomas - Program Specialist, Alcohol and Drug Services, Department of Social Services
- Donna Nash-Alain - Proof-reader
- Derek Green - Coordinator, Program Evaluation, Department of Education

Members of the Advisory Committees:

- Judy O'Heir - Assistant Regional Nursing Officer, Health & Welfare Canada
- Mike Kelly - Regional Guidance Counsellor, Department of Education, Inuvik
- Patricia Nester - Classroom Assistant, Rankin Inlet
- Mabel Wong-Tam - Coordinator, Nutrition Services, Stanton Yellowknife Hospital
- Yvonne Green - Director of Dietetics, Stanton Yellowknife Hospital
- Gordon Trueblood - Coordinator, Health Education, Indian and Inuit Health Services, Health and Welfare Canada, Ottawa
- Dr. Dexter Harvey - Faculty of Education, University of Manitoba
- Dr. Peter Kallos - Medical Officer, Yellowknife
- Olasie Machmer, Jeela Moss-Davies - Inuit Women's Association, Ottawa
- Lorraine Doctor, Marjorie Kossatz - N.W.T. Native Women's Association, Yellowknife
- Sharon Kirwan - Assistant Regional Nursing Officer, Health & Welfare Canada
- Bob MacQuarrie - Member of the Legislative Assembly, Northwest Territories
- Beaton MacKenzie - Teacher, Yellowknife Education District #1
- David Bouchard - Religious/Health Coordinator, Yellowknife Separate School Board
- Veronica Curley, Elizabeth Lyall - Keewatin Inuit Association, Rankin Inlet
- Robbie Robinson - Chief, Safety Division, Department of Justice and Public Services
- Elsie Burger, Thomas Palakkamanil, Bertha Blondin - Dene Nation, Yellowknife
- Margaret Dukes - St. John Ambulance Association, Ottawa

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

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

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

NORTHWEST TERRITORIES

School Health Program

PHILOSOPHY AND RATIONALE

THE RATIONALE FOR HEALTH EDUCATION

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

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

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

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

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

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

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

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

Nutrition

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

Alcohol & Drug Use

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

Self-esteem

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

Family Life Education

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

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

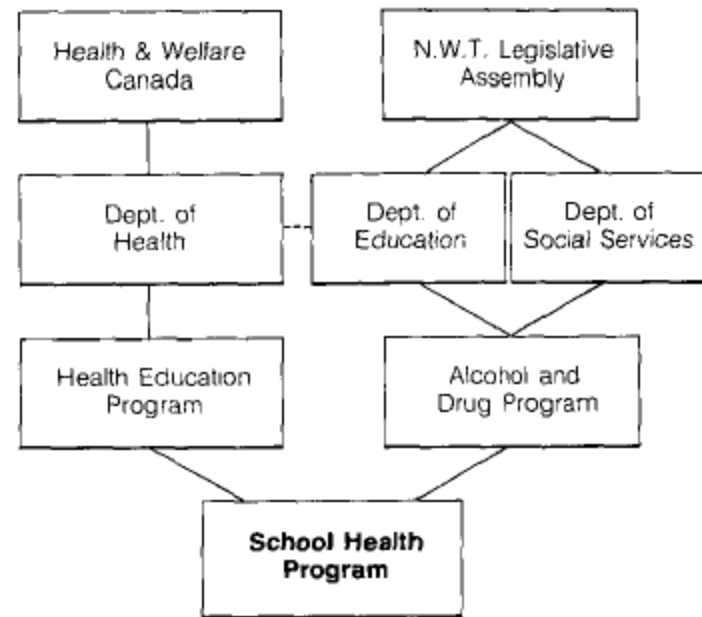
THE HISTORY OF THE N.W.T. SCHOOL HEALTH PROGRAM

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

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

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

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



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

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

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

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

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

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

The questionnaires asked:

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

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

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

Evidence from:

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

A VISION OF HEALTH

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

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

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

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

This is done in three ways:

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

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

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

THE ROLE OF SCHOOLS IN HEALTH PROMOTION

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

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

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

Health behaviour is related to the general beliefs:

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

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

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.

NORTHWEST TERRITORIES

School Health Program

IMPLEMENTATION

MAJOR GOALS

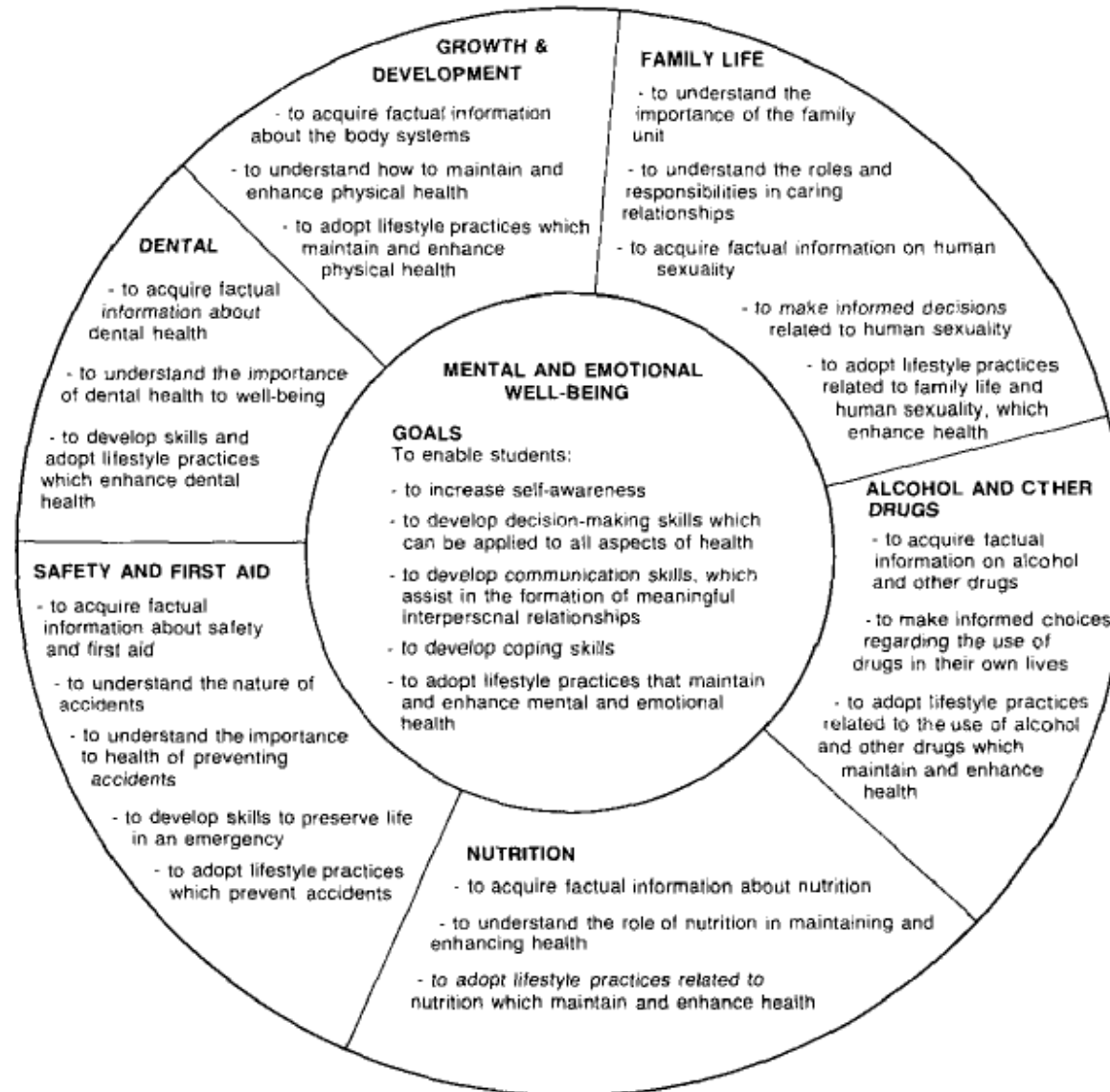
OF THE NORTHWEST TERRITORIES SCHOOL HEALTH PROGRAM

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

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

THE UNITS OF THE PROGRAM

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



SCOPE AND SEQUENCE

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

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

SCOPE AND SEQUENCE

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

SCOPE AND SEQUENCE

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

SCOPE AND SEQUENCE

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

SCOPE AND SEQUENCE

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

SCOPE AND SEQUENCE

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

TIME ALLOCATION

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

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

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

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

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

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

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

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

THE LESSON FORMAT

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

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

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

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

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

The lessons, themselves, are divided into three columns:

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

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

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

Each unit has reference letters:

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

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

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

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

APPROACHES TO THE TEACHING OF HEALTH

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

BUILDING A POSITIVE CLASSROOM ATMOSPHERE

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

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

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

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

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

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

THE TEACHING OF VALUES

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

The program focuses on these values:

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

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

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

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

APPROPRIATE TECHNIQUES FOR TEACHING HEALTH

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

1. *Small Group Discussion*

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

Successful small group discussion depends upon:

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

2. *Brainstorming*

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

Five rules of brainstorming to remember are:

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

3. *Roleplaying*

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

4. *The Question Box*

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

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

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

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

Who Should Use the Language Development Approach

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

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

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

What is the Purpose of the Language Development Approach?

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

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

The Principles of the Language Development Approach

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

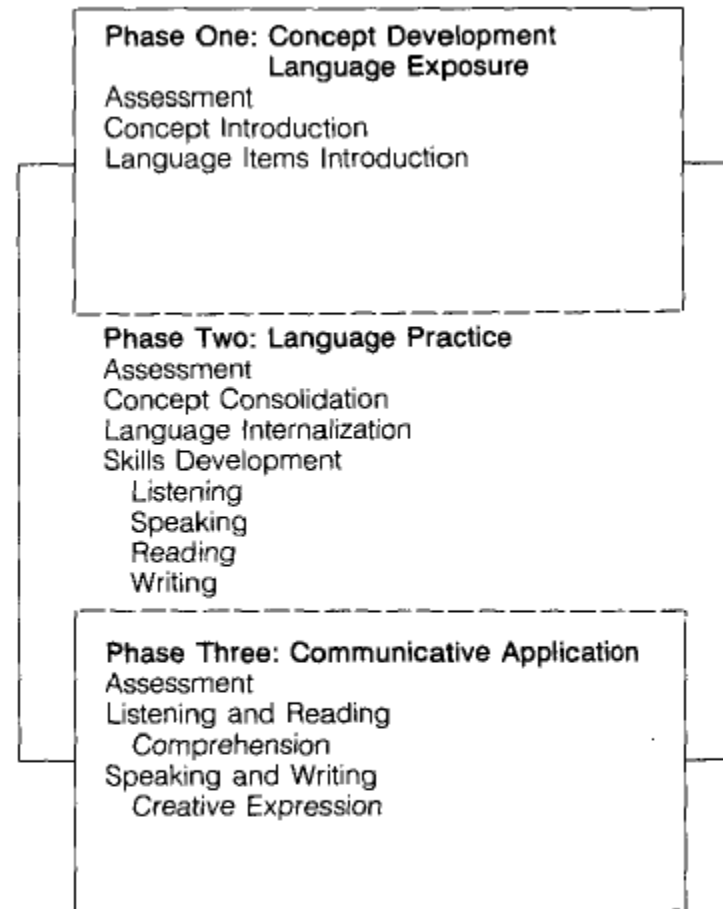
These principles are also valid for students who speak English as a first language. The difference lies in the methods and techniques used. Although designed for second language students, the Language Development Approach allows flexibility in choosing specific classroom practices and techniques to meet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

LANGUAGE DEVELOPMENT FRAMEWORK

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

Intellectual Skills

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



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

How to Develop a Language Development Unit

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

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

How to Plan Language Development Lessons

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

Concept Development/Language Exposure Activities

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

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

Language Practice Activities

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

Communicative Application

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

Intellectual Skills

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

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

INITIAL ASSESSMENT ACTIVITIES

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

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

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

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

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

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

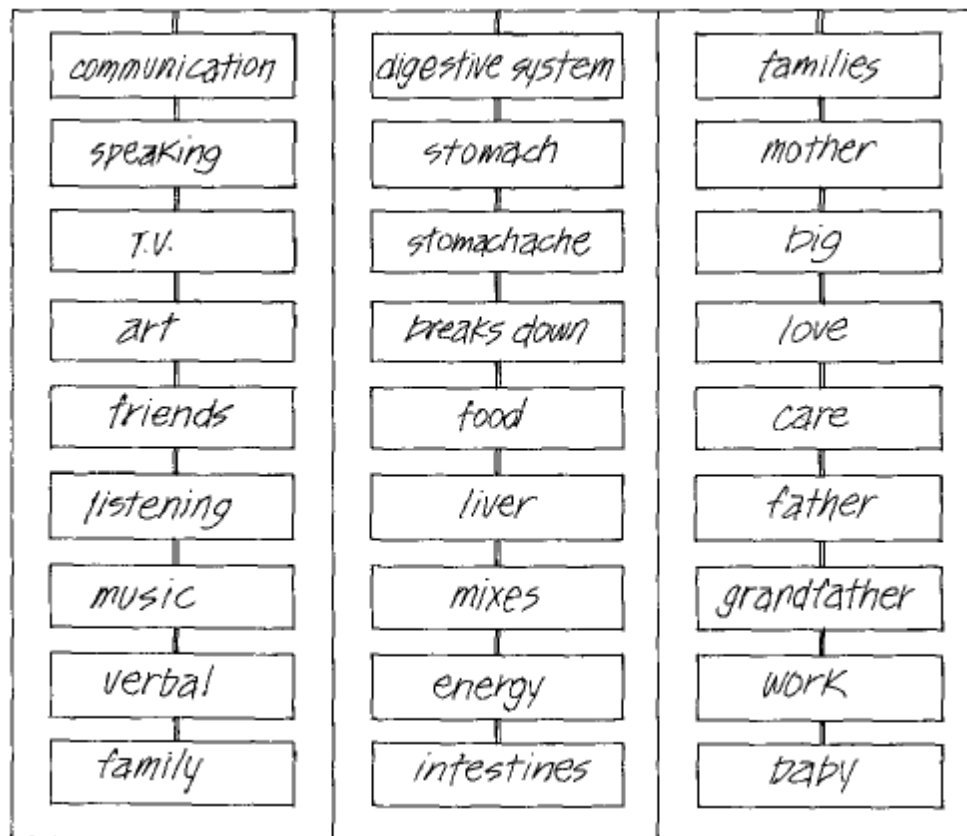
These activities will also help determine what language students have to discuss the topic, i.e., what vocabulary items students already know and what associations they have for each word. It is important to ascertain the meanings students attach to words; sometimes their interpretations may be surprising!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

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

1. Brainstorming

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

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



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 9



Education, Culture and Employment
Health and Social Services

August, 1996

MENTAL AND EMOTIONAL WELL BEING

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|-----------------------------|--|--|
| 1 | CAREER AND LIFE PREPARATION | Personal interests, abilities, attitudes and opportunities influence career and life choices | Students will be able to: i) define career ii) identify personal interests, abilities and attitudes that influence career and life choices iii) identify career and life choices that correlate with personal interests, abilities and attitudes iv) examine the requirements for a variety of career and life choices |
| 2 | CAREER AND LIFE PREPARATION | Searching for and keeping a job involve specific steps | i) identify the different steps involved in actively searching for a job ii) demonstrate the different steps involved in actively searching for a job iii) identify specific behaviours which help people keep a job |
| 3 | LIFESTYLE | Positive lifestyle practices promote health | i) describe the components of a personal lifestyle ii) assess the components of their own mental and emotional lifestyle iii) design a personal program to promote or maintain a healthy mental and emotional lifestyle iv) evaluate the effectiveness of the program |

GROWTH AND DEVELOPMENT

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|--------------------|--|---|
| | | | Students will be able to: |
| 1 | BODY SYSTEMS | The immune system helps protect the body from disease | <ul style="list-style-type: none">i) describe how germs enter the bodyii) describe the body's first two lines of defenceiii) describe how the immune system helps protect the body from diseaseiv) describe common problem conditions related to the immune system |
| 2 | BODY SYSTEMS | The body systems work together to promote health | <ul style="list-style-type: none">i) classify the body systems according to functionii) explain the inter-relationship of the body systems |
| 3 | DISEASE PREVENTION | Non-communicable diseases may be prevented or reduced by positive lifestyle behaviours | <ul style="list-style-type: none">i) identify common non-communicable diseasesii) identify the nature and causes of common non-communicable diseasesiii) identify lifestyle behaviours which prevent non-communicable diseases |
| 4 | LIFESTYLE | Positive lifestyle practices promote health | <ul style="list-style-type: none">i) identify positive lifestyle practices that promote healthy growth and developmentii) design a personal program to promote healthy growth and developmentiii) evaluate the effectiveness of the program |
| 5 | HEALTH CARE SYSTEM | Each person is responsible for appropriate use of the health care system | <ul style="list-style-type: none">i) describe the health care system in the N.W.T.ii) illustrate the cost of health care in the N.W.T.iii) describe responsible use of the health care system |
| 6 | HEALTH CAREERS | The health care system offers many opportunities for health careers | <ul style="list-style-type: none">i) identify health career opportunities in the N.W.T. |

FAMILY LIFE

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|------------------------------------|--|---|
| | | | Students will be able to: |
| 1 | FAMILIES | Males and females have equal potential | i) describe male and female gender role stereotyping ii) identify factors that contribute to changes in gender role stereotyping |
| 2 | FAMILIES | Family members play an important role in meeting the needs of a newborn | i) describe the needs of a newborn ii) explain the roles of family members in meeting the needs of a newborn |
| 3 | FAMILIES | Effective parenting enhances family living | i) describe effective parenting ii) demonstrate the parenting skill of encouragement iii) demonstrate the parenting skill of effective communication iv) demonstrate the parenting skill of logical consequences |
| 4 | FAMILIES | There are many support systems in the community available to families | i) identify family support systems in the community ii) identify the roles of family support systems iii) describe how to effectively use the systems |
| 5 | FAMILIES | The union and development of reproductive cells determine the characteristics of an off-spring | i) describe how the characteristics of an offspring are determined ii) describe how inherited traits determine personal uniqueness iii) describe how the sex of an offspring is determined iv) identify how multiple births are determined |
| 6 | HUMAN DEVELOPMENT AND REPRODUCTION | A female's body undergoes physical changes during pregnancy | i) describe the signs of pregnancy ii) describe some characteristics of the three trimesters of pregnancy iii) describe the stages of labour |

| | | | |
|---|------------------------------------|---|---|
| 7 | HUMAN DEVELOPMENT AND REPRODUCTION | Positive health behaviours during pregnancy promote maternal and child health | i) describe positive health behaviours during pregnancy that promote maternal and child health |
| 8 | TEEN DECISIONS | Opinions differ on how to deal with unplanned pregnancy | i) identify alternatives in dealing with unplanned pregnancy ii) describe how to prevent unplanned pregnancy |
| 9 | LIFESTYLE | Positive lifestyle practices promote health | i) identify positive lifestyle practices that promote healthy sexuality and family relationships |

NUTRITION

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|----------------|---|--|
| 1 | FOOD SELECTION | Food choices and habits are influenced by many factors | Students will be able to: i) identify factors that influence food choices and habits ii) explain how food customs have changed in the NWT iii) describe some of the consequences of changes in food customs in the NWT |
| 2 | FOOD SELECTION | Family needs and preferences influence the planning and preparation of nutritious meals | i) plan a menu for a feast that is suitable for family members of various ages |
| 3 | FOOD SELECTION | Family needs and preferences influence the planning and preparation of nutritious meals | i) prepare a feast that is suitable for family members of all ages ii) demonstrate a willingness to participate in the feast |
| 4 | LIFESTYLE | Positive nutrition lifestyle practices promote health | i) list some nutrition concerns in the NWT and Canada ii) describe some nutrition concerns in the NWT iii) identify preventive behaviours related to nutrition |
| 5 | LIFESTYLE | Positive nutrition lifestyle practices promote health | i) identify the four Canadian Nutrition and Dietary Recommendations ii) identify positive behaviours that reflect the four Canadian Nutrition and Dietary Recommendations iii) design a personal nutrition program based on a behaviour which promotes one of the recommendations iv) evaluate the effectiveness of the program |

DENTAL HEALTH

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|---------------------------------|---|--|
| | | | Students will be able to: |
| 1 | FACTORS AFFECTING DENTAL HEALTH | Many behaviours promote oral and dental health | i) identify behaviours/factors that promote oral and dental health |
| 2 | DENTAL CAREERS | Career planning in dental health involves personal assessment, career opportunities and decision making | i) examine a variety of dental health careers and their requirements |
| 3 | LIFESTYLE | Positive lifestyle practices promote healthy teeth for a lifetime | i) teach positive lifestyle practices related to dental health |

SAFETY AND FIRST AID

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|-----------|--|--|
| | | | Students will be able to: |
| 1. | FIRST AID | ARTIFICIAL RESPIRATION SUPPLIES OXYGEN TO A PERSON WHO IS NOT BREATHING | i) give examples of common causes of breathing difficulties ii) demonstrate how to assess breathing iii) demonstrate how to give assistance in a breathing emergency |
| 2. | FIRST AID | CHOKING IS A BREATHING EMERGENCY THAT CAN BE PREVENTED | i) give examples of common causes of choking ii) demonstrate the universal distress sign of choking iii) differentiate between partially obstructed airway and complete obstruction of airway iv) demonstrate first aid for partially obstructed and completely obstructed airway v) outline safety rules to follow that prevent choking |
| 3. | FIRST AID | EXTERNAL AND INTERNAL BLEEDING REQUIRE IMMEDIATE FIRST AID | i) give examples of common causes of bleeding ii) distinguish between external and internal bleeding iii) demonstrate first aid for external bleeding from a wound without an embedded object iv) demonstrate first aid for external bleeding from a wound with an embedded object v) explain limited first aid for internal bleeding |
| 4. | FIRST AID | SHOCK REQUIRES IMMEDIATE FIRST AID TO PREVENT SERIOUS COMPLICATIONS | i) explain what shock is ii) describe the signs and symptoms of shock iii) list common causes of shock iv) explain first aid for shock v) demonstrate how to place a person into the recovery position |
| 5. | FIRST AID | UNCONSCIOUSNESS REQUIRES IMMEDIATE FIRST AID TO RESTORE THE BLOOD SUPPLY TO THE BRAIN | i) explain what unconsciousness is ii) give examples of common causes of unconsciousness iii) demonstrate first aid for unconsciousness |

SAFETY AND FIRST AID

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|-----------|--|---|
| | | | Students will be able to: |
| 6. | FIRST AID | FRACTURES AND SPRAINS AND DISLOCATIONS REQUIRE FIRST AID TO MINIMIZE THE INJURIES TO BONES, JOINTS AND SURROUNDING TISSUES | <ul style="list-style-type: none">i) explain what a fracture isii) describe the signs and symptoms of an open (compound) fractureiii) describe the signs and symptoms of a closed (simple) fractureiv) demonstrate first aid for each type of fracturev) name two common types of joint injuriesvi) explain what a "sprain" isvii) describe the signs and symptoms of a sprainviii) demonstrate first aid for a sprainix) explain what a "dislocation" isx) describe the signs and symptoms of a dislocationxi) demonstrate first aid for a dislocationxii) demonstrate first aid rescue carries |
| 7. | FIRST AID | HEART ATTACK AND STROKES CAN BE PREVENTED BY RISK REDUCTION BEHAVIOURS AND MINIMIZED BY APPLYING FIRST AID | <ul style="list-style-type: none">i) distinguish between a "heart attack" and a "stroke"ii) identify risk behaviours that can prevent and reduce heart attack and strokeiii) list the signs and symptoms that might be indicators of a heart attackiv) demonstrate initial first aid for a suspected heart attackv) list the signs and symptoms that may be indicators of a strokevi) demonstrate initial first aid for a suspected stroke |
| 8. | FIRST AID | POISONING REQUIRES IMMEDIATE FIRST AID TO MINIMIZE INJURIES | <ul style="list-style-type: none">i) identify four ways that poisons enter the bodyii) give examples of common hazardous household products that may result in poisoningiii) explain safety rules to follow that prevent poisoningiv) demonstrate first aid for each type of poisoningv) prepare a first aid poison prevention manual |

SAFETY AND FIRST AID

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|-----------|--|--|
| | | | Students will be able to: |
| 9. | FIRST AID | IT IS IMPORTANT TO RECOGNIZE THAT SOME ALLERGIC REACTIONS CAN BE LIFE THREATENING AND TO APPLY FIRST AID | <ul style="list-style-type: none">i) recall the characteristics of an allergic reactionii) report on common food and drug allergies and how they affect people differentlyiii) list the signs and symptoms that may indicate an allergic reactioniv) explore personal safety precautions individuals can follow that will prevent allergic reactionsv) demonstrate first aid for each type of allergic reaction e.g. foods, drugs etc. |
| 10. | LIFESTYLE | POSITIVE SAFETY AND FIRST AID LIFESTYLE PRACTICES SAVE LIVES AND MINIMIZE THE EFFECTS OF INJURIES | <ul style="list-style-type: none">i) identify the leading causes of injuries and accidental deathsii) explain the importance of first aidiii) design a personal safety and first aid programiv) evaluate the effectiveness of the program |

ALCOHOL AND OTHER DRUGS

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|------------|---------|---|--|
| 1 | ALCOHOL | THERE ARE LAWS REGULATING THE USE, SALE AND PURCHASE OF ALCOHOL | i) identify the two levels of laws which relate to alcohol ii) identify those parts of the N.W.T. Liquor Act which affect youth who decide to drink alcohol iii) identify when an offence is being committed |
| 2 | ALCOHOL | THERE ARE LAWS REGULATING THE USE, SALE AND PURCHASE OF ALCOHOL | i) determine the number of drinks leading to illegal blood alcohol level (B.A.L.) - may be new legislation ii) explain the laws relating to drinking alcohol and driving |
| 3 | ALCOHOL | THE USE OF ALCOHOL BY YOUTH IS REGULATED UNDER THE YOUNG OFFENDER'S ACT | i) explain that youth are treated differently than adults under the law ii) explain the dispositions for young offenders |
| 4 | ALCOHOL | LOCAL COMMUNITIES MAY CONTROL THE AVAILABILITY OF ALCOHOL | i) explain the process of local options ii) explain why some people wish to have alcohol controlled in their community and why some people do not |
| 5 | DRUGS | DIFFERENT DRUG GROUPS HAVE DIFFERENT CHARACTERISTICS | i) identify the main groups of drugs ii) identify the main characteristics for each drug group |
| 6 | DRUGS | THERE ARE POSSIBLE CONSEQUENCES ASSOCIATED WITH DRUG USE | i) identify possible consequences of drug use ii) explain that any drug may produce a side-effect |
| 7 | DRUGS | THERE ARE LAWS REGULATING THE POSSESSION, USE AND SALE OF DRUGS | i) identify the two laws relating to drugs ii) identify the legal categories of drugs iii) distinguish the three types of criminal acts in the legal system |
| 8 | DRUGS | THERE ARE LAWS REGULATING THE POSSESSION, USE AND SALE OF DRUGS | i) identify the main offences related to drugs ii) explain the penalties associated with each offence iii) identify situations in which an offence is being committed |

ALCOHOL AND OTHER DRUGS

GRADE 9

| LESSON NO. | THEME | CONCEPT | OBJECTIVES |
|-------------------|--------------|---|---|
| 9 | SOLVENTS | DIFFERENCES AND SIMILARITIES OF SOLVENT, CANNABIS AND ALCOHOL ABUSE | i) identify the differences and similarities of solvent, cannabis and alcohol abuse |
| 10 | WELL-BEING | PEOPLE MAKE THEIR OWN DECISIONS ABOUT THE USE OF DRUGS (INCLUDING ALCOHOL) IN THEIR OWN LIVES | i) examine their own attitudes towards the use of drugs in their own lives |

GRADE 9

MENTAL AND EMOTIONAL WELL-BEING

MENTAL AND EMOTIONAL WELL BEING

GRADE: 9

LESSON: 1

THEME: CAREER AND LIFE
PREPARATION

CONCEPT: PERSONAL INTERESTS, ABILITIES, ATTITUDES AND OPPORTUNITIES INFLUENCE CAREER AND LIFE CHOICES

PREPARATION: 1 Prepare a class set of What Am I Like? worksheets (Activity Sheet ME70)
2 Prepare a class set of Doing What I Like To Do worksheets (Activity Sheet ME71)
3 Prepare one large card for each category, with blank flipchart paper underneath (Activity Sheet ME72A - 72B Teacher Answer Guide)

VOCABULARY: career, life, job

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| Students will be able to: i) define career | Students: 1 Define the term 'career'. | Background Information Page ME43 to ME48 Use a dictionary and general discussion to define the term. A career is a chosen course of ,action through life. Today career does not mean a chosen occupation It also includes training, different fobs a person holds and even retirement Career and life preparation involve: <ul style="list-style-type: none">- self-assessment (interests, abilities and attitudes)- investigation of fob opportunities- making decisions about one's career and life choices |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| ii) identify personal interests, abilities and attitudes that influence career and life choices | 2 Complete the What Am I Like? Worksheet. 3 Prepare a list of personal interests, hobbies, abilities and strengths that influence career and life preparation. | <p>Refer to Activity Sheet ME70.</p> <p>Have students think about what they are like, what they like to do and are good at. Ask them to record their answers on the worksheet. When they are finished, have them give the worksheet to a friend or an adult who knows them well and have the friend or adult write down how they perceive the student. Compare the two responses.</p> <p>Refer to Activity Sheet ME71.</p> <p>It is important that all students know their personal strengths etc., whether they become wage earners, pursue a traditional lifestyle, work at home or for creative use of leisure time. This will help them to feel worthy and valuable in all roles that they assume in the community a g., doctor, hunter, mother, volunteer.</p> <p>Have students complete the Doing What I Like To Do worksheet</p> <p>Discuss how knowing what a person likes to do helps him/her make career choices.</p> |
| iii) identify career and life choices that correlate with personal interests, abilities and attitudes | 4 Identify which categories of career/life choices are of most interest to them. | <p>Refer to Activity Sheet ME72A.</p> <p>Refer to Activity Sheet ME72B for answers.</p> <p>Copy, or enlarge, each category of career/life choice onto a large card. Teachers should add any category which would be particularly suited to their community. Place each card at intervals around the room with a sheet of blank flipchart paper below. Divide the class into eight groups. Have each group start at a different category, by reading the card describing the kind of things people in this category do. Brainstorm jobs/careers in that category and write them down on the flipchart paper Move to the next category and add to the list for that category.</p> |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|---|
| iv) examine the requirements for a variety of career and life choices | 5 Interview a community person whose career/life choice is of interest and prepare a report or read some booklets or pamphlets about career/life choices of interest and prepare a report. | <p>Once each group has completed each category, have students individually write down the following:</p> <ul style="list-style-type: none"> - the group they think they would be most suited to - their second choice - their third choice <p>The following may be used as a guide for writing the report:</p> <ul style="list-style-type: none"> - qualifications - duties and responsibilities - experience related to their choice - abilities - education - pay - hours of work - place of work |

WHAT AM I LIKE?

Read each item on the list. Decide if the statement describes you or not. Score yourself on each item using the point system:

- 3 - This is really me!
- 2 - This is a bit like me!
- 1 - This is not like me at all!!



When you are finished, ask a friend or an adult who knows you well to write down how they see you. Compare the points your friend gives you with what you gave yourself.

| Name: | This is really me! (3 points) | This is a bit like me! (2 points) | This is not like me at all! (1 point) | How my friend sees me. |
|---------------------------------------|----------------------------------|--------------------------------------|--|------------------------|
| Make friends easily | | | | |
| Like being with other people | | | | |
| Good at organizing things | | | | |
| People ask me for help/advice | | | | |
| Stick with a job until it is finished | | | | |
| Have a hobby or sport I do every day | | | | |
| Neat and tidy | | | | |
| Good at thinking up new ideas | | | | |
| Like being the same as other people | | | | |
| Like a challenge | | | | |
| Good at math | | | | |
| Good at following directions | | | | |

| | This is really me! (3 points) | This is a bit like me! (2 points) | This is not like me at all! (1 point) | How my friend sees me. |
|--|--|--|--|-------------------------------|
| Like to work with my hands | | | | |
| Good at sports | | | | |
| Can repair snowmobiles, motor bikes etc, | | | | |
| Like building things | | | | |
| Flexible | | | | |
| Ask for help if needed | | | | |
| Know how I feel about things | | | | |
| Think about other peoples' feelings | | | | |
| Easy going | | | | |
| Know what I want to do | | | | |

List the 5 items that are really you!

1. _____
2. _____
3. _____
4. _____
5. _____



Explain how each of those items might help you in your career/life choices

e.g , Like being with other people - would enjoy a job where you meet lots of new people e.g., nurse, working in a store etc.

DOING WHAT I LIKE TO DO

ME71

Think about how you spend your free time. What things are you good at? What are you interested in? What are your hobbies? List 13 things you really like doing.

1

2.

3.

4.

5

6.

7.

8

9

10

11.

12.

13

Now!!!

- Put an A (for alone) after those things you do by yourself Put an O + (for others) after those things you do with other people.
- If the activity needs pre-planning, write a P. If it can be done at the last minute, write L M
- Put an S beside any items which are seasonal and a Y beside year round activities
- Write I after any items where you'd really like to improve your skills.
- Write the date when you last did each item
- Put a \$ after each thing that costs money.
- Put a * beside any item you've been praised or rewarded for.
- Put an F after any activity you learned from a family member.
- Pick the 3 things you like most. Circle them.
- List 3 items which have the possibility of the activity developing into a job.
- How can knowing what you like to do help you identify career possibilities.

WHERE DO I GO FROM HERE?

Mechanical/Construction

- working with tools
- fixing things
- understanding how things work



Resource development/management

- like the outdoors
- like working with animals/ plants/rocks
- self-sufficient



Service

- doing things for other people
- working with food
- serving people
- keeping things clean, tidy



Helping/Homemaking

- working with other people
- caring for other people
- organizing things



Arts/Crafts

- very creative
- expressing themselves in words, drawings, music, acting



Clerical

- organizing things
- following directions



Practical

- doing things with their hands
- working machinery



WHERE DO I GO FROM HERE?

(Teacher Answer Guide)

Job List

Mechanical/Construction:

- welders
- mechanics
- carpenters
- plumbers
- electricians

Practical:

- bus drivers
- heavy equipment operators
- cab drivers
- bakers
- miners

Clerical:

- secretaries
- file clerks
- bank teller/bookkeepers
- receptionists
- word processors

Service:

- waiters/waitresses
- cooks
- hotel workers
- hairdressers
- store clerks
- Armed Forces
- firefighter
- janitor

Resource Development:

- hunters
- fishers
- trappers
- wildlife officers
- geologists

Arts/Crafts:

- artist
- carver
- sewer
- photographer
- musician
- writer

Helping/Homemaking:

- nurses/doctors
- babysitters
- mothers/fathers
- teachers/day care workers
- social workers
- flight attendants

MENTAL AND EMOTIONAL WELL BEING

GRADE: 9

LESSON: 2

THEME: CAREER AND LIFE
PREPARATION

CONCEPT: SEARCHING FOR AND KEEPING A JOB INVOLVE SPECIFIC STEPS

- PREPARATION:
- 1 Prepare a class set of the Sample Resume Outline (Activity Sheet ME73)
 - 2 Prepare a class set of the Letter of Application worksheet (Activity Sheet ME74)
 - 3 Prepare a class set of the Sample Application Form (Activity Sheet ME75)
 - 4 Prepare enough Sample Interview Question Sheets for one for each group (Activity Sheet ME76)
 - 4 Prepare a class set of cards with inappropriate work behaviours
-

VOCABULARY: resume, application, interview, acceptance, rejection

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| Students will be able to: i) identify the different steps involved in actively searching for a job | Students: 1 Brainstorm the steps involved in searching for a job | Background Information Page ME43 to ME48 * This lesson will require several class periods Pretend that one of the students is looking for a job S/he needs some advice on how to go about it. The steps involved should include: - identifying own interests, abilities etc (This was covered in the last lesson) - identifying where to look for a job - writing a resume - filling out an application form, writing a letter of application - preparing for a job interview |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|---|--|
| ii) demonstrate the different steps involved in actively searching for a job | 2 List where in the community to look for jobs. | Jobs might be found: <ul style="list-style-type: none"> - through advertisements on community bulletin boards - through advertisements in government offices - in newspaper want ads - at Canada Employment Centres (Inuvik, Ft Simpson, Ft Smith, Hay River, Yellowknife, Rankin Inlet, Iqaluit) - at Outreach Projects (Ft Resolution, Igloolik, Pond Inlet, Pangnirtung, Eskimo Point, Ft Norman, Tree of Peace in Yellowknife, Rae-Edzo) - by word of mouth - by applying to individual organizations |
| | 3 Write a resume | Refer to Activity Sheet ME73. Have students use the outline to write their own resume. |
| | 4 Write a letter of application | Refer to Activity Sheet ME74. Have students choose one of the newspaper want ads on the worksheet and write a letter of application for the job. (A sample letter is included on the worksheet.) |
| | 5 Complete a job application form | Refer to Activity Sheet ME75. Have students complete the application form. |
| | 6 List some interview tips | Brainstorm tips people should keep in mind when going for an interview. <ul style="list-style-type: none"> - Be on time. - Look neat and tidy. - Smile and greet your interviewer as you go in, shake hands. - Try to look confident, even if you are nervous. - Speak clearly. - Ask questions about the position. |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | |
|---|---|---|------------|-----------|---|---|
| | <p>7 In small groups, role play a job interview</p> <p>8 List ways to follow up on the interview</p> <p>9 Discuss how to handle acceptance and rejection</p> | <ul style="list-style-type: none"> - Try not to fiddle with your hands, bite your nails etc. - Be honest and sincere. - Show how your qualifications match the job. - Be polite. - Watch for clues that the interview is over. - Thank the interviewer. <p>Refer to Activity Sheet ME76.</p> <p>Use the sample interview questions as an outline for an interview situation. Each group can perform the roleplay for the rest of the class. The class members can decide to which applicant they would give the job.</p> <p>Brainstorm ways people can follow-up on an interview. Ways include:</p> <ul style="list-style-type: none"> - calling on the phone - writing a letter <p>Ways to handle acceptance or rejection include:</p> <table border="1" data-bbox="963 1003 1980 1330"> <thead> <tr> <th data-bbox="963 1003 1417 1045">Acceptance</th> <th data-bbox="1417 1003 1980 1045">Rejection</th> </tr> </thead> <tbody> <tr> <td data-bbox="963 1045 1417 1330"> <ul style="list-style-type: none"> - decide if you really want this job - verbally accept the job - write a letter of acceptance - find out when you start work </td> <td data-bbox="1417 1045 1980 1330"> <ul style="list-style-type: none"> - don't take it personally (it's your skills they're rejecting, not you) - think about any positive things they said about you - keep on looking for another job - thank them for interviewing you - ask if they will keep your application on file </td> </tr> </tbody> </table> <p>If you decide <i>not</i> to take the job, write a letter thanking the employer for his/her time and saying why you will not be taking the job.</p> <p>Discuss.</p> | Acceptance | Rejection | <ul style="list-style-type: none"> - decide if you really want this job - verbally accept the job - write a letter of acceptance - find out when you start work | <ul style="list-style-type: none"> - don't take it personally (it's your skills they're rejecting, not you) - think about any positive things they said about you - keep on looking for another job - thank them for interviewing you - ask if they will keep your application on file |
| Acceptance | Rejection | | | | | |
| <ul style="list-style-type: none"> - decide if you really want this job - verbally accept the job - write a letter of acceptance - find out when you start work | <ul style="list-style-type: none"> - don't take it personally (it's your skills they're rejecting, not you) - think about any positive things they said about you - keep on looking for another job - thank them for interviewing you - ask if they will keep your application on file | | | | | |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

iii) identify specific behaviours which help people keep a job

10 List appropriate behaviours which will help them to keep a job.

Prepare several sets of cards with inappropriate work behaviours on them. Divide the class into small groups. Have one student act out the inappropriate behaviours. The group has to decide what the corresponding appropriate behaviours would be.

| Inappropriate | Appropriate |
|---|---|
| - arriving at work late | always being on time |
| - leaving early (skipping out) | staying at work as long as you should |
| - staying away from work without a good reason | calling in first thing in the morning if you are ill |
| - calling your friends to chat to them | Doing what you're paid to do, during working hours calling your friends at your <u>lunch break</u> |
| - dressing in your scruffy old jeans and T-shirt (if you're a receptionist) | wearing appropriate clothes (this will vary depending on your job) |
| - constantly making mistakes | asking someone to explain anything you don't understand |
| - being rude, if someone corrects you | learning to accept criticism as a way of improving what you do |
| - walking out of the job | giving enough notice (usually two weeks) |
| - yelling at people | being a good listener, giving your opinion in a calm nonthreatening manner |



Discuss with the class .

SAMPLE RESUME OUTLINE

ME73

Personal Information Name _____(Full name)
Mailing Address _____
_____ (include Postal Code)
Telephone _____

Education History _____ (Start from the most recent. Include the schools you have attended, and any subjects which relate directly to the job for which you are applying.)

Work Experience: _____ (Start from the most recent. Include part-time, summer work and volunteer work.)

Hobbies and Interests. _____ (Include any which relate to the job, plus any which might be useful e.g., First Aid)

References. _____ (Include the names of 2 or 3 people who know you well and *whose permission you have* e.g., a teacher.)

LETTER OF APPLICATION

ME74

Choose one of the newspaper ads and write a letter of application

RECEPTIONIST

Required immediately. Must be bilingual and have pleasant telephone manner. Typing desirable.

STORE CLERK required immediately for Bay Northern Store. Must be highly motivated and reliable. Able to work Saturdays.

SEWING MACHINE OPERATORS for Parka Company. Must be experienced. Must be able to work flexible hours.

APPRENTICE CARPENTER

On-the-job training provided. Some courses will be taken at Arctic College in Fort Smith. Good starting pay.

NEED MONEY NOW?

NO EXPERIENCE NECESSARY

Contact
Funny Business
Box 000
Edmonton

INTERPRETER/TRANSLATOR

for new hospital. Must be bilingual (Inuktitut and English). Able to translate medical terms Must have good people skills.

SAMPLE LETTER

Box 1240
Inuvik,
N.W.T. XO E OTO

March 23, 1988

Manager
Bay Northern Store
Inuvik, N.W.T.
XOE OTO

Dear Sir/Madam,
I wish to apply for the position of store clerk, advertised in this week's Inuvik Drum.

I have completed Grade 10 at Samuel Hearne Secondary School. I have also worked part-time filling shelves in your store on Saturdays.

I am enclosing my resume which will give you further details of my background.

I look forward to hearing from you.

Yours truly,

J North

SAMPLE APPLICATION FORM

General Information

Complete all blanks Use CAPITAL LETTERS

| | | | | | | | |
|---------------------------------------|--|-------|--|-------------------------|--|-------|--|
| Name in full | | | | Social Insurance Number | | | |
| Last | | First | | | | | |
| Address | | | | | | City | |
| Province | | | | Postal Code | | Phone | |
| Position you are applying for (Title) | | | | | | | |

Be sure you write down the correct title →

← Always read instructions carefully
 ← Leave this blank, if you don't have one. You will have to get one, if you are offered a job. You can apply for a SIN. by filling out an application form at the Post Office.

Education

| Names and addresses of schools attended | Dates of attendance | Type of Diploma |
|---|---------------------|-----------------|
| | | |
| | | |
| | | |
| | | |

Start with your most recent school first →

← If you do not have a diploma, write down which grade you have completed

Employment

| Dates | Name and Address of Employer | Job Title and Duties | Rate of Pay | Reason for Leaving |
|-------|------------------------------|----------------------|-------------|--------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Start with the most recent first List summer, volunteer or part-time jobs if you have not had any other jobs →

← This can be per hour, day, week or year.

Which languages do you speak? _____ Additional interests/hobbies _____

References

| Name | Title | Address | Phone |
|------|-------|---------|-------|
| | | | |
| | | | |
| | | | |

You should be able to carry on a short conversation. →

← References should be people who know you well, but not a close relative e.g., a teacher or former employer. You should ask them before you put their names down.

Signature _____

SAMPLE INTERVIEW QUESTIONS

ME76

- 1 Tell me a little bit about yourself?
- 2 What were your grades like at school?
3. Do you have any experience with work like this?
- 4 Why do you want this job?
- 5 What kinds of things do you do in your spare time?
- 6 Why do you think I should hire *you* for this job?
7. If you were offered the job, when could you start work?
- 8 What was your favourite subject at school? Why?
- 9 Would you be prepared to take more training for this job?
- 10 Do you have any questions you want to ask?

Thank you for coming. We will be able to let you know in about a week



MENTAL AND EMOTIONAL WELL BEING

GRADE: 9

LESSON: 3

THEME: LIFESTYLE

CONCEPT: POSITIVE LIFESTYLE PRACTICES PROMOTE HEALTH

PREPARATION: 1 Prepare a class set of Lifestyle Quiz worksheets (Activity Sheet ME77)
2 Prepare a class set of Improving My Lifestyle worksheets (Activity Sheets ME78A and 78B)

VOCABULARY: lifestyle, assess

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| Students will be able to: i) describe the components of a personal lifestyle | Students: 1 Define the term 'lifestyle'. | Background Information Page - Lifestyle is an individual's way of life. It includes many different categories: - mental and emotional well-being - safety - nutrition - dental health - fitness - leisure - hygiene - drug use - social well-being |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | | | |
|--|---|---|-----------|-----------|------------|---|--|--|
| <p>ii) assess the components of their own mental and emotional lifestyle</p> <p>iii) design a personal program to promote or maintain a healthy mental and emotional lifestyle</p> | <p>2 Give specific examples of knowledge, attitudes and behaviours that reflect positive mental and emotional well-being.</p> <p>3 Complete the Lifestyle Quiz.</p> <p>4 Design a personal program to promote or maintain a healthy mental-emotional lifestyle.</p> | <p>It reflects an individual's knowledge, attitudes and health behaviours. Health behaviours can be either positive (health-enhancing) or negative (health-compromising).</p> <p>Discuss.</p> <p>Some examples of a positive mental and emotional well-being include.</p> <table border="1" data-bbox="989 560 1797 860"> <thead> <tr> <th data-bbox="989 560 1249 621">Knowledge</th> <th data-bbox="1249 560 1509 621">Attitudes</th> <th data-bbox="1509 560 1797 621">Behaviours</th> </tr> </thead> <tbody> <tr> <td data-bbox="989 621 1249 860"> <ul style="list-style-type: none"> - knows personal strengths and weaknesses - knows decision-making skills - knows assertiveness skills </td> <td data-bbox="1249 621 1509 860"> <ul style="list-style-type: none"> - feels good about him/herself - respects self and others </td> <td data-bbox="1509 621 1797 860"> <ul style="list-style-type: none"> - communicates effectively - uses appropriate coping skills </td> </tr> </tbody> </table> <p>Refer to Activity Sheet ME77.</p> <p>Have students complete the inventory to assess their own mental-emotional lifestyle.</p> <p>Refer to Activity Sheet M E78A.</p> <p>Have students select one aspect of their mental-emotional lifestyle (from Activity Sheet ME77) which they want to improve It should be one of the statements to which they answered 'Never' or 'Some of the time' on Activity Sheet ME77. Then they should decide on their goal and devise a strategy to work on it.</p> <p>Teachers should work individually with students to ensure that goals are specific, measurable and realistic.</p> | Knowledge | Attitudes | Behaviours | <ul style="list-style-type: none"> - knows personal strengths and weaknesses - knows decision-making skills - knows assertiveness skills | <ul style="list-style-type: none"> - feels good about him/herself - respects self and others | <ul style="list-style-type: none"> - communicates effectively - uses appropriate coping skills |
| Knowledge | Attitudes | Behaviours | | | | | | |
| <ul style="list-style-type: none"> - knows personal strengths and weaknesses - knows decision-making skills - knows assertiveness skills | <ul style="list-style-type: none"> - feels good about him/herself - respects self and others | <ul style="list-style-type: none"> - communicates effectively - uses appropriate coping skills | | | | | | |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| iv) evaluate the effectiveness of the program | <p>5 Practise their personal programs for a given time period.</p> <p>6 Describe the degree of success of their program.</p> | <p>Refer to Activity Sheet ME78B.</p> <p>Have students record their own progress on a daily basis for a fixed length of time.</p> <p>Refer to Activity Sheet ME78B.</p> <p>Have students refer to the evaluation section of their program.</p> <p>These personal programs can be continued over an extended length of time. Goals can be altered as necessary.</p> |

LIFESTYLE QUIZ

ME77

Decide if the following statements are true for you- most of the time, some of the time or never.

Put a cross in the appropriate box

| | Most of the time | Some of the time | Never |
|---|-------------------------|-------------------------|--------------|
| 1. I feel good about myself. | | | |
| 2. I know my own strengths and weaknesses. | | | |
| 3. I respect myself. | | | |
| 4. I can make responsible decisions easily. | | | |
| 5. I enjoy new experiences. | | | |
| 6. I am assertive. | | | |
| 7. I have realistic plans for my life. | | | |
| 8. I know who to ask if I need help. | | | |
| 9. I get satisfaction when I work hard at things. | | | |
| 10. I am happy with my life. | | | |
| 11. I make friends easily. | | | |

| | Most of the time | Some of the time | Never |
|---|-------------------------|-------------------------|--------------|
| 12. I respect my elders, family and friends | | | |
| 13. I am kind to others | | | |
| 14. I can receive and give constructive criticism. | | | |
| 15. I trust others and hope they trust me | | | |
| 16. I like being by myself | | | |
| 17. I feel comfortable talking and listening to other people. | | | |
| 18. I get along well with my parents | | | |
| 19. I belong to a group | | | |
| 20. I can receive and give honest compliments. | | | |

Scoring When you have finished answering all the questions, add up your score as follows:

Most of the time _____ x 3 points =

Some of the time _____ x 2 points =

Never _____ x 1 point = _____

Total

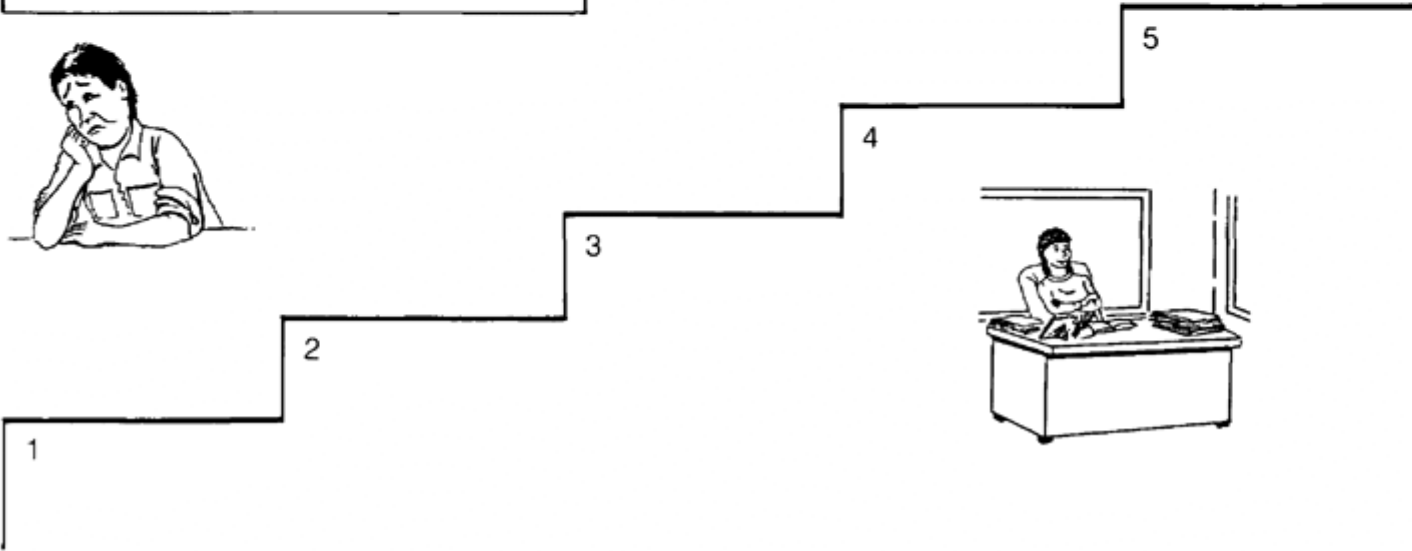
IMPROVING MY LIFESTYLE

Select one thing that you can do personally to improve your own mental and emotional lifestyle. Develop an action plan to achieve your goal.

MY GOAL:

WHY I CHOSE THIS GOAL

STEPS TO REACH MY GOAL
(What I have to do to reach my goal)



SUPPORT I NEED TO REACH MY GOAL

PROGRESS.

(Chart your daily progress)

| | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY | SUNDAY |
|--------|--------|---------|-----------|----------|--------|----------|--------|
| WEEK 1 | | | | | | | |
| WEEK 2 | | | | | | | |
| WEEK 3 | | | | | | | |
| WEEK 4 | | | | | | | |

HOW DID I DO?

(Summarize your progress and assess how well you did.)

GRADE 9

TEACHER BACKGROUND INFORMATION

MENTAL AND EMOTIONAL WELL-BEING

CAREER AND LIFE PREPARATION

The terms 'career' and 'job' are often used synonymously in the School Health Program, the following definitions are used.

career: a chosen course of action through life It includes training, the different jobs a person holds, hobbies, even retirement.

job tasks a position within an organization. This position has particular tasks and responsibilities assigned to it.

Grade 9 is a watershed for many students in the Northwest Territories. It is the year when they decide whether to continue their education to High School or to leave school. The more education a person has, however, generally the more opportunities are available to that person. Nowadays, most people will have a number of different jobs and will be re-trained a number of times between the time they leave school and the time they retire.

Job search skills which students learn now, as well as an ability to identify their own strengths and interests will probably be used many times over. They may be used to determine one's career, to search for jobs, to pursue volunteer work or to make effective use of leisure time.

Making Decisions for the Future

Grade 9 students have first to decide whether to continue their education, or to leave school and look for a job. They should be encouraged to use the decision-making process

- What is the problem?
- What are the alternatives?
- What are the consequences of each alternative?
- What is important to the person?
- Make a decision?
- Evaluate the decision at a later date.

Leaving School

| Pros | Cons |
|---------------------------------|---|
| - Stay in community with family | - low skill level - lower earning potential - fewer job opportunities |

Continuing Education

| Pros | Cons |
|--|--|
| - Greater job opportunities - More skills - Higher earning potential | - May have to leave community - A few years' delay before a person starts earning money |

Assessing one's likes and dislikes, one's interests, abilities and attitudes is an important first step in making choices related to one's career and life pattern. E.g., a person who likes helping people may be bored if s/he has to work a piece of machinery all day.

Matching these interests and abilities to particular jobs may indicate what kind of job the person should look for.

Active Job Searching

Finding, getting and keeping a job that is right for the individual takes time, careful planning and patience. Looking for a job requires energy. It involves trying to make employers notice the special skills which that person has. The success of a job search often depends on how much effort is put into it.

Finding Employers

a) Personal contacts - telling other people exactly what kind of job they are looking for and asking them if they know of any jobs that are open and or will be opening soon. Some of the people who may be helpful in finding job openings are friends, relatives, or neighbours. This method of looking for a job may be slow but is often effective.

b) Media - Newspapers, employment bulletins as well as radio and television stations advertise job openings. In newspapers, job openings are listed in the classified section and in larger city newspapers such as the Edmonton Journal they have a section on Career Opportunities. Some employers such as the Territorial and Federal Governments advertise through their employment bulletins which are put up in all the Departments. Some schools also get copies of employment bulletins. It is important for people to read or listen to the advertisements very carefully to make sure the job really interests them and make sure they have the skills necessary for that job.

c) How to identify employers - Sometimes job openings can be found by contacting employers even if there isn't a position advertised or even if they don't have a position open at that time.

It is a waste of time for people to contact employers who do not need their special skills and abilities.

A person with little experience should contact employers who offer on-the-job training. A lot of employers, especially for students, will hire because they think they are capable of learning new skills and are willing to try all kinds of things to obtain skills. An important thing to remember is that. **IF A JOB IS WORTH DOING, IT IS WORTH DOING WELL.** Sometimes, it is necessary for people to do work that they really don't enjoy.

Sometimes employers can be found in the Yellow Pages of the telephone book. Another good source is what is known as a Business Directory. These books supply the name, address and other useful information about a company and what its business is all about. Business Directories can usually be found in public libraries. Employers can be contacted by mail, by telephone or in person by going to their office. Actually seeing the employer in person is usually the best way.

The person to get in touch with is the person who makes the decisions about hiring.

If seeing the employer in person is not possible, it is acceptable to write them a letter. In a day or two when they will have received the letter, it can be followed up with a telephone call. They might ask about the kind of work the person is looking for and why they want to work for that company.

Canada Employment Centres

1. Employment Centres provide a service which is free of charge to both the employer and the job seeker. It serves both employed and unemployed people.
2. They have lists of employers with job openings and they may provide.
 - information about job openings
 - assistance in getting interviews or making contact with employers
 - testing (typing test, education level test)
 - help in preparing letters, application forms
 - information about training and how to get financial assistance to take courses
 - information about jobs in other communities and how to get financial assistance if it is required

Canada Employment Centres are located in the following communities (June 1988):

- Inuvik
- Fort Simpson
- Fort Smith
- Hay River
- Yellowknife
- Rankin Inlet
- Iqaluit

Outreach Projects (funded by Canada Employment) are located in:

- Igloolik
- Pond Inlet
- Pangnirtung
- Eskimo Point
- Fort Resolution
- Fort Norman
- Rae-Edzo
- Tree of Peace, Yellowknife

Writing a Resume

A resume is a record with all the information that will interest an employer.

Personnel managers often get a lot of applications and by looking over a written record they get a better idea of a person's skills than from the basic information given on the average application form. The resume should be short, easy to read and written in such a way that it shows immediately the person's special skills and abilities.

1. Personal information is put on the top of the page and includes the person's full name, address and a telephone number where s/he can be reached or where a message can be left.

2. Educational history is very often the most important part of the list. This section should include the names of the schools the person attended, the type of programmes, degree or certificate s/he received when s/he finished. Employment training courses and workshops should also be listed - these show that the person has "kept in touch" and is always interested in learning more.

3. Work experience or employment records are a necessary part of the list. Dates should be given along with the names of past employers, their addresses and a description of the work duties. Job descriptions should be as short as possible but should include the things which the person did in that job, skills needed to do the job, and responsibilities. It is also good to let an employer know about any promotions in past jobs Part-time, summer or volunteer work should also be included.

4. Leisure time activities provide some information about the person's personality Involvement in activities such as baseball, hockey or other sports shows responsibility and an involvement in the community. Certificates received from special skill training (First Aid, Life Skills or Coaching) should be listed.

5. References don't have to be shown on the list but they should be available if the employer asks for them. References should be chosen carefully and should not include family members or relatives. Many employers won't accept references if they are from family members.

BEFORE making a list of references, it is important for the person to ask the people s/he has chosen if it is okay to use their name and if they will give him/her a good recommendation for the job s/he is applying for.

Some important points about writing a resume:

- It should be typed neatly on plain white paper.
- There should be no mistakes in spelling, punctuation or typing.
- It should be simple and short (One or two pages at the most).
- It should include **all** the person's special skills.
- It should be truthful.
- Employers may check out the information.
- Language should be clear and simple.
- The writer should keep a copy of his/her resume for reference.

Writing a Letter

The following are the usual ways of writing letters asking about jobs, covering letters and letters of application.

The letter should be short and to the point (one page) and should basically tell the employer what the applicant has to offer. A resume should be included.

The first sentence should be written so that right away it gets the employer's attention. The letter must make the employer want to read the resume and want to meet the person who wrote it.

Telling an employer how one's skills are important to the particular job s/he is applying for will encourage the employer to learn more about the person.

At the end of the letter, a telephone number should be included where the employer can contact the applicant or at least leave a message.

The letter should be typed and checked carefully for spelling and punctuation mistakes.

The letter should always be an original - not a xerox copy.

A resume should always have a covering letter.

Answering an Advertisement

The following things should be kept in mind when answering an advertisement.

- The person should be sure they are interested in the job and have the special skills necessary to do it.
- The job should be applied for in the way the advertisement asks. If the employer is in a hurry to fill a job position the ad may request that applicants simply telephone their office and give their list of skills over the phone. Employers advertising a summer position often want an application form completed. If no special way of applying is advertised, then the person can send a letter with his/her employment record.
- The job position, the date it was advertised and the place where the advertisement appeared should be included in the letter. Some positions have what they call a file, competition or reference number and this should be included in the letter also.
- The person applying for the job should keep a copy of all his/her applications.

Completing Application Forms

When people contact an employer they will probably be asked to fill out an application form. They must know how to fill the form out properly to be considered for the job. If they are careful in filling out the form the employer will think they are careful when doing their work. A neat and carefully completed form will tell the employer good things about the applicant. Not everyone can or does write or print with perfect form and in this case neatness really applies. The important thing is to fill it out as carefully as possible.

Each company or business will have its own type of application form and they have a certain way they want them filled out. The following points will be helpful in filling out most application forms.

- If the form does not have to be completed in the office, it can be taken home and filled out carefully and neatly.

If two copies of the form can be obtained, one should be filled out in pencil and kept for reference. The other should be typed or printed in ink and given to the employer.

Some forms say print, some say write and some say to type the information. The instructions should be followed carefully so that no blank spaces are left. If a question does not apply the person can fill in the blank with the abbreviation N/A. This means "not applicable".

The name should be written out in the order asked for e.g., last name, first name, middle initial.

North, Jim L.

An address and telephone number should be included so that the employer can get in touch with the applicant, if necessary.

It is important to state exactly what position the applicant is interested in.

Work experience and education should start with the most recent and work back from there.

Any languages which the applicant has a working knowledge of should be included (in the N.W.T., particularly if it is a native language).

All questions should be answered honestly.

If it asks for references, their names and addresses should be included. People listed for references should always have given their permission first.

The form should be checked over for accuracy before handing it in.

It should be sent off immediately.

Attending an Interview

The interview is probably the most important part of the job search. Many people feel very nervous about job interviews.

Everyone at some point in time has been interviewed so employers know how the person feels and will try and make him/her feel less nervous.

Employers hire someone because they like the person and they need that person's special skills to get the jobs in their company done. An interview provides the applicant with information about the company and is also to see if s/he can do the job. Both the applicant and the interviewer will be asking the same question. "Do I really want to work with this person".

Preparing for an Interview

There are several ways to help get over nervousness before an interview and listed below are a few examples that may help.

- Try and get plenty of sleep the night before the interview.
- Clothes should be neat and clean because one's appearance may be important. For SOME job interviews it is okay to wear jeans or cords but OTHER jobs may require dress pants or a skirt.
- It is important to be on time Have the correct time and place written down.
- Find out, and remember, the name of the person who is conducting the interview.
- Make sure a copy of the resume is available.

Going for an Interview

When it is time for the interview, take a deep breath and appear as confident as possible.

- Eye contact is very important. This means looking directly at the interviewer.
- Be sure to speak loudly and clearly enough for the interviewer to hear.
- It is alright to ask the interviewer to repeat a question. Do it politely.
- Answer questions honestly.
- Try not to answer questions with 'yes' or 'no'. Expand on the answers a little.
- It may be necessary to fill out an application form or to have a medical.

- When the interview is over, ask when the interviewer will make a decision and how the applicant will know about the decision.
- Say a polite 'Goodbye' when the interview is over. Thank the interviewer for his/her time.

Questions Interviewers May Ask

The following are some common questions which an interviewer may ask.

- 1 Tell me (us) about yourself.
- 2 Why do you want to work for this company?
- 3 What do you know about the job(s) that are open?
- 4 What other jobs have you had?
- 5 Why did you leave your other job?
- 6 What courses did you like best in school?
- 7 What courses didn't you like in school?
8. Why did you choose to apply for a (secretary's, waitress', mechanic's) job?
- 9 What do you know about our company?
- 10 What special training have you had that is necessary for this job?
- 11 What are your hobbies?
- 12 What special things do you think a person does that helps them get promotions in a job?
- 13 Do you like to work with others or do you prefer to work by yourself?
14. Can you work with little or no supervision?
- 15 Do you prefer to work indoors or do you like outdoor work better?
- 16 Did you get along well with your other employers and co-workers (teachers, fellow students)?
- 17 Do you think your past employers/teachers would give you a good reference?
- 18 What interests you most about our company?
- 19 What parts of the job do you think you would find most interesting?
- 20 What parts of the job do you think would be boring?
- 21 What other kinds of jobs would you like to do?
22. Would you like regular hours or do you mind doing shift work?
- 23 What do you do really well?
- 24 What don't you do very well?
- 25 If you had your choice of any job in the company which one would you want?
- 26 Do you read very much?
- 27 What kind of books do you prefer to read?

- 28 Do you like to travel?
- 29 Everybody has good and bad habits What bad habits in other people really bug you? In yourself?
- 30 Which jobs have you had that you enjoyed the most?
31. Which jobs did you enjoy the least?
- 32 Did you have any school teacher that you really liked? Why?
- 33 Did you have any school teacher that you really disliked? Why?
- 34 Would you take further training if it was required for this job?
- 35 What salary are you looking for?
- 36 Would you be willing to move to another community if the job required you to do so?
- 37 If you are corrected for a mistake you made do you get angry and frustrated or do you accept your mistake as a learning experience?
- 38 If you could be any other person in the world, who would you like to be?

- not being afraid to ask someone, if you don't understand what you're to do,
- learning to deal with criticism as a way of improving what you do;
- giving enough notice, if you plan to leave the job.

Adapted from 'Jobs An Answer Book' by Manpower Development Division, GNWT Economic Development and Tourism

Follow-up to the Interview

If the applicant does not hear about the job soon after the interview, it is acceptable for him/her to call or write and ask if a decision has been made.

If the job is offered to the person, s/he should decide if s/he really wants the job, should accept it verbally and then write a letter of acceptance.

If the applicant is rejected for the job, although s/he will feel disappointed, s/he should keep applying for other jobs.

Keeping a Job

Having found a job, there are appropriate behaviours which will help the person to keep the job.

Appropriate behaviours include:

- always being on time, calling if you will be late for any reason;
- staying at work as long as you should e.g., not leaving work early;
- calling in first thing in the morning, if you are ill and not able to go to work,
- doing the work you're paid to do, during working hours,
- making any personal calls during coffee breaks or lunch hours,
- wearing appropriate clothes (this will vary depending on your job),

GRADE 9

GROWTH AND DEVELOPMENT

GROWTH AND DEVELOPMENT

GRADE: 9

LESSON: 1

THEME: BODY SYSTEMS

CONCEPT: THE IMMUNE SYSTEM HELPS PROTECT THE BODY FROM DISEASE

PREPARATION: 1 Prepare overhead transparencies of Activity Sheets GD84, 85, and 86

VOCABULARY: germ, virus, defence, organism, immune, immunization

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| Students will be able to: i) describe how germs enter the body | Students: 1 Define the term 'germ'. 2 Describe how germs enter the body and multiply. | Background Information Page GD39 to GD40 Use a dictionary and general discussion to define it. A germ is an organism that may cause disease. Refer to Activity Sheet GD84. Brainstorm how germs enter the body. Germs enter the body. - through breaks in the skin e.g., cuts - through body openings e.g., mouth, nose Use the overhead transparency to explain how a virus (one type of germ) multiplies. |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

ii) describe the body's first two lines of defence

3 Give examples of the body's outer defences and how they work to protect the body from disease.

Record information using an experience chart as illustrated:

| Outer Defences | Function |
|--|---|
| - skin | - physical barrier to keep germs out |
| - mucous membranes | - physical barrier to keep germs out |
| - hair (cilia) in the respiratory system | - fine hairs that work with mucus to trap germs and move them to the throat |
| - body secretions (tears, saliva, gastric juices, mucus) | - tears wash germs out of the eyes - other chemicals kill germs - mucus traps germs |
| - reflexes (coughing, sneezing, blinking) | - rids the body of germs - wash germs away |

iii) describe how the immune system helps protect the body from disease

4 Describe how white blood cells protect the body from disease.

Refer to Activity Sheet GD85.

The immune system is the basic defence network. A number of different cells move within the blood and lymph fluids to fight disease agents.

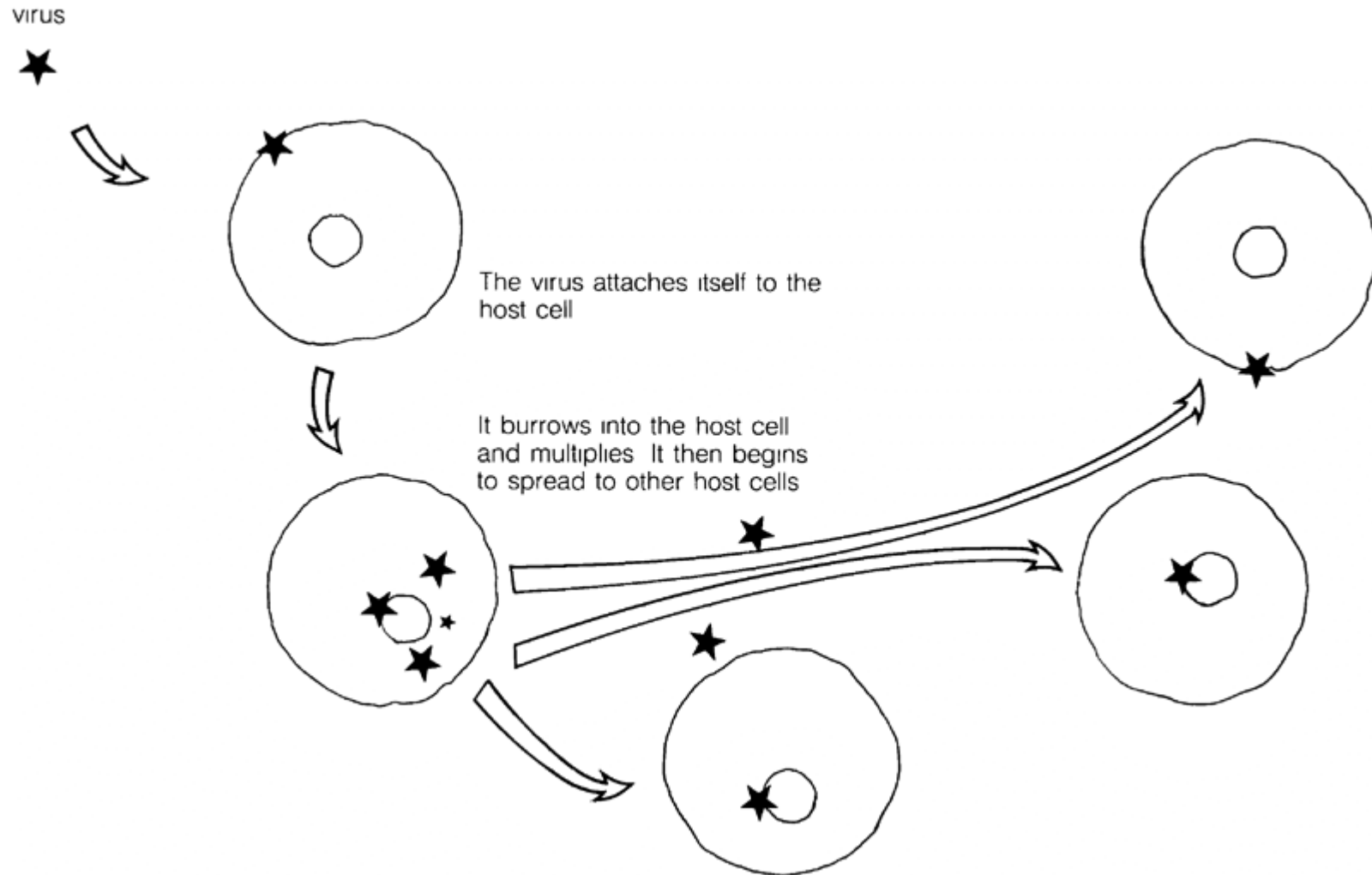
Use the overhead transparency to explain how special white blood cells identify, surround and destroy the germs.

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|--|--|
| | <p>5 Explain the role of T-cells and B-cells in fighting disease.</p> <p>6 Discuss the importance of the immune system.</p> <p>7 Explain how immunization helps protect the body from disease.</p> | <p>Refer to Activity Sheet GD86.</p> <p>When the macrophage cannot destroy the germs, the immune system produces special cells to help fight disease.</p> <p>8-cells are special cells that produce antibodies. The antibodies enter the blood stream and fight specific infections.</p> <p>Helper T-cells are special white blood cells that identify the organisms. They alert and co-ordinate other cells to fight the disease.</p> <p>Killer T-cells are special T-cells that kill infected host cells and stop the infection from spreading.</p> <p>Suppressor T-cells signal the other special cells to slow down reproduction once the disease has gone.</p> <p>Prior to the class, invite the community health nurse or doctor to talk about immunization.</p> <p>The immune system is important in</p> <ul style="list-style-type: none"> - fighting disease - responding to allergies <p>Use a dictionary to define immunization (and vaccination).</p> <p>Immunization means giving a person protection or resistance to a disease. It is usually done by injection, although the polio vaccine now is generally administered orally.</p> |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| iv) describe common problem conditions related to the immune system | 8 Brainstorm common problem conditions of the immune system. 9 Select a project to undertake related to the immune system. | <p>Have students brainstorm types of immunization they may have had:</p> <ul style="list-style-type: none"> - diphtheria - tetanus - whooping cough - polio - measles/mumps/rubella - 'flu <p>People who travel to foreign countries often need immunization against diseases which may be common in that country e.g., cholera.</p> <p>Vaccine contains a very small amount of the germ which causes the disease. This then causes T-cells and B-cells to form, which remain in the body to fight the disease. Because only a small amount of the germ is in the vaccine, it is not enough to make a person sick.</p> <p>Common problem conditions of the immune system include:</p> <ul style="list-style-type: none"> - immune-deficiency diseases (the body does not produce its own defences such as antibodies) (The best known of these is AIDS) (AIDS is covered in the Family Life Section of Grade 9.) - abnormal development of the immune system - allergies <p>Students can work individually or in pairs. Have them select a project from one of the following:</p> <ul style="list-style-type: none"> - How the immune system protects the body from disease - The importance of immunization - Germs and the Body - Medicine and Disease e.g., penicillin, Pasteur, etc. |

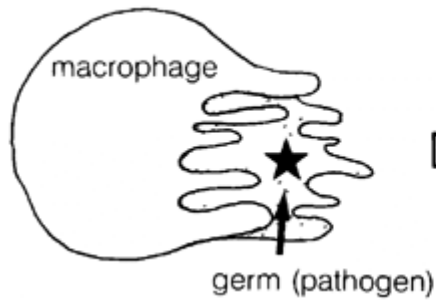
HOW A VIRUS SPREADS INSIDE THE BODY

The virus enters the body (through a break in the skin or a body opening).

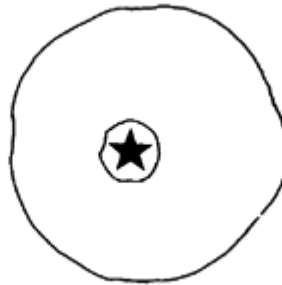


CELL DEFENCES FIGHT THE GERMS

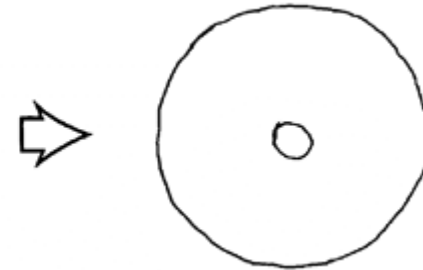
1 Macrophage
finds the germ.



2 Macrophage
surrounds the germ.



3 Macrophage destroys
the germ.

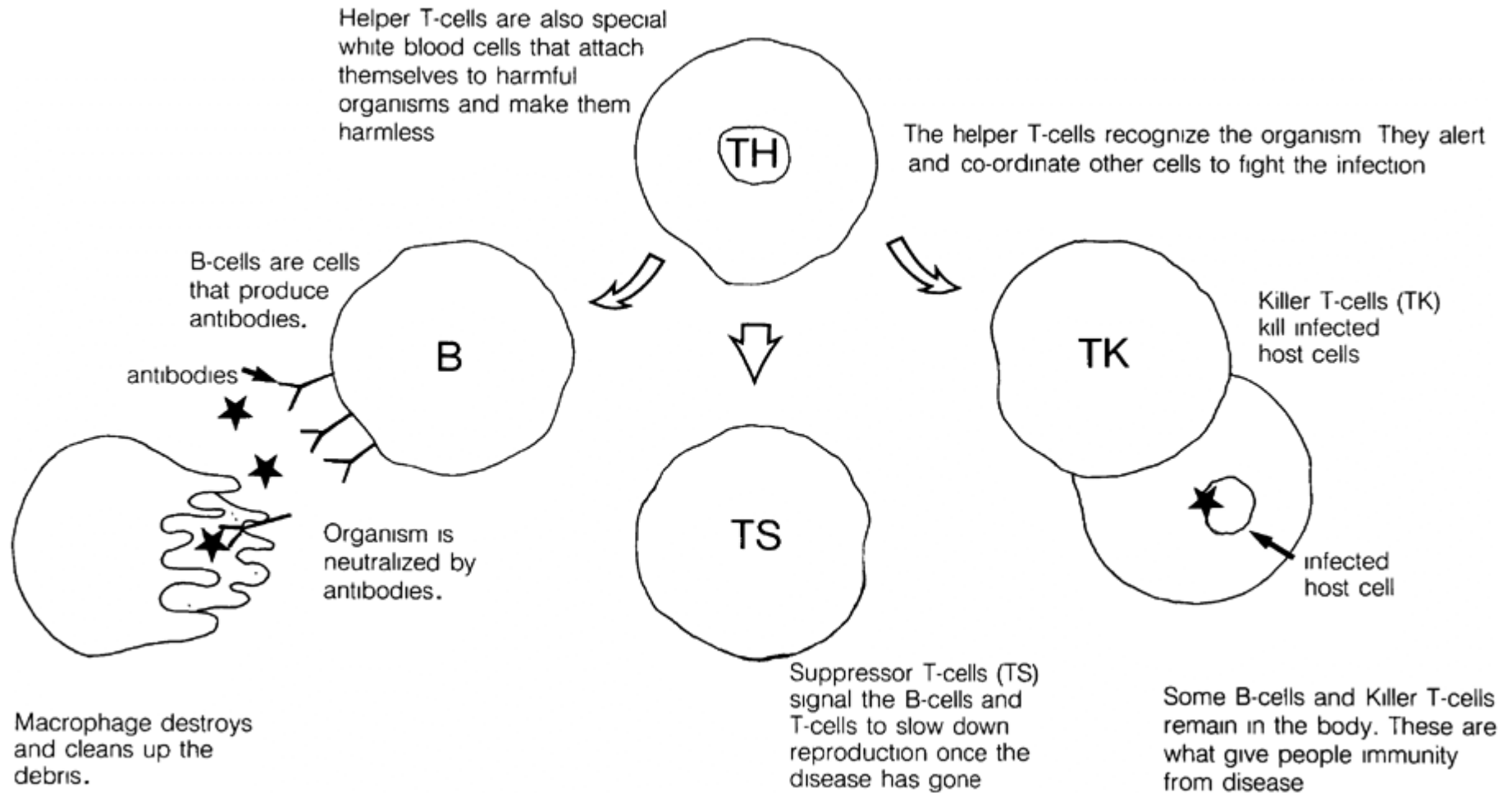


Special white blood cells (macrophage) find the germ (pathogen), surround it and destroy it.

Inflammation, fever, aches and pains are signs that the body is producing special white blood cells to fight disease.

HOW THE IMMUNE SYSTEM HELPS PROTECT THE BODY FROM DISEASE

When an infection spreads too fast for the white blood cells to control it, helper T-cells join the battle.



GROWTH AND DEVELOPMENT

GRADE: 9

LESSON: 2

THEME: BODY SYSTEMS

CONCEPT: THE BODY SYSTEMS WORK TOGETHER TO PROMOTE HEALTH

PREPARATION: 1 Prepare one set of cards with the functions of the body systems and another set with the names of each body system
2 Prepare a class set of Crisis worksheets (Activity Sheet GD87)

VOCABULARY: control, regulation, transport, supply

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | | | |
|---|--|---|----------|-------------|------------------------|----------------|--|------------------|
| Students will be able to: i) classify the body systems according to function | Students: 1 Make a chart of the body systems classified according to function | Background Information Page GD41 Write the functions of the body systems on one card. Write the names of each of the body systems on another. Have the students decide which body system performs which function. <p style="text-align: center;">Classification of Body System</p> <table border="1" style="margin-left: auto; margin-right: auto;"><thead><tr><th data-bbox="1066 1149 1459 1203">Function</th><th data-bbox="1459 1149 1871 1203">Body System</th></tr></thead><tbody><tr><td data-bbox="1119 1211 1423 1263">control and regulation</td><td data-bbox="1507 1211 1814 1263">nervous system</td></tr><tr><td></td><td data-bbox="1507 1271 1814 1323">endocrine system</td></tr></tbody></table> | Function | Body System | control and regulation | nervous system | | endocrine system |
| Function | Body System | | | | | | | |
| control and regulation | nervous system | | | | | | | |
| | endocrine system | | | | | | | |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|----------------------|--------------------|--|--------------------|--|------------------|--|------------------|--|--|----------------------------------|-----------------|--|-----------------|--|-------------|--|---------------|--|--|--------------|----------------------|
| <p>ii) explain the interrelationships of the body systems</p> | <p>2 Choose a crisis scenario and describe how the body systems interrelate as they meet the crisis.</p> <p>3 In pairs, participate in an active physical activity and note changes in the body systems.</p> | <div style="text-align: center;"> <table border="1" style="margin: auto;"> <tr> <td style="border: 1px solid black; padding: 5px;">transport and supply</td> <td style="border: 1px solid black; padding: 5px;">circulatory system</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">respiratory system</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">digestive system</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">excretory system</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; height: 10px;"></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">support, movement and protection</td> <td style="border: 1px solid black; padding: 5px;">muscular system</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">skeletal system</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">skin system</td> </tr> <tr> <td></td> <td style="border: 1px solid black; padding: 5px;">immune system</td> </tr> <tr> <td colspan="2" style="border-top: 1px solid black; height: 10px;"></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;">reproduction</td> <td style="border: 1px solid black; padding: 5px;">reproductive systems</td> </tr> </table> </div> <p>Refer to Activity Sheet GD87.</p> <p>The crisis scenario is 'Chased by a Bear'. Tell students what the crisis is. Ask them to go through each body system and describe how it reacts in this crisis. Teachers can prepare other scenarios.</p> <p>Have students select their own crisis and write a story about it, indicating the reactions of each body system.</p> <p>E.g., shaking and breathless...</p> <p>Have one student from each pair run on the spot for three minutes. His/her partner has to observe body changes. Then the other person runs on the spot.</p> <p>Discuss the body systems involved.</p> | transport and supply | circulatory system | | respiratory system | | digestive system | | excretory system | | | support, movement and protection | muscular system | | skeletal system | | skin system | | immune system | | | reproduction | reproductive systems |
| transport and supply | circulatory system | | | | | | | | | | | | | | | | | | | | | | | |
| | respiratory system | | | | | | | | | | | | | | | | | | | | | | | |
| | digestive system | | | | | | | | | | | | | | | | | | | | | | | |
| | excretory system | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| support, movement and protection | muscular system | | | | | | | | | | | | | | | | | | | | | | | |
| | skeletal system | | | | | | | | | | | | | | | | | | | | | | | |
| | skin system | | | | | | | | | | | | | | | | | | | | | | | |
| | immune system | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| reproduction | reproductive systems | | | | | | | | | | | | | | | | | | | | | | | |

CRISIS!

Situation Chased by a bear

Body Systems

nervous system.

- senses perceive bear and send signal to brain that the bear is a danger
- messages are sent from the brain to other body systems

endocrine system:

- adrenalin output increases
- heart rate increases
- awareness level is heightened

circulatory system

- heart rate increases
- blood flow increases to muscles for energy output

respiratory system:

- breathing rate increases
- more oxygen delivered to muscles
- wastes removed more quickly

digestive system:

- digestion stops as blood is redirected to essential muscles



excretory system.

- wastes from active muscles are removed quickly and stored

skin system

- skin sweats to remove heat
- skin gets paler

muscular system:

- uses energy to escape from bear

skeletal system:

- supports body in escaping from bear

reproductive system:

- not directly involved

immune system:

- not directly involved

GROWTH AND DEVELOPMENT

GRADE: 9

LESSON: 3

THEME: DISEASE PREVENTION

CONCEPT: NON-COMMUNICABLE DISEASES MAY BE PREVENTED OR REDUCED BY POSITIVE LIFESTYLE BEHAVIOURS

PREPARATION: 1 Addresses for various health agencies which can provide information on non-communicable diseases
2 Booklets or pamphlets about non-communicable diseases

VOCABULARY: communicable, non-communicable

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | |
|--|--|---|--------------|------------------|--|--|
| Students will be able to: i) identify common non-communicable diseases | Students: 1 Differentiate between communicable and non-communicable diseases. | Background Information Page GD42 to GD54 Ask students what the difference is between a disease such as cancer (non-communicable) and a disease such as the common cold (communicable). <table border="1" data-bbox="1024 1040 2018 1414"><thead><tr><th data-bbox="1024 1040 1444 1117">Communicable</th><th data-bbox="1444 1040 2018 1117">Non-communicable</th></tr></thead><tbody><tr><td data-bbox="1024 1117 1444 1414"><ul style="list-style-type: none">- can be passed from one person to another- caused by a living organism e.g., virus- usually short-term- can usually be treated and cured</td><td data-bbox="1444 1117 2018 1414"><ul style="list-style-type: none">- cannot be passed from one person to another- not caused by a living organism- usually long-term- may never be cured</td></tr></tbody></table> | Communicable | Non-communicable | <ul style="list-style-type: none">- can be passed from one person to another- caused by a living organism e.g., virus- usually short-term- can usually be treated and cured | <ul style="list-style-type: none">- cannot be passed from one person to another- not caused by a living organism- usually long-term- may never be cured |
| Communicable | Non-communicable | | | | | |
| <ul style="list-style-type: none">- can be passed from one person to another- caused by a living organism e.g., virus- usually short-term- can usually be treated and cured | <ul style="list-style-type: none">- cannot be passed from one person to another- not caused by a living organism- usually long-term- may never be cured | | | | | |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| <p>ii) identify the nature and causes of common non communicable diseases</p> <p>iii) identify lifestyle behaviours which prevent noncommunicable diseases</p> | <p>2 List examples of common non communicable diseases</p> <p>3 Select a non-communicable disease and research the causes, nature and preventive lifestyle behaviours.</p> <p>4 Present a brief report to the class.</p> | <p>Lifestyle and immediate physical environment are major contributors to cause and prevention of non-communicable diseases.</p> <p>Common non-communicable diseases include:</p> <ul style="list-style-type: none"> - cardiovascular disease e.g., hypertension, atherosclerosis, heart attack, heart failure, stroke - cancers e.g., lung, skin, oral, cervical, leukemia (of the blood) - arthritis - cirrhosis of the liver - emphysema - diabetes <p>Have students write to various health agencies e.g., Canadian Cancer Society or go to the nursing station and/or library for information on non-communicable diseases</p> <p>Lifestyle behaviours which might prevent non-communicable diseases include:</p> <ul style="list-style-type: none"> - eating a well-balanced diet - exercising regularly - not smoking - having regular medical check-ups |

GROWTH AND DEVELOPMENT

GRADE: 9

LESSON: 4

THEME: LIFESTYLE

CONCEPT: POSITIVE LIFESTYLE PRACTICES PROMOTE HEALTH

PREPARATION: 1 Prepare a class set of Am I At Risk? worksheets (Activity Sheet GD88)
2 Prepare a class set of Growing Up Healthy worksheets (Activity Sheet GD89)

VOCABULARY: risk factors

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | | | |
|---|---|--|--------------|------------|----------------|--|---|------------------------------|
| Students will be able to: i) identify positive lifestyle practices that promote healthy growth and development | Students: 1 List risk factors related to lifestyle. | Background Information Page GD42 to GD54 Risk factors are conditions or habits that can increase the chances of disease. Risk factors can be classified as follows. <table border="1" data-bbox="1024 1068 2016 1334"><thead><tr><th data-bbox="1024 1068 1346 1149">Controllable</th><th data-bbox="1346 1068 1656 1149">Modifiable</th><th data-bbox="1656 1068 2016 1149">Uncontrollable</th></tr></thead><tbody><tr><td data-bbox="1024 1149 1346 1334">- smoking - lack of exercise - overweight (usually) - underweight</td><td data-bbox="1346 1149 1656 1334">- blood pressure - stress/tension - cholesterol - diabetes</td><td data-bbox="1656 1149 2016 1334">- sex - heredity - age</td></tr></tbody></table> | Controllable | Modifiable | Uncontrollable | - smoking - lack of exercise - overweight (usually) - underweight | - blood pressure - stress/tension - cholesterol - diabetes | - sex - heredity - age |
| Controllable | Modifiable | Uncontrollable | | | | | | |
| - smoking - lack of exercise - overweight (usually) - underweight | - blood pressure - stress/tension - cholesterol - diabetes | - sex - heredity - age | | | | | | |




| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| ii) design a personal program to promote healthy growth and development | 2 Complete the Am I at Risk? work sheet. | <p>Refer to Activity Sheet GD88.</p> <p>Have students complete the worksheet to find out if they are at risk.</p> <p>If students answered YES to the following questions, their lifestyle may be putting them at risk.</p> <p style="padding-left: 40px;">Questions 1, 2, 4, 5, 6, 9, 10.</p> <p>If they answered NO to the other questions, their lifestyle may be putting them at risk.</p> <p style="padding-left: 40px;">Questions 3, 7, 8.</p> |
| | 3 Select one lifestyle practice from the Am I At Risk? worksheet which puts them at risk and identify a positive lifestyle practice for it. | <p>Refer to Activity Sheet GD88.</p> <p>Have students select one positive lifestyle practice which will promote healthy growth and development.</p> <p>E g , if the lifestyle practice that puts him/her at risk is not exercising regularly, then the positive lifestyle practice is to exercise three times a week.</p> |
| | 4 Design a personal program to promote healthy growth and development. | <p>Refer to Activity Sheet GD89.</p> <p>Have each student complete the following:</p> <ul style="list-style-type: none"> - My Goal - Why I Want to Reach This Goal - What I Have to Do to Reach This Goal |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| iii) evaluate the effectiveness of the program | 5 Practise his/her personal program for a given time period. 6 Describe the degree of success of his/her program. | <p>Refer to Activity Sheet GD89.</p> <p>Have students decide on a time period for their personal program and using the chart 'How I Am Doing', keep a daily record of their progress during that time.</p> <p>Refer to Activity Sheet GD89.</p> <p>Have students evaluate how successful they were in working towards their goal and record the evaluation in the section 'How Did I Dog'.</p> <p>Successes can be shared among friends, in small groups, or as a class depending upon the goals set and whether or not students are comfortable with such sharing.</p> |

AM I AT RISK?

GD88

Read each item Decide how this statement applies to you- YES, A LITTLE, or NO Put an X in the appropriate box.

| | YES | A LITTLE | NO |
|---|-----|----------|----|
| 1. I smoke cigarettes, chew chewing tobacco or use snuff  | | | |
| 2. I am overweight | | | |
| 3. I exercise regularly.  | | | |
| 4. I drink alcohol or use other drugs. | | | |
| 5. I worry about things. | | | |
| 6. I often eat junk food. | | | |
| 7. I usually get enough sleep | | | |
| 8. I have regular medical check-ups | | | |
| 9. There's lots of garbage around my house/school  | | | |
| 10. I eats lots of fatty foods. | | | |

GROWING UP HEALTHY

Name _____

My Goal: (Specific goal that I wish to work towards)

Why I want to reach this goal:

What I have to do to reach my goal.

| Things I have to do | Supports I need to help me. |
|---------------------|-----------------------------|
| | |
| | |
| | |
| | |
| | |
| | |

How I am doing

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

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

GROWTH AND DEVELOPMENT

GRADE: 9

LESSON: 5

THEME: HEALTH CARE SYSTEM

CONCEPT: EACH PERSON IS RESPONSIBLE FOR APPROPRIATE USE OF THE HEALTH CARE SYSTEM

PREPARATION: 1 Prior to the class, invite a local health professional to discuss the health care system
2 Prepare a class set of Canadian and Territorial Health Facts Sheet (Activity Sheets GD90A - 90B Answer Sheet)

VOCABULARY: health care system, extended benefits, premium

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| Students will be able to: i) describe the health care system in the N W T | Students: 1 Describe local health care services | Background Information Page - Prior to the class, invite a local health professional to discuss: - examples of local health care providers - professional and para-professional - health care facilities - health insurance - non-government health organizations - informal networks related to health If appropriate for your particular community, and if resource people are available, discuss the role of traditional medicine in health care. |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

Divide the class into groups. Have each group make a list of local services under one of the following headings.

| Health Care Providers | Facilities | Non-government Agencies | Informal Networks |
|--|--|--|---|
| <ul style="list-style-type: none"> - nurse - doctor - dentist - dental therapist - community health reps - traditional medicine people | <ul style="list-style-type: none"> - nursing station - hospital - dental office | <ul style="list-style-type: none"> - St John - Alcoholics Anonymous - Block Parents | <ul style="list-style-type: none"> - family - friends - elders |

ii) illustrate the cost of health care in the N W T

2 Compare and contrast the cost of health care to the individual in the N.W.T. compared to other provinces.

In the N.W.T.

In Alberta

- no premium for basic medical coverage for anyone

- people have to pay a premium for basic medical coverage

If a person is employed, they may pay a supplementary amount which gives them extended medical benefits.

Native people who have to travel out of the community for medical services have their costs paid by the Federal Government .Non-native people may have to pay \$100 return towards their air fare. If they are employed, this is paid by their employer.

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| iii) describe responsible use of the health care system | 3 Graph health expenditures for the N W T over the last 25 years. | <p>Annual health expenditures in the N.W.T. every 5 years.</p> <p>1960 - \$ 3 m 1965-\$ 5m 1970 - \$11 m 1975 - \$30 m 1980 - \$62 m</p> <p>Indicate on the graph what they expect the health care costs to be in 1990. Discuss the trend of the graph.</p> |
| | 4 Discuss the Canadian and Territorial Health Facts Sheet. | <p>Refer to Activity Sheet GD90A Have students work in small groups to complete the worksheet. Refer to Activity Sheet GD90B for answers. Discuss the facts with the class.</p> |
| | 5 Make a list of responsible ways to use the health care system. | <p>Brainstorm responsible ways to use the health care system. Responsible ways include.</p> <ul style="list-style-type: none"> - practising healthy lifestyle behaviours, - seeking medical advice promptly when ill, - keeping personal records of immunization, - following the medical advice which is given, - taking medications as prescribed, - completing the course of medication, - having regular medical and dental check-ups, - seeking early pre-natal care, if pregnant, - staying at home in bed when one has a cold or 'flu, - avoiding using the health care system if it is not necessary <p>Students may be able to present some of this information to parents in a workshop.</p> |
| | 6 Write a short essay on The Health Care System in the N.W.T. | <p>Have students write an essay It can include topics such as:</p> <ul style="list-style-type: none"> - its history - problems peculiar to the N W T e g ,language - costs associated with health care - responsible use of the system etc - the role of traditional medicine |

CANADIAN AND TERRITORIAL HEALTH FACTS

GD90A

Circle the correct answer

- 1 The total cost of health care in Canada in 1985 was
 - a) \$500 m
 - b) \$1 billion
 - c) over \$30 billion
- 2 How much was it per person
 - a) \$500
 - b) \$1000
 - c) over \$1000
- 3 Is the N W T per person cost more or less than the national cost
 - a) more
 - b) less
- 4 How much have health costs increased since 1960?
 - a) 5 times
 - b) 10 times
 - c) 15 times
- 5 How much does it cost per patient per day for a hospital to function
 - a) \$100
 - b) \$200
 - c) \$300
- 6 How much does it cost per patient per day for a nursing station to function
 - a) \$300
 - b) \$1000
 - c) \$2000
- 7 How many doctors do you think there are in the N W.T
 - a) 200
 - b) 100
 - c) under 100
- 8 What's the ratio of people to doctors in the N W.T.?
 - a) 500 to 1
 - b) 750 to 1
 - c) 1000 to 1
- 9 Is this higher or lower than other parts of Canada
 - a) higher
 - b) lower
- 10 How much does it cost a person for basic health care coverage in the N W T
 - a) no cost
 - b) \$40 per month
 - c) \$100 per month



CANADIAN AND TERRITORIAL HEALTH FACTS

(Teacher Answer Sheet)

- 1 The total cost of health care in Canada in 1985 was over \$30 billion.
2. This works out to over \$1000 per person.
- 3 The N W T is higher than this. In 1985, it was approximately \$1500 per person
- 4 Health costs have increased 15 times since 1960.
- 5 It costs \$300 per patient per day to operate a hospital
- 6 It costs approximately \$2000 per patient per day to operate a nursing station
- 7 There are presently (1988) under 100 doctors in the N W T
- 8 There are 1000 people to 1 doctor in the N W T
9. This is higher than other parts of Canada. Ontario has the lowest ratio at approximately 500 to 1
- 10 There are no medical premiums for basic health care for anyone in the N.W T. Some people may pay a supplementary amount for extended benefits

GROWTH AND DEVELOPMENT

GRADE: 9

LESSON: 6

THEME: HEALTH CAREERS

CONCEPT: THE HEALTH CARE SYSTEM OFFERS MANY OPPORTUNITIES FOR HEALTH CAREERS

- PREPARATION:
- 1 A copy of 'Health Careers in the Northwest Territories' (available in all schools or from the Otto Schaefer Health Resource Centre, Box 1320, Yellowknife, N W T)
 - 2 Invite a number of health professionals to form a panel to discuss their jobs
-

VOCABULARY: opportunities

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| Students will be able to: i) identify health career opportunities in the N W T | Students: 1 Make a list of the health career opportunities which they know exist in the N W T 2 Research one or more health careers of interest | Background Information Page Refer to the publication 'Health Careers in the Northwest Territories' (published by the Department of Health and available in all schools). e.g., community health nurse, dental therapist etc. Have each student choose one of the Health Careers from the publication and research the following areas: - educational requirements - length of training required - working conditions - job opportunities - salaries - duties and responsibilities of the job |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|--|--|
| | <p>3 Prepare a class book of Health Careers in the N.W.T.</p> <p>4 Find out about specific health jobs in the community or region.</p> | <p>Have each student prepare a section of the book using their research material.</p> <p>Invite a panel of different health professionals to answer questions on their jobs. Have students prepare questions in advance.</p> |

GRADE 9

TEACHER BACKGROUND INFORMATION

GROWTH AND DEVELOPMENT

THE IMMUNE SYSTEM

Diseases are caused by organisms called germs or pathogens. They generally belong to five groups:

- bacteria one-celled organisms which multiply by dividing in half. They can double every 30 minutes. Many bacteria do not cause diseases and, in fact, are useful to people e.g., bacteria which help make cheese or yogurt.
- viruses a single unit of genetic material in a protein shell. They are the smallest pathogen and can be seen only by a special microscope. They live and multiply inside living cells. They use part of the cell they invade to multiply. The new viruses then attack other living cells. Common colds are caused by a virus.
- fungi small plantlike organisms. They cause diseases such as Athlete's Foot.
- protists one-celled organisms with specialized internal structure. They include different kinds of amoebae. Diseases caused by protists are more common in tropical countries.
- animal parasites organisms that live by feeding on other animals. They often enter the body by infected food or water and live in the intestines e.g., worms.

Germs or pathogens can be passed on in a number of different ways

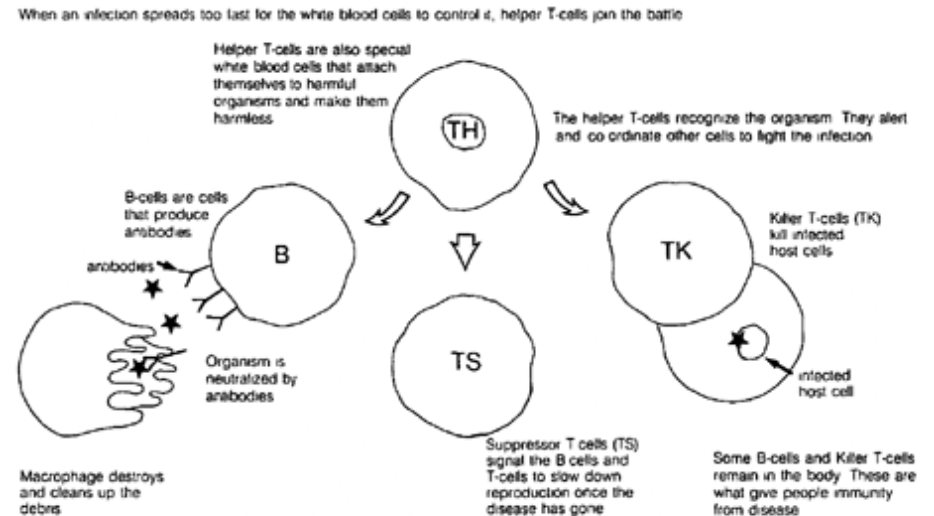
- through the air
- through infected food
- through infected water
- by touch
- by animals

Germs enter the body either through breaks in the skin i.e., cuts or grazes or through body openings such as the mouth or nose.

The body has different lines of defence against disease.

- a) its physical defences (which prevent germs entering the body)
 - skin
 - mucous membranes
 - perspiration, tears, saliva
- b) its cellular defences
 - some cells identify the germ
 - other special white blood cells surround it and destroy it

HOW THE IMMUNE SYSTEM HELPS PROTECT THE BODY FROM DISEASE



Immunization (or vaccinations)

A very small amount of the germ is introduced into the body. This is generally done by injection, although the polio vaccine is given orally. The germ forces the body to produce T-cells and B-cells to fight it. People do not get sick, because the amount of the germ is so small. However, they may experience slight increase in temperature, which is a sign that their body is fighting the germ. Because a few T-cells and B-cells will remain in the body, they will quickly produce antibodies if the same germ enters the body again.

Immunizations are generally given as follows in the N.W.T.

| Age | Immunization |
|------------------------|---|
| 1 month | - tuberculosis (only given nowadays in high risk areas) |
| 2 months | - diphtheria, whooping cough, tetanus - oral polio |
| 4 months | - diphtheria, whooping cough, tetanus - oral polio |
| 6 months | - diphtheria, whooping cough, tetanus |
| 12 to 15 months | - measles, mumps, rubella (German measles) |
| 18 months | - diphtheria, whooping cough, tetanus - oral polio |
| * 18 months to 5 years | - Hib (for meningitis) |
| 5 to 6 years | - diphtheria, whooping cough, tetanus |

| | |
|----------------|--|
| 11 to 12 years | - rubella (German measles) for females only |
| 14 to 16 years | - diphtheria, tetanus - oral polio |
| Adults | - oral polio (every 10 years) - diphtheria booster (every 10 years) - tetanus booster (every 10 years or in the case of a wound, if it occurs in the second half of the ten-year period) - T B. test annually, if in high risk area |

* recommended at 18 months

When the Immune System Fails

When the body's natural defences fail to protect a person from disease, s/he may require medical attention. Drugs may be necessary to fight the infection.

Antibiotics are drugs which will fight bacteria. They contain bacteria e.g., penicillin. They will not fight viruses.

BODY SYSTEMS

Cells are the basic building blocks of the body. There are many kinds of cells (e.g., muscle, bone, skin, etc) The adult body contains trillions of cells.

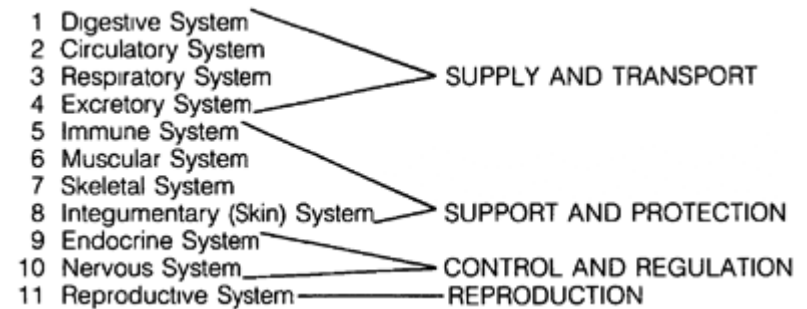
Tissues are groups of like cells that have a specific function.

Organs are made up of tissues and have a specific function.

| The major body organs are: | Function |
|----------------------------|--|
| 1 BRAIN | <ul style="list-style-type: none"> - nervous system - regulates thinking, memory, balance, coordination |
| 2 LUNGS | <ul style="list-style-type: none"> - respiratory system - provide air and oxygen for the body and exchange it for body wastes (carbon dioxide) |
| 3 HEART | <ul style="list-style-type: none"> - circulatory system - pumps blood with nutrients and oxygen to all parts of the body |
| 4 STOMACH AND INTESTINES | <ul style="list-style-type: none"> - digestive system - change food into forms that can be used by the body and eliminate wastes |
| 5 LIVER | <ul style="list-style-type: none"> - digestive system - breaks down chemicals, cleans the body of harmful wastes, aids in digestion of fats, stores energy (in the form of glycogen) |
| 6 KIDNEYS AND BLADDER | <ul style="list-style-type: none"> - excretory system - remove liquid wastes from the blood and produce urine which is stored and later removed from the urinary bladder |

Related organs are grouped into a body system. For example, the heart, veins, arteries, capillaries are organs of the circulatory system.

Eleven body systems work together to carry out the many functions of daily living.



NON-COMMUNICABLE DISEASES

At the turn of the century infectious diseases, such as pneumonia, influenza, tuberculosis and acute diarrhea, were the primary health dangers to the world. Because of public health advancements, these infectious diseases no longer pose the threat they once did. However, with this progress has come another group of basic health problems that we must face today, the chronic or non-communicable diseases.

As a group, the chronic diseases share certain characteristics. They are termed "chronic" because they linger. Their causes are frequently unclear and they often take a long time to develop. Chronic diseases usually reduce the body's level of functioning for an extended period of time. Due to their long life-span, their treatments are often fairly costly. Some chronic diseases cause progressive destruction to the tissues, and may never be cured.

Behavioural factors have a great impact upon the chronic diseases. Lifestyle, as well as immediate physical environment, are major determinants of cause and prevention.

Common non-communicable or chronic diseases include:

| Type | Examples |
|------------------------|---|
| Cancer | Lung Cancer Skin Cancer Blood Cancer (Leukemia) Cancer of the Rectum or Colon Breast Cancer Cervical Cancer Bone Cancer Cancer of the Stomach Cancer of the Bladder |
| Cardiovascular Disease | Atherosclerosis Coronary Artery Disease High Blood Pressure Heart Attack Angina Pectoris Stroke Rheumatic Heart Trouble Congenital Defects |
| Respiratory Disease | Asthma Chronic Bronchitis Emphysema |

| | |
|--------------------|--|
| Diabetes | |
| Arthritis | |
| Rheumatism | |
| Epilepsy | |
| Muscular Dystrophy | |
| Multiple Sclerosis | |
| Allergies | |
| Cerebral Palsy | |

Cancer

All cancers are diseases of the cell. Cancer interferes with the performance of the DNA within the nucleus of the cell. This defective nucleus can no longer regulate growth and allows abnormal cells to divide to form other abnormal cells. This results in the formation of tumours. However, not all tumours are necessarily malignant, (cancerous).

Cancer cells appear different from normal cells. Their nuclei are larger, they vary more in shape and size, and they undergo cell division more often. They may also be seen invading normal tissue.

In the earliest stages, the cancerous tumor is "localized", i.e., confined to one site. Most cancers originate on the surface of a tissue. For a time they remain on the surface, at the site of origin. If the spread of cancerous cells is assumed to be stopped then the cancer is considered to be in remission. If all the living cancer cells remain at the original site, the disease is still considered localized. However, some of the cancer cells may then penetrate the surface and invade the underlying tissues. The process in which cancer cells become detached from the original tumour and then carried through the lymph or blood streams to other parts of the body, is called metastasis.

The lymph nodes in the region near the original tumour site is the body's protective mechanism against roving cancer cells. If left untreated, cancer cells eventually spread to other parts of the body and become "advanced" cancer. At this point, death is usually inevitable.

Most cancers have no single cause, but rather a combination of causes that includes genetic, viral, chemical and physical factors, as well as the person's immune system. Heredity has also been identified as an important factor in determining the risk of breast cancer and a variety of rarer cancers. A chemical **carcinogen** is a cancer-producing agent. Cigarette smoke is the most deadly carcinogen in our environment today. Many cancers have also been related to carcinogens on the job and exposure to radiation.

Seven Warning Signals of Cancer

Change in bowel or bladder habits.

A sore that does not heal.

Unusual bleeding or discharge.

Thickening or lump in breast or elsewhere.

Indigestion or difficulty in swallowing.

Obvious change in wart or mole.

Nagging cough or hoarseness.

If you have a warning signal, see your doctor!

Major Cancer Sites

| Site | Cause | Symptoms | Treatment |
|------------------------------------|---|---|---|
| Lung cancer | <ul style="list-style-type: none"> - cigarette smoking is a major contributing factor Risk of developing lung cancer is increased in proportion to <ul style="list-style-type: none"> - number of cigarettes smoked - length of time person has been smoking - age when smoking began - how deeply the smoke is inhaled - inhalation of industrial chemicals e.g., asbestos, uranium | <ul style="list-style-type: none"> - cough may be first symptom - persistent cough with blood in the sputum - may be no symptoms - may go undetected | <ul style="list-style-type: none"> - surgery - radiotherapy (as an alternative to or in addition to surgery) - combination of radiation therapy and chemotherapy for one form of lung cancer |
| Skin cancer | <ul style="list-style-type: none"> - exposure to intense sunlight (especially caucasians with blue eyes and light hair) [basal cell carcinoma - the most common form of skin cancer] - exposure to X-rays or irritants e.g., alcohol [squamous cell carcinoma] - uncontrolled division of the colour-containing cells which are concentrated in moles, usually related in exposure to sunlight [malignant melanoma] - generic predisposition - burns | <ul style="list-style-type: none"> - a skin lesion which undergoes change in <ul style="list-style-type: none"> - colour - size - shape - sensation - consistency of surface characteristics | <ul style="list-style-type: none"> - removal if the growth is small enough - radiotherapy - chemotherapy applied locally |
| Cancer of the blood - lymphomas | <ul style="list-style-type: none"> - possibly virus-related - possibly genetic - abnormalities in cellular immunity | <ul style="list-style-type: none"> - enlarged, painless lymph nodes - enlarged spleen or liver - sweating, fever - itching - weight loss - weakness | <ul style="list-style-type: none"> - irradiation - chemotherapy |
| - leukemias | <ul style="list-style-type: none"> - excessive exposure to radiation and some chemicals e.g., benzene - possibly virus-related - possibly linked to genetic abnormalities | <ul style="list-style-type: none"> - tiredness - paleness (due to anaemia) - increased susceptibility to infection and haemorrhage - unexplained fever, weight loss, enlarged lymph nodes (in childhood leukemia) - lymph nodes, spleen, liver may be enlarged | <ul style="list-style-type: none"> - chemotherapy - radiotherapy - occasionally, x-ray therapy of the spleen |

| Site | Cause | Symptoms | Treatment |
|-------------------------------|---|---|---|
| Cancer of the rectum or colon | <ul style="list-style-type: none"> - related to the amount of refined carbohydrates and low fibre content of North American diet - possibly genetic | <ul style="list-style-type: none"> - unexplained anaemia - blood in the stool - change in bowel habits | <ul style="list-style-type: none"> - surgery - radiotherapy |
| Breast cancer | <ul style="list-style-type: none"> - unknown - high risk women include <ul style="list-style-type: none"> - women over 35 who have no children - women who had their first child after 35 - women who had their first period before they were 12 - women who have been menstruating for 30+ years - women whose mother or sister have had breast cancer | <ul style="list-style-type: none"> - a lump - persistent redness or skin irritation - changes in the nipples - enlarged lymph nodes in the armpit or neck | <ul style="list-style-type: none"> - surgery in combination with radiotherapy, chemotherapy or hormonal therapy - radiation * breast self-examination each month provides the best method for a woman to discover breast changes for herself |
| Cervical cancer | <ul style="list-style-type: none"> - possibly virus-related | <ul style="list-style-type: none"> - vaginal discharge - irregular bleeding | <ul style="list-style-type: none"> - cryotherapy (use of extreme cold to destroy tissue) - electrocoagulation (use of an electric current to destroy tissue) - surgery - radiotherapy - radiation therapy * a pap test should be done regularly for all women over 16 |
| Bone cancer | <ul style="list-style-type: none"> - unknown - possibly related to radiation exposure in some areas | <ul style="list-style-type: none"> - pain/swelling | <ul style="list-style-type: none"> - surgery - radiotherapy |
| Cancer of the stomach | <ul style="list-style-type: none"> - declining rapidly, probably due to improved diet - possibly related to methods of preparing food e.g. , smoking, barbecuing, frying | <ul style="list-style-type: none"> - stomach pains - distaste for certain foods - digestive discomfort - rapid weight loss - vomiting | <ul style="list-style-type: none"> - surgery |
| Cancer of the bladder | <ul style="list-style-type: none"> - related to industrial environmental agents - also related to exposure to certain chemicals in food, plastics, air and water - possibly related to smoking - possibly virus-related | <ul style="list-style-type: none"> - blood in the urine - discomfort - increased frequency in urination | <ul style="list-style-type: none"> - surgery - radiotherapy |

Cardiovascular Disease

Cardiovascular disease includes many different conditions and disorders affecting the heart and blood vessels

| Condition | Cause | Brief Description |
|-------------------------|--|--|
| Atherosclerosis | <ul style="list-style-type: none"> - diet - smoking - high blood pressure - lack of exercise - stress - hormones - heredity <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> } all possible contributors </div> | <ul style="list-style-type: none"> - the most common form of hardening of the arteries - the body is unable to handle certain fatty substances, such as cholesterol - the fatty substances are deposited in the inner lining of the walls of the arteries, causing the channels through which the blood flows to narrow |
| Coronary artery disease | <ul style="list-style-type: none"> - caused by atherosclerosis | <ul style="list-style-type: none"> - when the arteries become narrow, the heart receives less blood - this makes the heart muscle less efficient due to the lack of proper nourishment - most common among men, 40 to 60 years old - becoming more common among younger people |
| High blood pressure | <ul style="list-style-type: none"> - may run in families - most common amongst people who are overweight - aggravated by nervous tension | <ul style="list-style-type: none"> - also known as hypertension - occurs when the heart has to work harder to pump the blood through the arteries - pressure in the arteries increases - heart muscle may enlarge - characterized by headaches, dizziness and/or fatigue |
| Heart attacks | <ul style="list-style-type: none"> - usually caused by atherosclerosis in the coronary arteries - diet - lack of exercise - smoking - stress | <ul style="list-style-type: none"> - sometimes referred to as coronary thrombosis, coronary occlusion or myocardial infraction - sudden closing of a coronary artery by a blood clot (thrombosis) - heart is deprived of its blood supply - characterized by a feeling of pressure in the chest, sweating, weakness, shortness of breath, nausea, vomiting and sometimes loss of consciousness - higher incidence among men |
| Angina pectoris | <ul style="list-style-type: none"> - may be result of exertion, excitement or digestion of a heavy meal | <ul style="list-style-type: none"> - the blood supply to the heart muscle is insufficient at that moment - characterized by a feeling of pressure in chest which radiates down the arm - may be controlled by medication |

| Condition | Cause | Brief Description |
|-------------------------|---|--|
| Stroke | - caused by a blood clot that forms in the artery | - when the blood supply to any part of the brain is reduced or completely cut off, nerve cells, and therefore that part of the body which they control, cannot function normally - person becomes partially paralyzed, may be unable to speak |
| Rheumatic heart disease | - repeated attacks of rheumatic fever | - a complication of streptococcal sore throat - symptoms of rheumatic fever include: - a persistent, light fever - pain in the joints and muscles - poor appetite - failure to gain weight - unexplained fatigue - frequent nose bleeds |
| Congenital defects | - heart has failed to develop normally during the prenatal period | - may necessitate surgery - children with congenital heart defect require close medical supervision during their growing years |

Warning Signals

Since cardiovascular ailments are not always accompanied by symptoms, it is often difficult for a person to recognize the onset of heart disease. However, the body sometimes sends out warning signals that should be heeded immediately. It is important for an individual to consult a doctor if s/he notices any of the following dangers:

- Unusual shortness of breath: Shortness of breath associated with moderate exertion might be an early symptom of a weakened heart muscle.
- Pain or a tight feeling in the chest during exertion or excitement: Extra pressure may cause pain even when the heart is completely well, but if you have any discomfort it is best to play it safe and consult your physician.
- Swelling of the feet and ankles: Circulation becomes insufficient and fluid may gather in the tissues when the heart fails to pump with its customary vigour.

- Persistent fatigue: If you frequently feel very tired, it may be a sign of hypertension or heart difficulty.

Anyone who is worried that his/her heart is not behaving normally is strongly recommended to see his/her physician.

Protecting the Heart

Positive lifestyle practices which help to protect the heart include:

- watching your weight and keeping it under control,
- eating nutritious meals,
- exercising regularly,
- avoiding cigarette smoke;
- learning to relax,
- learning to cope appropriately with stress.

Respiratory Diseases

| Disease | Cause | Symptoms | Brief Description |
|--------------------|---|--|---|
| Asthma | <ul style="list-style-type: none">- allergy to external irritants such as dust or pollen- respiratory infection- stress | <ul style="list-style-type: none">- attacks of wheezing- difficulty breathing- shortness of breath- coughing- between attacks, patients may appear relatively free of symptoms | <ul style="list-style-type: none">- the bronchioles contract as a result of a spasm, constriction or mucus blockage- can be prevented by avoiding causal allergens, or using relaxation methods to cope with stress |
| Chronic bronchitis | <ul style="list-style-type: none">- respiratory irritants- smoking- overweight- lack of exercise | <ul style="list-style-type: none">- persistent sputum-producing cough- shortness of breath- wheezing | <ul style="list-style-type: none">- damage caused to the airways through chronic irritation of the mucous lining by smoke, dust, etc. |
| Emphysema | <ul style="list-style-type: none">- smoking- air pollution- occupational hazards | <ul style="list-style-type: none">- shortness of breath- difficulty breathing | <ul style="list-style-type: none">- a deterioration of the lungs- the walls of the tiny air sacs lose their elasticity and tear, thus reducing the ability of the lungs to exhale- extremely disabling, if severe |

Other Chronic Diseases

| Disease | Cause | Symptoms | Brief Description |
|--------------------|---|--|--|
| Diabetes | <ul style="list-style-type: none"> - people at risk include - relatives of diabetics - obese people - mothers of large babies | <ul style="list-style-type: none"> - frequent urination - excessive thirst - craving for sweets and starches - weakness | <ul style="list-style-type: none"> - a disorder of the body's metabolism that results from a deficiency of insulin, produced in the pancreas - can often be controlled by exercise and diet - may have to use insulin |
| Arthritis | | <ul style="list-style-type: none"> - difficulty moving joints - severe pain in the joints | <ul style="list-style-type: none"> - rheumatoid arthritis - inflammation of the joints - osteoarthritis - deterioration of the cartilage between the bones - rest, light exercise, physical therapy can prevent deformity |
| Rheumatism | <ul style="list-style-type: none"> - emotional disorders - strains - tiredness - cold <p style="margin-left: 150px;">} can trigger it</p> | <ul style="list-style-type: none"> - aches/pains | <ul style="list-style-type: none"> - includes lumbago, fibrositis - includes most aches and pains which do not involve the joints |
| Epilepsy | <ul style="list-style-type: none"> - a disorder of the brain functioning | <ul style="list-style-type: none"> - grand mal (the most severe) - victim collapses, body stiffens and muscles go into spasms - petit mal - victim exhibits unusual behaviour e.g. abnormal rage, fear, incoherent speech, along with some minor twitching | <ul style="list-style-type: none"> - disordered brain waves which precipitate sudden attacks of violent muscle contractions and/or unconsciousness - can be controlled by drugs - is not related to intellectual impairment |
| Muscular dystrophy | | <ul style="list-style-type: none"> - eventually unable to walk | <ul style="list-style-type: none"> - a gradual wasting away of muscle tissues - life expectancy may be decreased - no cure, although effects can be reduced by physical therapy |
| Multiple sclerosis | | <ul style="list-style-type: none"> - loss of muscular co-ordination - loss of balance - possible difficulty controlling bladder and bowels - paralysis, speech or vision impairment, trembling, numbness | <ul style="list-style-type: none"> - disintegration of the sheaths which cover the nerve fibres in the brain and spinal cord - usually strikes people between 20 and 40 - treatment includes physical therapy, rest and a balanced diet |

| Disease | Cause | Symptoms | Brief Description |
|----------------|--|--|---|
| Allergies | <ul style="list-style-type: none"> - numerous | <ul style="list-style-type: none"> - runny noses - hives - watery eyes - rashes - headaches - coughs - wheezing - sneezing | <ul style="list-style-type: none"> - overcompensation of the body's immune system, which produces special antibodies to attack the allergen |
| Cerebral palsy | <ul style="list-style-type: none"> - result of damage to the central nervous system (usually during or shortly after birth) - head injury - malnutrition - encephalitis - meningitis - oxygen deficiency | <ul style="list-style-type: none"> - mild co-ordination problems - spasms - severe convulsions | <ul style="list-style-type: none"> - no medical treatment can repair damaged brain tissue - many victims need partial care, some need complete care |

Adapted from Harvey, D and White, D (ed) "Chronic Diseases", Health Education Methods Project for Elementary School Teachers' Ottawa, Ont Health and Welfare Canada, 1983
 Book for Teachers and Students, Canadian Cancer Society, 1980

POSITIVE LIFESTYLE PRACTICES

Many of the chronic diseases described in the previous section can be prevented or minimized by adopting positive lifestyle practices.

Positive lifestyle practices include:

- exercising at least three times a week
 - improves physical well-being
 - helps relieve stress
 - helps control weight
- maintaining a reasonable weight
- eating nutritious meals and snacks
- avoiding use (overuse) of alcohol and other drugs (including tobacco)
- getting adequate rest and sleep
- learning to control stress

RISK FACTORS

Risk factors are conditions or habits that can increase the chance of developing disease.

Most of us have some risk factors. When reviewing a person's risk factors, it is important to remember some principles.

- risk factors are cumulative
- concentrate on changeable risk factors
- only one change should be made to lifestyle at a time (Changing 20 habits isn't easy)
- an individual will change his/her lifestyle only when he/she is ready and only with support
- few people will continue with activities they don't enjoy So, encourage them to find and do activities they find interesting and enjoyable

In addition to the risk factors identified, a comparison of positive and all negative health habits will reveal how "AT RISK" a person is.

Risk factors can be categorized as follows:

| Controllable | Modifiable | Uncontrollable |
|---|--|------------------------|
| Smoking Lack of Exercise Overweight (usually) | High Blood Pressure Cholesterol Stress Diabetes | Sex Heredity Age |

The greater the number of risk factors, the greater the chances of heart disease.

Controllable: Smoking

One of the most important risk factors to ELIMINATE, is SMOKING Based upon previous studies, eliminating smoking can significantly reduce your risk of heart attack (regardless of how long you have smoked).

Smoking is harmful because:

- It causes blood vessels to become temporarily smaller so that the heart has to pump harder and faster This raises your blood pressure
- Less oxygen is available for use by the heart and the rest of the body
- It irritates the lungs This leads to breathing difficulties and puts a strain on the heart

RECOMMENDATIONS TO STOP SMOKING - (Try one or more of the following)

- Decide not to smoke - take one day at a time
- Stop "Cold Turkey" For example, decide you are not going to smoke anymore
- Taper off smoking, for example, set daily goals, reducing the number of cigarettes you smoke.
- Get a friend or relative to quit smoking with you.
- Join a "stop smoking" clinic or group
- Approach whichever stop smoking program you use with a POSITIVE ATTITUDE not with grim determination
- Watch your weight.

Lack of Exercise

Inactivity predisposes a person to many injuries. This is due to weak muscles, poor flexibility, and inability to meet unexpected energy demands the body. Also, lack of exercise predisposes a person to diseases such coronary heart disease, hypertension and diabetes.

Regular exercise provides several benefits for you.:

- It improves circulation. It tones muscles.
- It helps handle stress better, since it relaxes the body With proper diet, it can help control weight.
- By reducing tension and relaxing the body, regular exercise can lower the blood pressure and heart rate.

Overweight

- When a person is overweight, the heart has to pump harder to supply blood to the excess weight.
- Overweight people frequently have breathing difficulties because the lungs have less room to expand. This results in less oxygen being taken in.
- High blood pressure frequently occurs in people who are overweight. The heart has to work even harder when high blood pressure and overweight occur together.

Suggestions to lose weight

- Follow a prescribed diet as recommended by the doctor and dietitian. Eat slowly. Always put the fork down while chewing.
- Always serve yourself last.
- Lose weight gradually.
- Restrict pure sweets and sugars in diet.
- Read product labels to ascertain the ingredients and their proportions. Reward yourself for weight loss with non-food items.
- Set realistic goals for weight loss.

Modifiable:

High Blood Pressure

- Blood pressure is the force of blood against the artery walls.
- In high blood pressure, there is increased force against the artery walls making the heart work harder.
- High blood pressure can result in damage to the arteries. This can lead to damage of the brain, heart and kidneys.
- People can have high blood pressure without even knowing it.

Suggestions to control high blood pressure

- Have blood pressure checked as frequently as the doctor recommends.
- Follow medical advice about medication, diet, and changes in health habits.
- Medication to control high blood pressure must be taken because when stopped, blood pressure (BP) will go up again.
- Keep taking your medications whether you feel well or not. DO NOT stop medication because of side effects but INFORM the doctor about how you are feeling.
- Follow a low salt diet if ordered by the doctor Stop smoking.
- Since tension is believed to be a factor in high blood pressure learn relaxation techniques to decrease stress.
- Lose weight because the heart has to work harder when you are overweight.
- Exercise regularly fit people have lower blood pressure.
- Notify your doctor if you have any symptoms of a headache or dizziness or if you feel part of your treatment is not working.

Cholesterol

- Fatty substances can be deposited more easily in and on the walls of the arteries when there is an excess of fats circulating in the blood stream.
- This depositing of fatty substances on the inner lining of the arteries is called atherosclerosis.
- The opening of the arteries becomes smaller and smaller making it harder for the heart to pump blood through the blood vessels. This results in high blood pressure and an enlarged heart.
- Foods high in saturated animal fats are marbled meats (beef, lamb, pork, ham), butter, cream, whole milk, and cheese made from cream and whole milk.
- Foods high in saturated vegetable fats are- lard, solid shortenings, coconut oil, palm oil, non-dairy milk and cream substitutes.
- Foods high in cholesterol are- organ meats, prepared luncheon meats, hot dogs, bacon, egg yolks, and shrimp.

Suggestions to control fatty substances intake

- Limit intake of egg yolks.
- Limit use of organ meats and shellfish.
- Use skinned chicken, turkey, veal and fish more often in your meal plans
- Eat lean beef, pork, lamb and ham less frequently and in smaller portions (For example, 3 ounce portions).
- Rather than frying foods, bake, broil, boil, roast or stew fatty foods
- Limit use of prepared luncheon meats e.g., sausage, cold cuts.
- Use polyunsaturated vegetable oils and margarines.
- Use skimmed milks and cheeses.
- Use foods of plant origin - For example, fruits, vegetables, grains, cereals and nuts.

Tension and Stress

- Emotional stress and tension cause the body to produce a substance called adrenalin.
- Adrenalin causes the heart to pump harder and faster. This puts extra strain on the heart.
- Stress and tension may raise blood pressure and blood cholesterol levels.
- People who live in almost constant stress and are unable to relax, tend to have increased blood pressure, increased heart rate and increased blood cholesterol level.

Suggestions for reducing tension and stress

- Know what makes you anxious or tense. For example, work, traffic.
- Avoid situations that make you tense, if possible.
- Learn relaxation and exercise techniques.

Diabetes

- Diabetes is an abnormal condition of the body in which sugars and starches cannot be broken down.
- The excess sugar is left in the blood and early atherosclerosis develops.
- There seems to be a connection between diabetes, atherosclerosis, high blood pressure and overweight.

Suggestions to decrease the risks associated with diabetes

- Have yearly checkups to detect and treat diabetes (diabetes runs in families).
- If you are diabetic, follow your doctor's prescribed medical regime.
- Regular exercise programs frequently lessen the amount of insulin needed.
- Good foot care is essential to slow down the premature onset of vascular disease, e.g. atherosclerosis

Uncontrollable:

Male

- Males have coronary heart disease more frequently than females.
- Males should make an effort to eliminate or reduce the controllable risk factors.

Heredity

- The risk of developing heart disease increases if family members have a history of heart disease.
- If heart disease is present in your family you should reduce or eliminate the risk factors you have control over. You can modify your lifestyle
- Teaching children about proper diet, avoiding smoking, and maintaining their normal weight will reduce their risk of developing atherosclerosis.

Age

- Not much can be done about this risk factor. As you increase in age, the chance of heart disease increases. Therefore, reduce the other risk factors for heart disease.

Summary

Prudent living is a lifestyle which minimizes the risk of disabling diseases which can be prevented and/or can be controlled.

This includes stopping smoking, controlling high blood pressure, reducing intake of fatty substances, coping with stress constructively, physical fitness through prescribed exercise program and weight control through proper nutrition.

LIFESTYLE FACTS:

Preventive medicine has gained popularity due to the reawakening of health consciousness and rising health care costs. Lifestyle-created illnesses are considered the biggest problem. The "baby boom" children are now entering the heart attack crisis years.

However, the current base of financial support is no longer quite as broad as it was. Statistics Canada has recently released a survey that indicates both women and men have increased their lifespan (women to 80 years and men to 70 years). There has been a decline in the birth rate since 1970, and it has not been high enough to replace the adult population since 1972.

Prevention is the best alternative to spiralling health costs. By modifying risk factors and incorporating positive health habits, one would be assuming responsibility for his/her own healthy lifestyle.

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

GRADE 9

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: 9

LESSON: 1

THEME: FAMILIES

CONCEPT: MALES AND FEMALES HAVE EQUAL POTENTIAL

PREPARATION: 1 Prepare a class set of the Is This True? Questionnaires (Activity Sheet FL104)
2 Prepare a class set of the Gender Role Questionnaires (Activity Sheet FL105)
3 Prior to the class, invite a person or people from the community to discuss stereotyping

VOCABULARY: stereotyping, gender role, capabilities

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| Students will be able to: i) describe male and female gender role stereotyping | Students: 1 Complete the Is This True? Questionnaire. | Background Information Page FL63 It is important that males and females have choices and are not stereotyped because of their gender. People who are stereotyped may not feel valuable or capable. Refer to Activity Sheet FL104. Have students complete the questionnaire. Discuss what is meant by stereotyping. Stereotyping is the idea that all members of a large group share the same characteristics in a fixed way. There are racial, sexual and physical stereotypes. Stereotyping ignores the fact that individuals are unique. Gender role stereotyping is an expected behaviour as a male or female. |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

| <p>ii) identify factors that contribute to changes in gender role stereotyping</p> | <p>2 Complete the Gender Role Questionnaire.</p> <p>3 List activities, careers and jobs that are of interest to males and females.</p> <p>4 Categorize the items on the list based on capabilities.</p> <p>5 List some factors that may contribute to changes in gender role stereotyping.</p> | <p>Refer to Activity Sheet FL105. Have students complete the questionnaire individually, then discuss in small groups.</p> <p>Have students brainstorm to produce the list, e.g., - nursing - teaching - secretarial</p> <p>Divide the class into small groups, with equal numbers of males and females in each group, if possible.</p> <p>Have the groups examine the list from Activity 3, and categorize the jobs into those which males, those which females, those which both can do, based on capabilities.</p> <table border="1" data-bbox="1142 846 1942 1016"> <thead> <tr> <th data-bbox="1142 846 1362 911">Males</th> <th data-bbox="1362 846 1591 911">Females</th> <th data-bbox="1591 846 1942 911">Both</th> </tr> </thead> <tbody> <tr> <td data-bbox="1142 911 1362 1016"></td> <td data-bbox="1362 911 1591 1016"></td> <td data-bbox="1591 911 1942 1016"> <ul style="list-style-type: none"> - nursing - teaching - etc. </td> </tr> </tbody> </table> <p>Discuss with the class whether choices are generally made based on gender, or based on capabilities and interests.</p> <p>Some factors include:</p> <ul style="list-style-type: none"> - parents and other caregivers who model roles (gender identification) - the media - community members who model changing roles - peers - culture and traditions - individuals who are successful at carrying out new activities beyond the usual gender roles | Males | Females | Both | | | <ul style="list-style-type: none"> - nursing - teaching - etc. |
|--|--|---|-------|---------|------|--|--|---|
| Males | Females | Both | | | | | | |
| | | <ul style="list-style-type: none"> - nursing - teaching - etc. | | | | | | |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|---|--|
| | <p>6 Discuss overcoming gender role stereotyping with someone who has successfully done this.</p> <p>7 Write a story about someone who is successful in a job or career which is outside the usual gender role.</p> | <p>If possible, invite an individual or a panel of people from the community who have overcome gender role stereotyping to discuss it with the class. Have students prepare questions ahead of time.</p> <p>Students may write a true or imaginary story. Some examples might be:</p> <ul style="list-style-type: none"> - a woman who becomes a pilot - a woman who becomes a heavy equipment operator - a man who stays home to look after his children <p>The story should include some of the difficulties which s/he had to overcome, and how s/he dealt with the difficulties to become successful.</p> |

IS THIS TRUE?

Read each statement Circle T if you think the statement is TRUE, F if you think it is FALSE. Discuss.

- | | | |
|---|---------|---------|
| 1 All teachers are mean. _____ | T _____ | F _____ |
| 2 All blondes are stupid _____ | T _____ | F _____ |
| 3 All boys like hockey _____ | T _____ | F _____ |
| 4. Men don't cry _____ | T _____ | F _____ |
| 5. Girls are no good at math _____ | T _____ | F _____ |
| 6 Parents don't understand their children _____ | T _____ | F _____ |
| 7 Only boys like hockey _____ | T _____ | F _____ |
| 8 Girls make the best nurses _____ | T _____ | F _____ |
| 9 Only men can be heavy equipment operators _____ | T _____ | F _____ |
| 10. Girls are always neat and tidy. _____ | T _____ | F _____ |



GENDER ROLE QUESTIONNAIRE

Read the following list and check whether male, female or both males and females can do the tasks.

WHO DO YOU THINK CAN...

| | Male | Female | Both |
|---|-------------|---------------|-------------|
| a take out the garbage? | _____ | _____ | _____ |
| b wash the dishes? | _____ | _____ | _____ |
| c choose nursing as a career? | _____ | _____ | _____ |
| d babysit? | _____ | _____ | _____ |
| e put away chairs? | _____ | _____ | _____ |
| f diaper a baby? | _____ | _____ | _____ |
| g have a newspaper route? | _____ | _____ | _____ |
| h drive a skidoo? | _____ | _____ | _____ |
| i clean the bathroom? | _____ | _____ | _____ |
| j. contribute to the family income? | _____ | _____ | _____ |
| k be a ballet dancer? | _____ | _____ | _____ |
| l make bannock? | _____ | _____ | _____ |
| m ask someone to dance? | _____ | _____ | _____ |
| n phone the opposite sex? | _____ | _____ | _____ |
| o wear jewelry? | _____ | _____ | _____ |
| p wear long hair? | _____ | _____ | _____ |
| q grow long fingernails? | _____ | _____ | _____ |
| r set a trapline? | _____ | _____ | _____ |
| s make mocassins? | _____ | _____ | _____ |
| t coach a volleyball team? | _____ | _____ | _____ |
| u shake hands when greeting others? | _____ | _____ | _____ |
| v move furniture? | _____ | _____ | _____ |
| w. build a house? | _____ | _____ | _____ |



FAMILY LIFE

GRADE: 9

LESSON: 2

THEME: FAMILIES

CONCEPT: FAMILY MEMBERS PLAY AN IMPORTANT ROLE IN MEETING THE NEEDS OF A NEWBORN

PREPARATION: 1 A photograph of a newborn baby

2 Prior to the class, invite a new mother, baby and community health nurse to the class to demonstrate baby care

VOCABULARY:

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| Students will be able to: i) describe the needs of a newborn | Students: 1 Make a list of the needs of a newborn | Background Information – The family teaches its members about love, care and nurturing throughout the years. It provides for such needs as clothing, shelter, food, cleanliness, love and a sense of belonging. It imparts values such as respect, honesty, truth, justice and non-exploitation. The addition of a new family member brings many responsibilities to parents and other family members. Show students a photograph of a newborn baby. In small groups, have them brainstorm the needs of a newborn. Needs of a newborn include: - to sleep for many hours a day - to be fed six to eight times a day - to be changed frequently (after every bladder and bowel movement) - to be bathed daily - to be held, touched, talked to, sung to - to be loved - to be examined by a nurse or doctor |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

ii) explain the roles of family members in meeting the needs of a newborn

- 2 Observe a demonstration on how to care for the needs of a newborn.
- 3 Describe how different family members can help in meeting the needs of a newborn.

Invite a new mother and baby, and public health nurse to class. Have the public health nurse demonstrate baby care e g , bathing, dressing etc. Encourage students to ask questions about the newborn's care and characteristics.

Use the list from Activity 1.

Record responses on a chart as illustrated:

| Basic Needs | Mother | Father | Other Relative | Other |
|--------------------|--------|--------|----------------|-------|
| food | | | | |
| providing clothing | | | | |
| bathing | | | | |
| changing diapers | | | | |
| love | | | | |
| holding/ touching | | | | |
| smiling/ talking | | | | |
| laundry | | | | |
| medical | | | | |

it is important to emphasize how all family members, especially the father, have a role to play.

Discuss.

FAMILY LIFE

GRADE: 9

LESSON: 3

THEME: FAMILIES

CONCEPT: EFFECTIVE PARENTING ENHANCES FAMILY LIVING

- PREPARATION:
- 1 Prepare 2 students to do a roleplay for Student Activity 1
 - 2 Prepare a class set of Encourage Them (Activity Sheet FL106A)
 - 3 Prepare a class set of Responses Which Give Encouragement (Activity Sheet FL106B)
 - 4 Prepare a class set of I-Messages (Activity Sheet FL107)
 - 5 Prepare a class set of Logical Consequences (Activity Sheet FL108)
-

VOCABULARY: effective, encouragement, logical, consequences, I-messages

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES | | | | | | | | |
|---|---|---|---------------------------|---------------------------|---------------------|---------------------------------|--------------------------|-----------------------|-------------------------------|-----------------------------|
| <p>Students will be able to:</p> <p>i) describe effective parenting</p> | <p>Students:</p> <p>1 List skills involved in effective parenting</p> | <p>Background Information -</p> <p>It is important for students to learn skills related to parenting. It is also important however, that teachers ensure students learn skills which are culturally appropriate.</p> <p>Have 2 students prepared ahead of time to roleplay two different parenting scenarios.</p> <table border="0"><tr><td>a) parent - hitting child</td><td>b) parent - hugging child</td></tr><tr><td>- shouting at child</td><td>- explaining carefully to child</td></tr><tr><td>- not listening to child</td><td>- listening carefully</td></tr><tr><td>- giving junk food for supper</td><td>- preparing nutritious meal</td></tr></table> <p>Have students decide which is the more effective parent.</p> <p>Discuss effective parenting.</p> | a) parent - hitting child | b) parent - hugging child | - shouting at child | - explaining carefully to child | - not listening to child | - listening carefully | - giving junk food for supper | - preparing nutritious meal |
| a) parent - hitting child | b) parent - hugging child | | | | | | | | | |
| - shouting at child | - explaining carefully to child | | | | | | | | | |
| - not listening to child | - listening carefully | | | | | | | | | |
| - giving junk food for supper | - preparing nutritious meal | | | | | | | | | |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| ii) demonstrate the parenting skill of encouragement | 2 Describe the parenting skill of encouragement. 3 Select and practise giving encouragement. | <p>Effective parenting goes beyond nurturing and the provision of basic needs of family members. Effective parenting includes skills such as:</p> <ul style="list-style-type: none"> - encouragement (focussing on strengths) - effective communication i.e., reflective listening, exploring alternatives, problem ownership, I-messages - natural consequences - logical consequences <p>Encouragement focusses on a person's assets and strengths. At first, encouragement and praise appear to be the same process because they look at positive behaviours. However, encouragement is given for any effort or improvement, while praise is a type of reward given for well-done, completed tasks.</p> <p>Encouragement can be used often in day-to-day relationships with family members and friends.</p> <p>Refer to Activity Sheets FL106A and 106E.</p> <p>Divide the class into small groups. For each situation, have students provide encouragement.</p> <p>(Activity Sheet FL106B provides some suggestions for giving encouragement).</p> |
| iii) demonstrate the parenting skill of effective communication | 4 Write a scenario that demonstrates encouragement and roleplay the scenario. 5 Demonstrate the use of I-messages. | <p>In small groups, have students design situations that demonstrate encouragement Roleplay the situation for the rest of the class.</p> <p>Refer to Activity Sheet FL107.</p> <p>In small groups, have students practise responding to situations using I-messages.</p> <p>Explain that I-messages remove any indication of 'blame' or 'guilt', and allow comments to be made in a non-threatening way.</p> |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|---|
| iv) demonstrate the parenting skill of logical consequences | <p>6 Describe the parenting skill of logical consequences.</p> <p>7 Select and practise applying logical consequences.</p> <p>8 Write a scenario that demonstrates logical consequences and roleplay the scenario.</p> | <p>Logical consequences is a method of disciplining individuals which holds the individual responsible for his/her behaviour. Logical consequences permit a person to make choices and experience related consequences. In other words, the consequences must 'fit' the behaviour in a logical way. For example, a younger brother and sister are arguing and you are trying to watch your favourite T.V. program. You might say "You two may settle down and watch T.V. with me or leave the room. You decide which you'd rather do." If the arguing continues, you say nicely "I see you've decided to leave the room. You can come back when you settle down " If necessary you can kindly, but firmly, remove them to another room.</p> <p>Refer to Activity Sheet FL108.</p> <p>In small groups, have students apply logical consequences for that situation.</p> <p>In small groups, have students design situations that demonstrate logical consequences. Roleplay the situation for the rest of the class.</p> |

ENCOURAGE THEM!

Situations

1. Your friend complains that math is too hard for her.
2. A child you are babysitting puts his runner on the wrong foot.
3. A younger brother or sister has just helped you clean up the kitchen.
4. Your brother tried out for the Arctic Winter Sports team and didn't make it.
5. A child who is not very good at painting has painted you a picture.
6. An older boy has helped a younger child in the yard.
7. A friend has just asked you what you think of her carving which she has just finished, and doesn't like.
8. A friend has just split up with her boyfriend.
9. Your mother made a special cake for your birthday, even though she hates baking.
10. A friend has to go for a job interview tomorrow and is really nervous about it.



RESPONSES WHICH GIVE ENCOURAGEMENT

Phrases that show acceptance:

"I like the way you handled that."

"I'm glad you're enjoying doing that."

"I'm glad you're pleased with it."

"Since you're not satisfied, what do you think you can do so that you will be pleased with it?"

"How do you feel about it?"

Phrases that focus on contributions, assets, and appreciation:

"Thanks; that helped a lot."

"It was thoughtful of you to _____."

"Thanks, I really appreciate _____, because it makes my job much easier."

"I need your help on _____."

"I really enjoyed today. Thanks "

"You are good at _____. Would you do that for the family?"

Phrases that show confidence:

"Knowing you, I'm sure you'll do fine."

"You'll make it."

"That's a rough one, but I'm sure you'll work it out."

"You'll figure it out."

Phrases that recognize effort and improvement:

"It looks as if you really worked hard on that."

"It looks as if you spent a lot of time thinking that through."

"I see that you're moving along."

"Look at the progress you've made," (be specific, tell how)


"You're improving in.. ." (be specific)

"You may not feel that you've reached your goal, but look how far you've come!"


I-MESSAGES

For each situation, give an I-message response E.g., I know that you are hungry, but you have to wash your hands before you eat.


1 John, who is 3, has just spilt his juice



2. Sarah is crying because the arms fell off her doll.




3. Your brother has just broken your ghetto blaster which he borrowed.




4 Margie just walked into the house with mud all over her shoes



5. Your sister has just lost her job and is upset about it



6. You are visiting a friend with the child you are babysitting. The child breaks a glass.



LOGICAL CONSEQUENCES

| Steps in applying logical consequences | Situations |
|---|--|
| 1 Give the person a choice <i>and</i> accept the person's decision. | 1 You are babysitting and the child keeps asking for a drink of water. |
| 2 Use a friendly tone of voice (reflects respect and acceptance). | 2 You are trying to talk to your best friend. Your younger brother or sister keeps interrupting. |
| 3 Make sure the consequence is <i>logically</i> related to the misbehaviour. | 3 Your brother borrowed your bicycle. He left the bike at his friend's house instead of putting it in the back yard. |
| 4 When following through with the consequence, assure the person there will be a chance to try again later. | 4 It's a rainy day and some neighbour's children are playing inside with your son. It is time for them to leave, and the room is a mess. |
| 5 If a misbehaviour is repeated, extend the time that must elapse before the person may try again. | |

Example: A younger brother and sister are arguing while you are trying to do your homework. You might say "You both settle down or leave the room. You decide what you're going to do." If they continue to argue, say "I see you have decided to leave the room. You are welcome to come back when you settle down." If they do not settle down, the consequence is that they have to leave the room until they have settled down.

FAMILY LIFE

GRADE: 9

LESSON: 4

THEME: FAMILIES

CONCEPT: THERE ARE MANY SUPPORT SYSTEMS IN THE COMMUNITY AVAILABLE TO FAMILIES

PREPARATION: 1 Prior to the class, arrange with an agency that provides support for families for a visit by the class or have a representative visit the class

VOCABULARY: support

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|--|
| Students will be able to: i) identify family support systems in the community | Students: 1 Make a list of agencies and organizations within the community that provide support for families. | Background Information - Brainstorm what community agencies and organizations exist to help families. Examples include: - nursing stations - social services - religious organizations - Canada Employment Centres (Outreach Projects) - recreation committees - R C M P - legal aid - educational facilities - band council - women's groups - service clubs e g , Lions - Alcoholics Anonymous - Alateen - crisis line - youth centres - alcohol and drug programs |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| <p>ii) identify the roles of family support systems</p> <p>iii) describe how to effectively use the systems</p> | <p>2 Select one of the support systems and prepare a brief report on its roles and how to use the system.</p> <p>3 Prepare a class book on 'Family Support Systems in the Community'.</p> <p>4 Select one of the support agencies to discuss with its representative.</p> | <p>In pairs, have students research one or more of the support systems identified in Activity 1. They should contact the agency with a set of prepared questions.</p> <p>Sample questions might include:</p> <ul style="list-style-type: none"> - What types of services are provided that would help families - Where are the services provided - To whom are they available - How can someone use these services <p>Photographs etc can be used to familiarize other students with the agency and to enhance the report.</p> <p>Have students prepare a class book from the information collected for their research.</p> <p>Display it in the school.</p> <p>As a class, select one of the support agencies to visit and discuss its roles, or invite a representative of the agency to class to discuss roles and how to access the system. Emphasis should be placed on responsible use of the agency.</p> |

FAMILY LIFE

GRADE: 9

LESSON: 5

THEME: HUMAN DEVELOPMENT
AND REPRODUCTION

CONCEPT: THE UNION AND DEVELOPMENT OF REPRODUCTIVE CELLS DETERMINE THE CHARACTERISTICS OF AN OFFSPRING

- PREPARATION:
- 1 Arrange for students to bring in photographs of themselves and their parent(s)
 - 2 Prepare a class set of the Hereditary Traits worksheet (Activity Sheet FL109)
 - 3 Prepare overhead transparencies of Activity Sheets FL110, 111 A and 111 B
 - 4 Prepare a class set of the Multiple Births worksheet (Activity Sheet FL112)
-

VOCABULARY: identical, fraternal, zygote, chromosomes, genes, heredity

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| Students will be able to: i) describe how the characteristics of an offspring are determined | Students: 1 Match adults and their offspring | Background Information Page FL66 to FL67 Students should have studied Reproductive Systems and Processes in prior grades. It is recommended that teachers conduct an initial assessment and review materials from Grades 7 and 8, if necessary. Prior to the class, arrange for students to bring in photographs of their parent(s) and a photograph of themselves. Arrange on the walls. Have students match parents and offspring. (This activity can also be done using animals and their offspring e.g., dog and puppies) Discuss how students were able to match parents and offspring. Explain that many of our characteristics are derived from our parents. |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|---|---|
| | <p>2 Explain what is meant by fertilization, zygote, chromosomes, genes and heredity.</p> | <p>Use a dictionary to help explain these terms.</p> <p>Fertilization (conception): the union of an egg and a sperm.</p> <p>Zygote: the single fertilized cell that results from the joining of the sperm and the egg.</p> <p>Chromosomes: thread-like structures that contain genetic information. The <i>Zygote</i> contains 46 chromosomes - 23 from the egg, 23 from the sperm. The chromosomes carry the hereditary information from both parents and from generation to generation.</p> <p>Heredity: <i>the</i> passing on of characteristics from parents to child.</p> <p>Gene: the basic unit of heredity. Genes are found within chromosomes. Genes determine every characteristic of the offspring.</p> |
| <p>ii) describe how inherited traits determine personal uniqueness</p> | <p>3 Complete the Hereditary Traits worksheet.</p> | <p>Refer to Activity Sheet FL109.</p> <p>Have students complete the worksheet individually. Then compile the class data (e.g., on bar graphs) to illustrate similarities and differences.</p> |
| <p>iii) describe how the sex of an offspring is determined</p> | <p>4 Illustrate how the sex of a male and female is determined.</p> | <p>Refer to Activity Sheet FL110.</p> <p>Using the overhead transparency, describe how the sex of an offspring is determined.</p> <p>Have students draw a diagram to answer the following questions.</p> <p>What will be the sex of the offspring if</p> <p>i) sperm X fertilizes an egg? (XX = female)</p> <p>ii) sperm Y fertilizes an egg (YX = male)</p> |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| iv) identify how multiple births are determined | <p>5 Describe how multiple births are determined.</p> <p>6 Complete the Multiple Births work sheet.</p> <p>7 Describe what it is like to be a twin.</p> | <p>Refer to Activity Sheets FL111A and 111B.</p> <p>Using the overhead transparencies, describe how identical twins and how fraternal twins develop.</p> <p>Refer to Activity Sheet FL112A.</p> <p>Refer to Activity 1128 for the answers. Have students complete the worksheet.</p> <p>If there are any twins in the community, invite them or their mother to the class to discuss what it is like to be a twin. If there are no twins, have students imagine what it would be like.</p> |

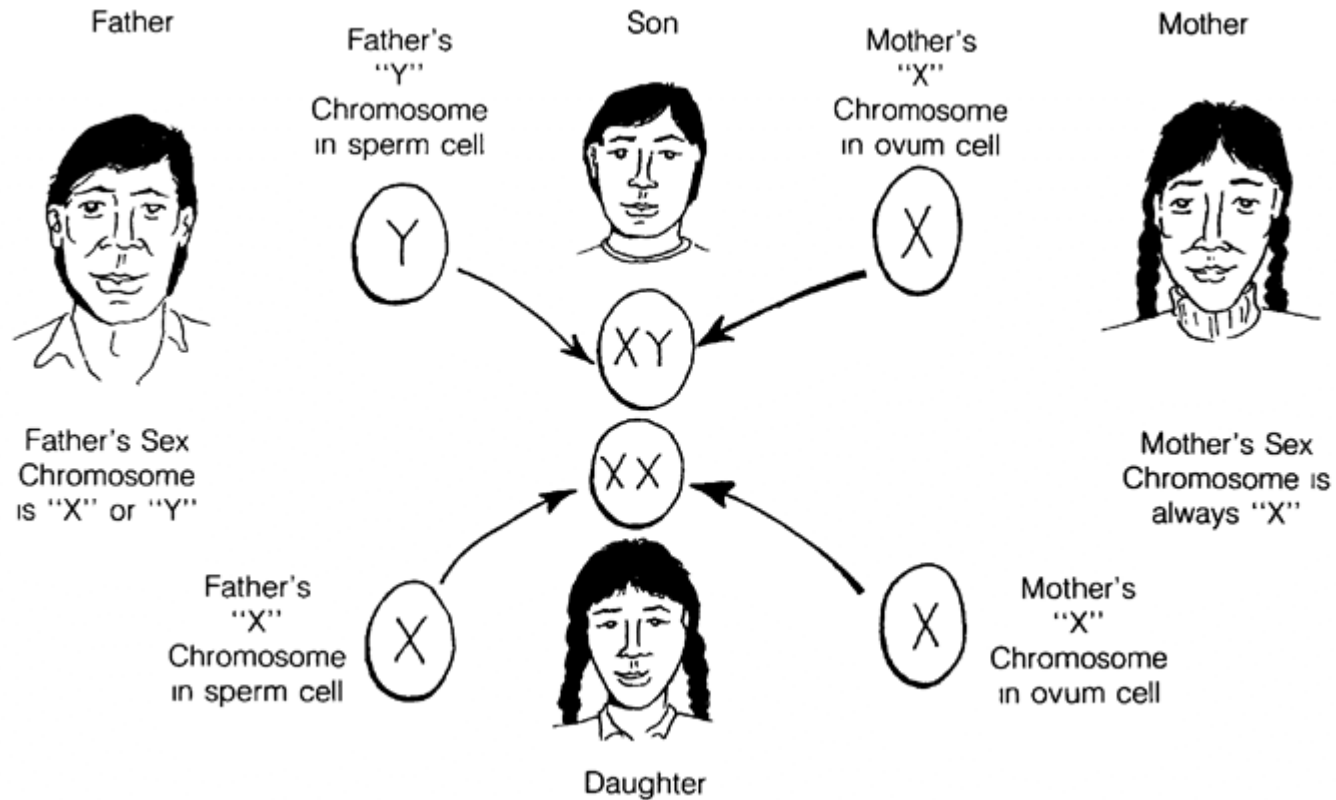
HEREDITARY TRAITS

Do you have this trait? (Answer only the first column individually. After that is completed, you will compile the class information together)

| Traits | I have this trait | Numbers of classmates who have this trait Explain |
|--|-------------------|---|
| 1. Gender (female or male) | | |
| 2. Hair colour (black, brown, red, blonde) | | |
| 3. Hair form (curly, straight, wavy) | | |
| 4. Dimples (Yes or No) | | |
| 5. Eye colour (black, blue, blend) | | |
| 6. Skin colour (fair, medium, dark) | | |
| 7. Hitch-hiker thumb | | |
| 8. Widow's peak hairline | | |
| 9. Longer second toe | | |
| 10. Ear lobes (attached or unattached) | | |
| 11. Handedness (left handed, right handed) | | |
| 12. Tongue rolling (Yes or No) | | |



DETERMINATION OF THE SEX OF OFFSPRING



The offspring gets half its chromosomes from the mother and half from the father. The father's sex chromosome - either "X" or "Y" - decides the sex of the offspring.

| Female | + | Male | |
|--------|---|------|--------------------|
| X | + | X | = Female offspring |
| X | + | Y | = Male offspring |

IDENTICAL TWINS



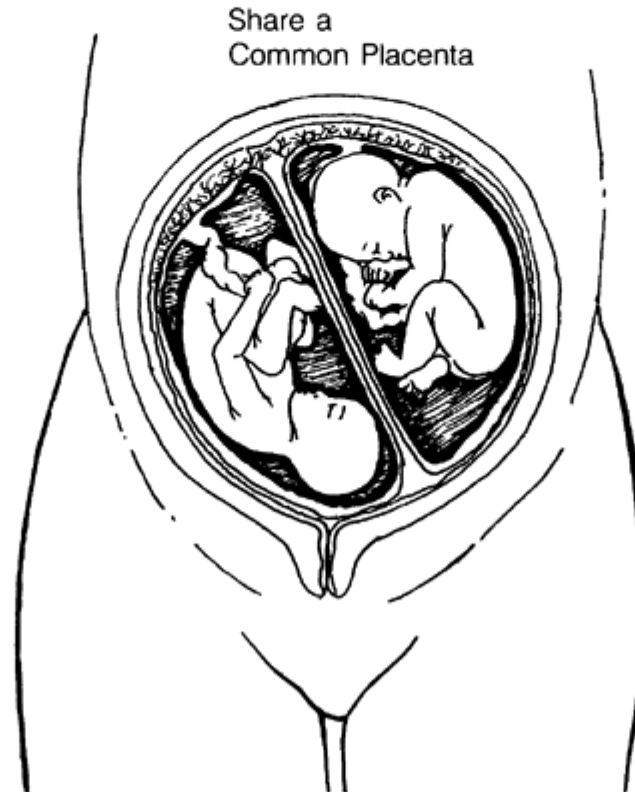
Single Egg and Sperm



Divides



Identical Chromosome



Share a Common Placenta

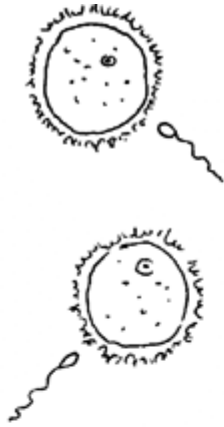


Girls



Boys

FRATERNAL TWINS

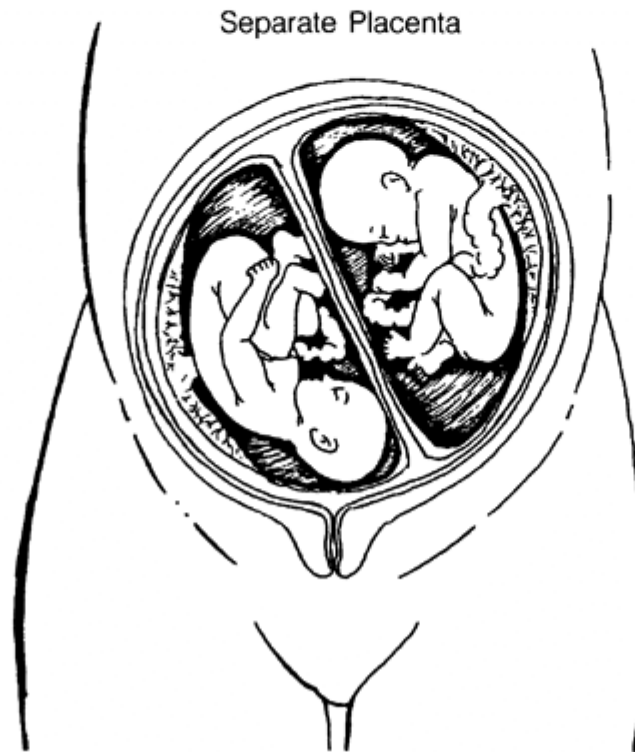


2 Eggs

2 Sperm



Different Chromosome



Girl and Boy



Girls



Boys

MULTIPLE BIRTHS

Select the correct answer from the words listed below.

two the same one two two Identical sex the same
 one male and female Fraternal one placenta

- 1 An identical twin develops from the union of _____ sperm(s) and _____ ovum (ova) which separate into _____ offspring
- 2 Identical twins are the same _____
- 3 Identical twins share _____ placenta.
- 4 Fraternal twins develop from the union of _____ sperm(s) and _____ ovum (ova).
5. Fraternal twins can be both _____ or _____ sex
6. Fraternal twins have a separate _____.
7. _____ twins are genetically the same
- 8 _____ twins may not look alike



MULTIPLE BIRTHS

(Teacher Answer Guide)

- 1 An identical twin develops from the union of one sperm(s) and one ovum (ova) which separate into two offspring
2. Identical twins are the same sex
- 3 Identical twins share one placenta
- 4 Fraternal twins develop from the union of two sperm(s) and two ovum (ova).
- 5 Fraternal twins can be both male and female or same sex.
- 6 Fraternal twins have a separate placenta
- 7 Identical twins are genetically the same
8. Fraternal twins may not look alike

FAMILY LIFE

GRADE: 9

LESSON: 6

THEME: HUMAN DEVELOPMENT
AND REPRODUCTION

CONCEPT: A FEMALE'S BODY UNDERGOES PHYSICAL CHANGES DURING PREGNANCY

PREPARATION: 1 Prepare overhead transparencies of Activity Sheets FL113, 114A, B, C and D

VOCABULARY: trimester, contraction, cervix

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| Students will be able to: i) describe the signs of pregnancy | Students: 1 Describe the signs of pregnancy. | Background Information Page FL68 to FL71 Students have probably heard pregnant women or others discuss some of the indicators of pregnancy. Brainstorm how a woman knows she might be pregnant. Early signs of pregnancy include: - a missed menstrual period - frequent urination - enlarged breasts, tingling, tender - fatigue or depression or bursts of energy - morning sickness - nausea and vomiting that occur anytime during the day |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| <p>ii) describe some characteristics of the three trimesters of pregnancy</p> <p>iii) describe the stages of labour</p> | <p>2 Describe some of the physical changes that usually occur in the mother during pregnancy.</p> <p>3 Define the term 'labour'.</p> <p>4 Describe the stages of labour.</p> | <p>Emphasize that definite diagnosis of pregnancy can be made by the doctor or nurse. It is important that diagnosis be made early and that prenatal care be initiated early as well.</p> <p>Refer to Activity Sheet FL113.</p> <p>Using the overhead transparency, describe physical changes that occur in the mother.</p> <p>Use a dictionary to describe the term.</p> <p>Labour is the delivery of the baby from the mother's uterus. It consists of a series of muscular contractions of the uterus that occur at regular intervals, to help push the baby and placenta from the uterus, into the birth canal and out of the mother's body.</p> <p>Refer to Activity Sheets FL114A, B, C and D.</p> <p>Using the overhead transparencies, discuss the stages of labour.</p> |

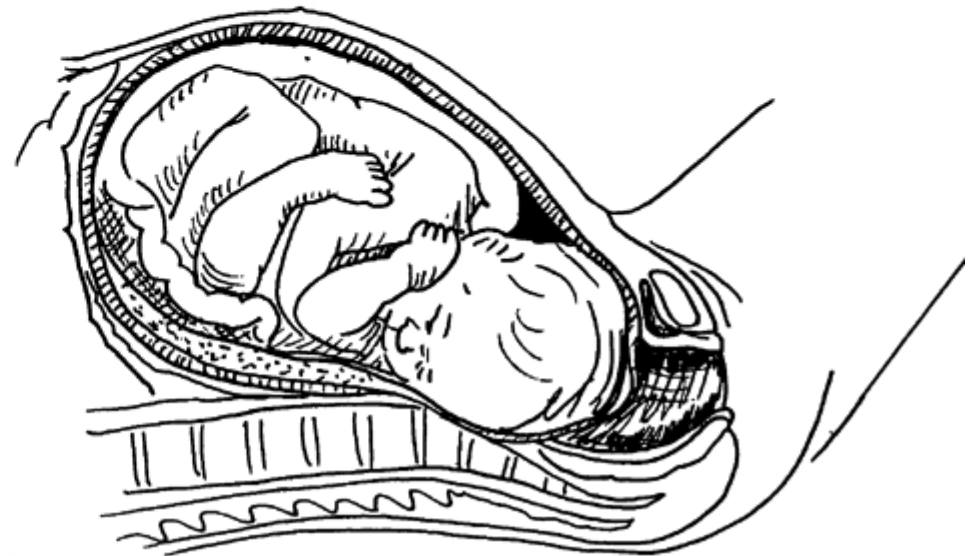
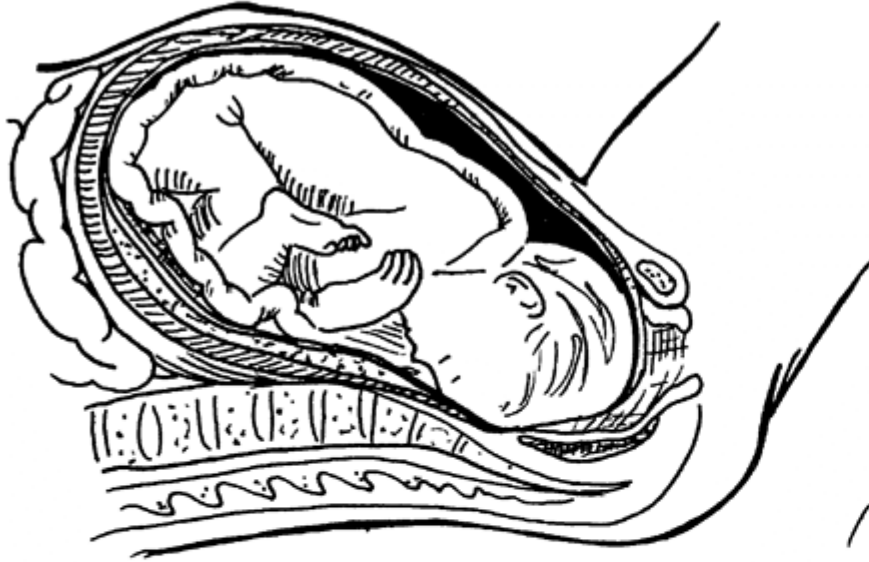
PHYSICAL CHANGES THAT OCCUR IN PREGNANT WOMEN

| Time Period | Physical Changes in Pregnant Mother |
|--------------------------------------|--|
| first trimester (first three months) | <ul style="list-style-type: none"> - absence of menstruation - breasts enlarge and are sensitive - fatigue - nausea (morning sickness) - frequent urination - light-headedness - shortness of breath - increased vaginal secretions - small weight gain |
| second trimester (4-6 months) | <ul style="list-style-type: none"> - uterus rises up in abdomen (less nausea, less bladder pressure, less tired) - breasts may secrete liquid - movement of baby felt in uterus - may experience low back pain - more rapid weight gain (near end of second trimester) |
| third trimester (7-9 months) | <ul style="list-style-type: none"> - steady weight gain - purple or red marks on abdomen and breasts (stretch marks) - tire more easily - irregular contractions of uterus (false labor) - muscle cramps in legs (especially at night) - fatigue and some depression (feelings of awkwardness and impatience) - heartburn and frequent urination (pressure of uterus on stomach and bladder) - constipation - shortness of breath |
| 3 - 4 days before labor | <ul style="list-style-type: none"> - breathing becomes easier when baby 'drops' - some weight loss - increase in 'false labour' contractions - less movement of baby - burst of energy |

* Not all of these changes are experienced by all women

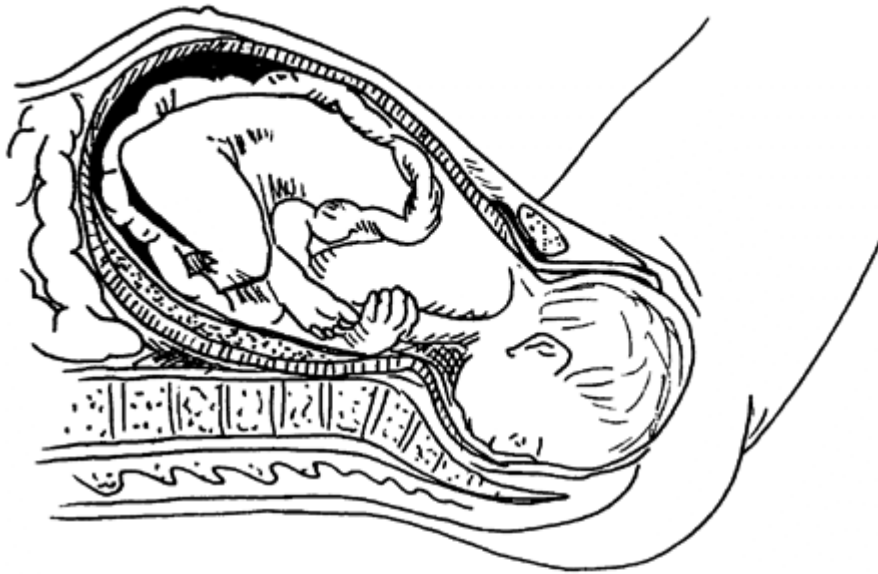
FIRST STAGE OF LABOUR

- Contractions begin
- Water breaks
- Cervix dilates



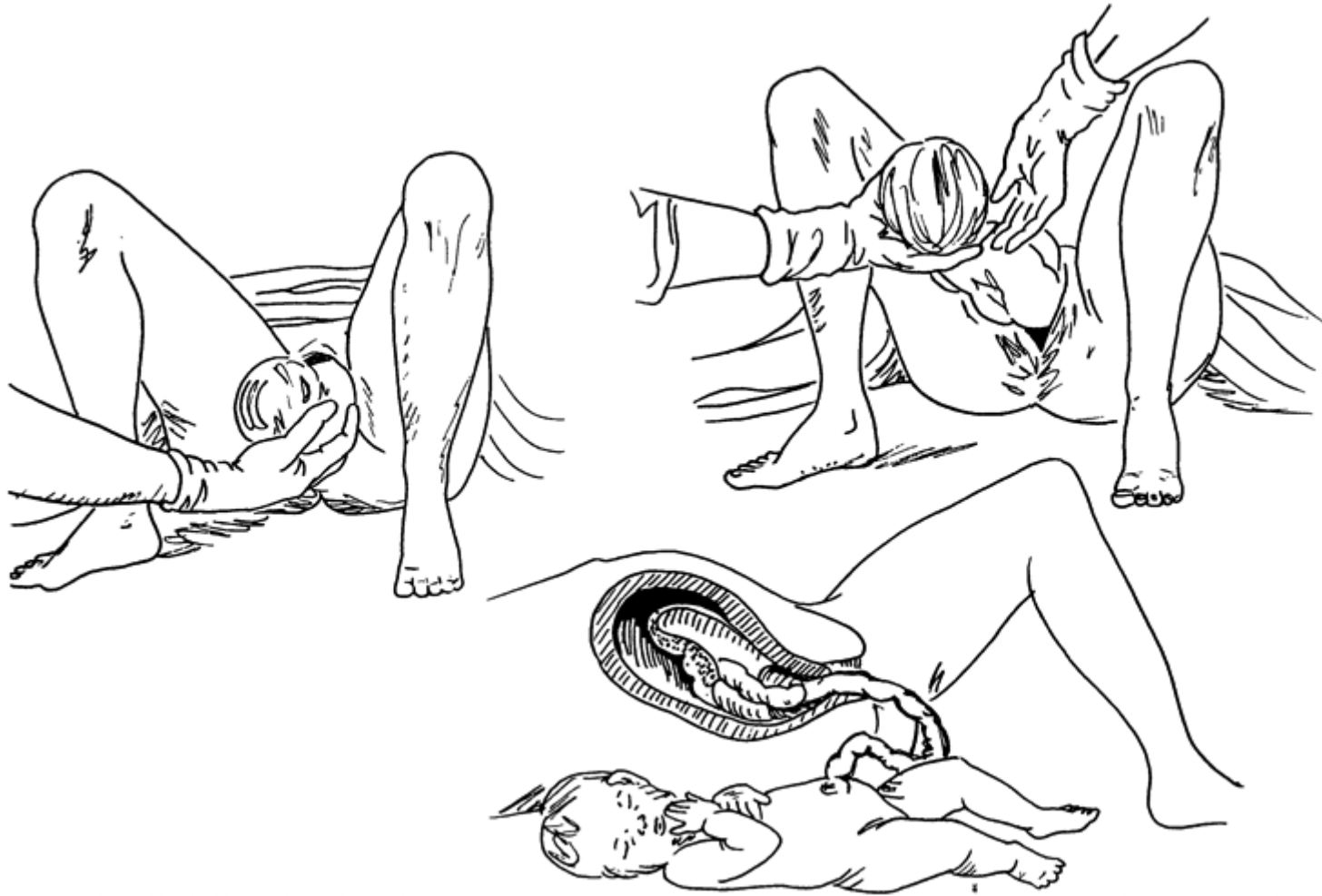
SECOND STAGE OF LABOUR

- Actual birth
- Head shows first (usually)



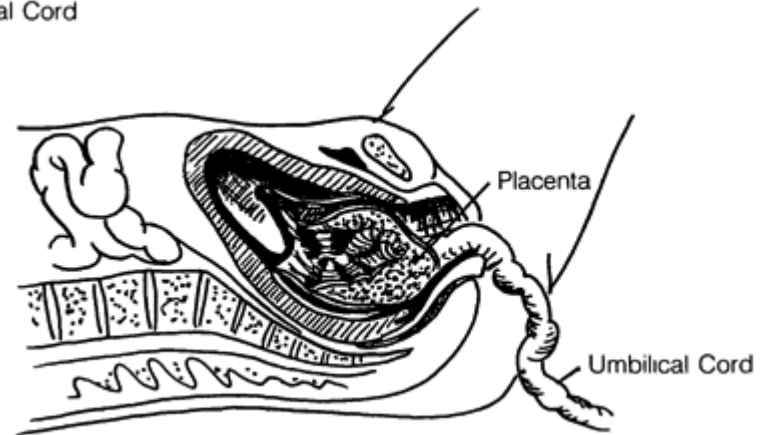
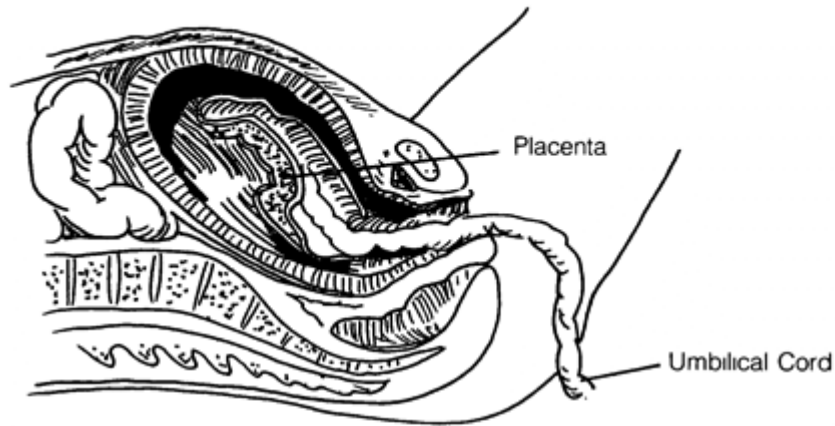
SECOND STAGE OF LABOUR

- Baby is assisted out of birth canal
- Umbilical cord will be tied and cut



THIRD STAGE OF LABOUR

Placenta (afterbirth) is expelled from uterus by contractions



FAMILY LIFE

GRADE: 9

LESSON: 7

THEME: HUMAN DEVELOPMENT
AND REPRODUCTION

CONCEPT: POSITIVE HEALTH BEHAVIOURS DURING PREGNANCY PROMOTE MATERNAL AND CHILD HEALTH

PREPARATION: 1 Prior to the class invite a community health nurse to the class to discuss prenatal care
2 Materials for making posters

VOCABULARY: prenatal

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| <p>Students will be able to:</p> <p>i) describe positive health behaviours during pregnancy that promote maternal and child health</p> | <p>Students:</p> <p>1 Explain what is meant by prenatal care.</p> <p>2 Describe positive health behaviours that promote a healthy pregnancy.</p> | <p>Background Information Page FL68 to FL71</p> <p>Prior to the class, invite the community health nurse to the class to discuss appropriate pre-natal care.</p> <p>Prenatal care refers to proper medical care during pregnancy. This increases the chances that a baby will be born healthy and that the mother will have no serious health problems.</p> <p>Examples of positive health behaviours include:</p> <ul style="list-style-type: none">- visiting the doctor/nurse before becoming pregnant (parental histories, hereditary diseases, physical check-up, immunization status).- consulting a doctor/nurse early to confirm pregnancy (and having complete medical exam to determine health status of pregnant woman). |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|--|--|
| | <p>3 Give examples of ways the father can support the pregnant woman during pregnancy.</p> <p>4 Prepare a large poster or collage depicting positive health behaviours that promote a healthy pregnancy.</p> | <ul style="list-style-type: none"> - following doctor/nurse's advice re dietary changes, weight gain, chemical substance use (i.e., medications, alcohol, nicotine), physical activity and avoidance of disease - visiting the doctor/nurse regularly - monthly, later more frequently to monitor position and growth of baby, baby's heartbeat - keeping the body clean to prevent infection and disease - practising proper posture to allow internal body organs to function efficiently and the fetus to grow larger - avoiding using drugs during pregnancy, whenever possible <p>It is important to emphasize that the male has a role to play during pregnancy. Ways he can support his pregnant wife include:</p> <ul style="list-style-type: none"> - attending prenatal classes with her, so that he can help her during labour - visiting the doctor with her, if necessary - helping to ensure she follows the doctor's/nurse's advice - understanding that her body is undergoing physical changes - sharing household tasks with her <p>During pregnancy, a woman is responsible for her developing baby. Both require special care. Health habits of a woman during pregnancy will affect the future health of her baby.</p> |

FAMILY LIFE

GRADE: 9

LESSON: 8

THEME: TEEN DECISIONS

CONCEPT: OPINIONS DIFFER ON HOW TO DEAL WITH UNPLANNED PREGNANCY

PREPARATION: 1 Prior to the class, teachers should encourage students to discuss the topic of abortion with their parents

VOCABULARY: adoption, fostering, abortion

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| Students will be able to: i) identify alternatives which people might consider in dealing with unplanned pregnancy | Students: 1 Brainstorm ways of dealing with unplanned pregnancy. | <p>Background Information</p> <p>The topics of abstinence and birth control have been taught in Grade 8. It is important for teachers to conduct an initial assessment to determine students' knowledge and understanding of these topics before this lesson is taught. If necessary, teachers should review the materials on these topics from Grade 8 with their students. Teachers should be aware of the extremely sensitive nature of this topic Prior to and after the class, encourage students to discuss the topic of abortion with their parent(s).</p> <p>Ask students to imagine that they (or their girlfriend) have just found out that they are pregnant Brainstorm how they might feel.</p> <p>Brainstorm some alternatives they might discuss in trying to deal with the unplanned pregnancy.</p> |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

2 Describe the advantages and disadvantages of these alternatives.

3 Discuss the topic of abortion.

Alternatives may include:

- keeping the child (as a single parent or married)
- giving the child to another family for fostering
- giving the child to another family for adoption (formal or custom)
- * - abortion
- having a grandmother bring up the child

* It is important that students understand that abortion is **not** a method of birth control.

Cultural attitudes of communities towards adolescent pregnancy may vary. The perception of difficulties facing a pregnant teenager may vary greatly between cultural settings. In some communities it may be common (custom) for a teenage mother to give her baby to a relative to raise. The child grows up knowing who his/her parents are.

Divide the class into small groups. Have them discuss the advantages and disadvantages of the alternatives. Record on a chart as illustrated.

| Alternatives | Advantages | Disadvantages |
|-------------------|-----------------------------------|--|
| Keeping the child | - natural mother raises the child | - lack of money - problems re school/work - decision whether to marry or not |

After the groups have discussed the issues, ask if there was any disagreement on the issues.

Abortion is the ending of a pregnancy before the fetus is ready to be born.

Emphasize that abortion is a controversial issue and it is important to respect different viewpoints.

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| ii) describe how to prevent unplanned pregnancy | 4 Discuss the responsibilities which parenthood involves. | <p>Encourage students to discuss this controversial issue with their parents and discuss the values and viewpoints of their parents.</p> <p>If teachers bring in resource people on this topic, it is important that both the 'Pro-Choice' and the 'Pro-Life' views be presented to students.</p> <p>Discussion on this topic could be conducted in the form of a debate.</p> <p>Tips for conducting a debate include:</p> <ul style="list-style-type: none"> - Decide how many people will speak to each side of the debate - Choose the students for each point of view - Allow them some time for research on the topic - Allow each side a specific length of time, say five minutes, to present their point of view - Allow each side time, e.g , two minutes, for a rebuttal - Allow a specific length of time for questions from the floor - Allow each side one minute to sum up their argument - Take a vote to determine which point of view has gained the most support <p>Parents must provide for the physical, mental, emotional, social, intellectual needs of their children.</p> <p>Brainstorm what these needs might be.</p> <p>Discuss.</p> |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|--|---|
| | <p>5 Brainstorm ways to prevent unplanned pregnancy.</p> | <p>Having a child involves a great deal of responsibility. Although they may be able physically to have a baby, young people are generally not prepared mentally, emotionally or socially for a stable relationship or the responsibility of looking after a baby.</p> <p>Ways to prevent unplanned pregnancy include:</p> <ul style="list-style-type: none"> - abstaining from sexual activity - using birth control, if sexually active <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>AIDS</p> <p>The AIDS lessons, developed for use with Grades 7, 8 and 9, should be taught at this point. Teachers should use the lessons labelled Grade 9 Refer to the document <i>N.W.T. School Health Program, AIDS Component</i>.</p> </div> |

FAMILY LIFE

GRADE: 9

LESSON: 9

THEME: LIFESTYLE

CONCEPT: POSITIVE LIFESTYLE PRACTICES PROMOTE HEALTH

PREPARATION:

VOCABULARY:

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| <p>Students will be able to:</p> <p>i) identify positive lifestyle practices that promote healthy sexuality and family relationships</p> | <p>Students:</p> <p>1 Select and prepare a report on a project related to human sexuality or family relationships to research, emphasizing those behaviours which have a positive influence.</p> | <p>Background Information</p> <p>Have students select a topic to research and prepare a report on.</p> <p>Topics might include:</p> <ul style="list-style-type: none">- The importance of families- Building a strong family- Making responsible decisions related to human sexuality- Human reproduction- Family violence- Assertiveness and human sexuality <p>Students may suggest other topics of interest.</p> <p>Students should emphasize positive lifestyle practices related to their topic of interest.</p> <p>Projects should be displayed in the class and shared with other students.</p> |

GRADE 9

TEACHER BACKGROUND INFORMATION

FAMILY LIFE

THE TERMINOLOGY OF THE FAMILY LIFE UNIT

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

Medical

| Terminology | Common | Slang |
|-------------|--------|---------|
| urinating | peeing | pissing |

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

SEX ROLE STEREOTYPING

Gender role identity begins to develop as soon as a baby is born, when s/he starts to fit into a society which provides the expectations or standards for his/her gender.

Gender roles are culture-specific and change with cultural transition. In some societies, for example, women may be expected to walk behind males, to ask their husband's permission before going out and to, generally, be subservient to them. In others, women have considerable power and may be the leaders of the culture.

Children learn their gender identity in early childhood and continue, through adolescence and adulthood, to observe and learn the cultural expectations for males and females.

Parents, in particular, but society, in general, reinforce gender identity and expectations:

- by labels e.g., 'sweetie-pie' or 'buster', 'sweet' or 'tough'
- by providing gender-appropriate toys e.g., cars for boys, dolls for girls
- through the kind of clothes they buy their children e.g., frilly dresses or overalls
- through the behaviours they expect e.g., boys don't cry

Little girls who do not conform to society's expectations of them may be referred to as 'tomboys', and boys as 'sissys'

Changing attitudes in North America towards gender role identity have become more prevalent in recent years. This has occurred partly as a result of activities such as the women's movement, changing social values e.g., the incidence of divorce and the increase in the number of women who work outside the home.

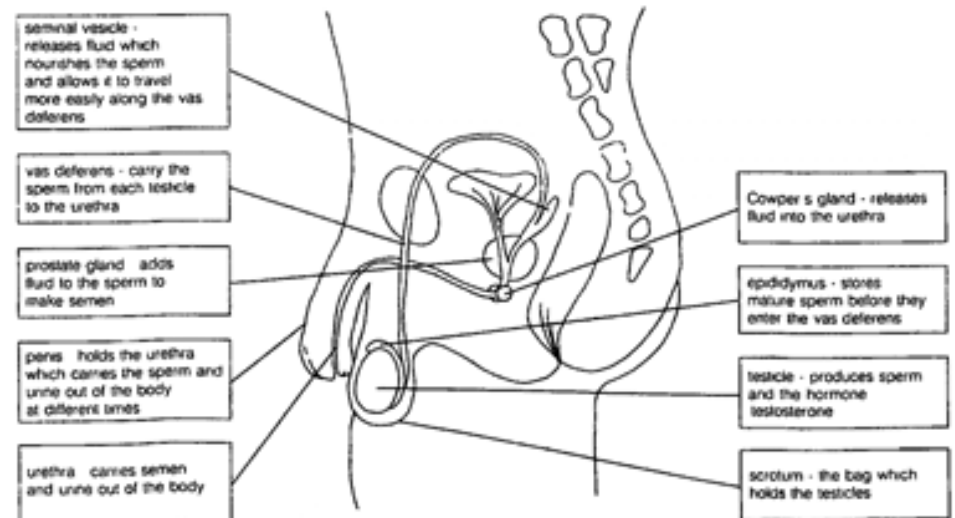
Nowadays, in western culture, males and females are recognized to have equal potential, and are more comfortable selecting, for example, jobs or activities which are beyond the traditional gender roles e.g., female truck drivers.

TERMS RELATED TO THE MALE REPRODUCTIVE SYSTEM

- sperm:* the male reproductive cell, it generally lives for 1 to 3 days, males do not begin to produce sperm until puberty
- scrotum:* the outer sac or bag which holds the testicles
- testicles:* two glands located inside the scrotum; these are where sperm are produced, it is common for each testicle to be slightly different in size
- vas deferens:* the tube which leads from each testicle to the urethra, sperm travels along this tube from the testicle to the urethra
- prostate gland:* a large gland which surrounds the male urethra in front of the bladder; it secretes fluids which lubricate the sperm
- urethra:* a tube inside the penis which carries both urine and semen to the outside of the body, semen and urine do not travel down the urethra at the same time
- Cowper's glands:* these glands secrete a small amount of fluid into the urethra just before the sperm reach this point
- penis:* an external body organ through which urine and sperm leave the body
- ejaculation:* the discharging of semen from the body through the penis
- erection:* the penis grows larger, becomes stiff and hard and sticks out from the body. This happens because blood flows into the loose skin of the penis. It can result from sexual stimulation (e.g., a sexual thought, seeing an attractive person, or from rubbing the penis) or spontaneously without any apparent reason. Erections are a natural occurrence which tend to happen more frequently during puberty

- wet dreams:* ejaculations which occur at night as a result of a dream
- masturbation:* the rubbing or stroking by a person of his/her own sexual parts. Masturbation does not cause physical harm. It is normal if a person chooses to masturbate. It is also normal if a person chooses not to masturbate.
- epididymus:* where sperm cells are stored before travelling along the vas deferens
- seminal vesicle:* produces fluid which provides nourishment and lubrication for the sperm

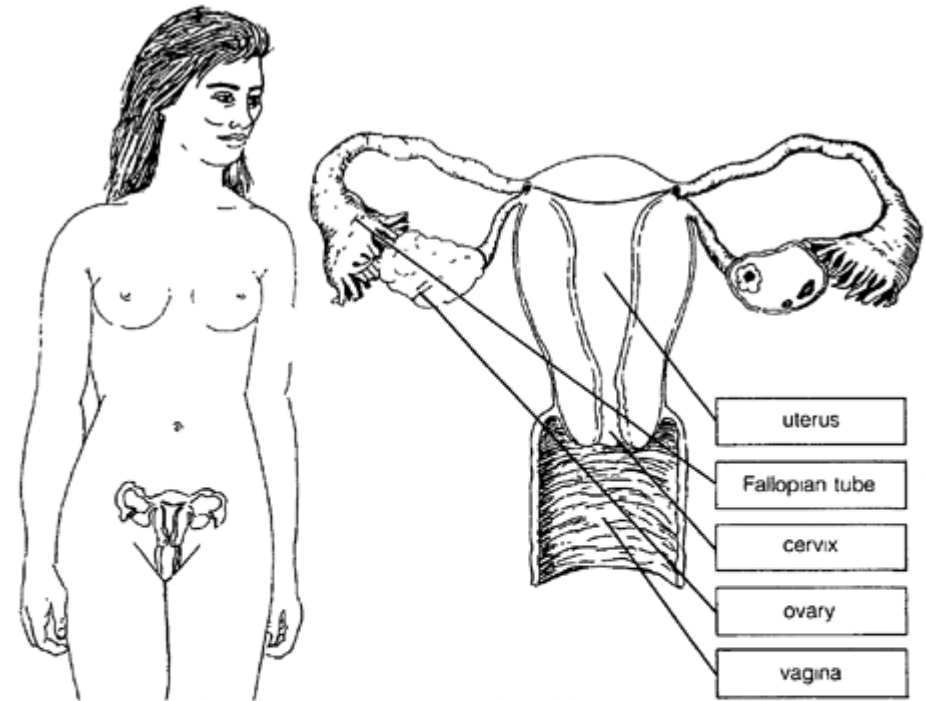
THE REPRODUCTIVE SYSTEM (MALE)



TERMS RELATED TO THE FEMALE REPRODUCTIVE SYSTEMS

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

THE REPRODUCTIVE SYSTEM (FEMALE)



HEREDITY

Both the sperm and egg cells carry specific genetic information. This information is contained in the **chromosomes**. The sperm and egg each have 23 chromosomes. When they unite, the **zygote** which they form has 46 chromosomes. Chromosomes are made up of smaller units called genes. Genes determine every characteristic of the offspring.

Half of a baby's chromosomes come from the mother's egg and half come from the father. This means the baby becomes a unique mixture of its mother and father.

A child can inherit many things from his/her parents

- physical appearance
- hair colour
- eye colour
- skin colour
- attached or unattached ear lobes
- certain diseases e.g., muscular dystrophy

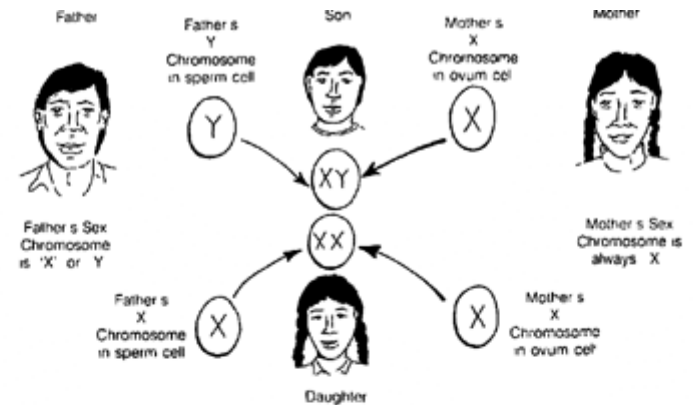
SEX DETERMINATION

Genes control every aspect of the growth of the new baby, including what sex the baby will be. One out of the 23 chromosomes that an egg and sperm each have is responsible for deciding whether a baby will be a boy or a girl. In the egg cell this sex chromosome is called an (x) sex chromosome. A sperm cell, however, can produce 2 kinds of sex chromosomes, either (x) or (y).

So, if a sperm cell, which has an (x) sex chromosome, joins with an egg cell, whose sex chromosome is always (x), the new cell they form will have a pair of sex chromosomes **(x,x)**. **This (x,x) pair** will mean that the baby will be a female.

If a sperm cell, which has a (y) sex chromosome joins with the egg cell the new cell they form will have a pair of (x,y) sex chromosomes. (Remember the egg cell always has only an (x) sex chromosome) **This (x,y) pair** will mean that the baby will be a male.

DETERMINATION OF THE SEX OF OFFSPRING



The offspring gets half its chromosomes from the mother and half from the father. The father's sex chromosome, either X or Y, decides the sex of the offspring.

| Female | Male |
|--------|--------------------------|
| X | X + Y = Female offspring |
| X | Y = Male offspring |

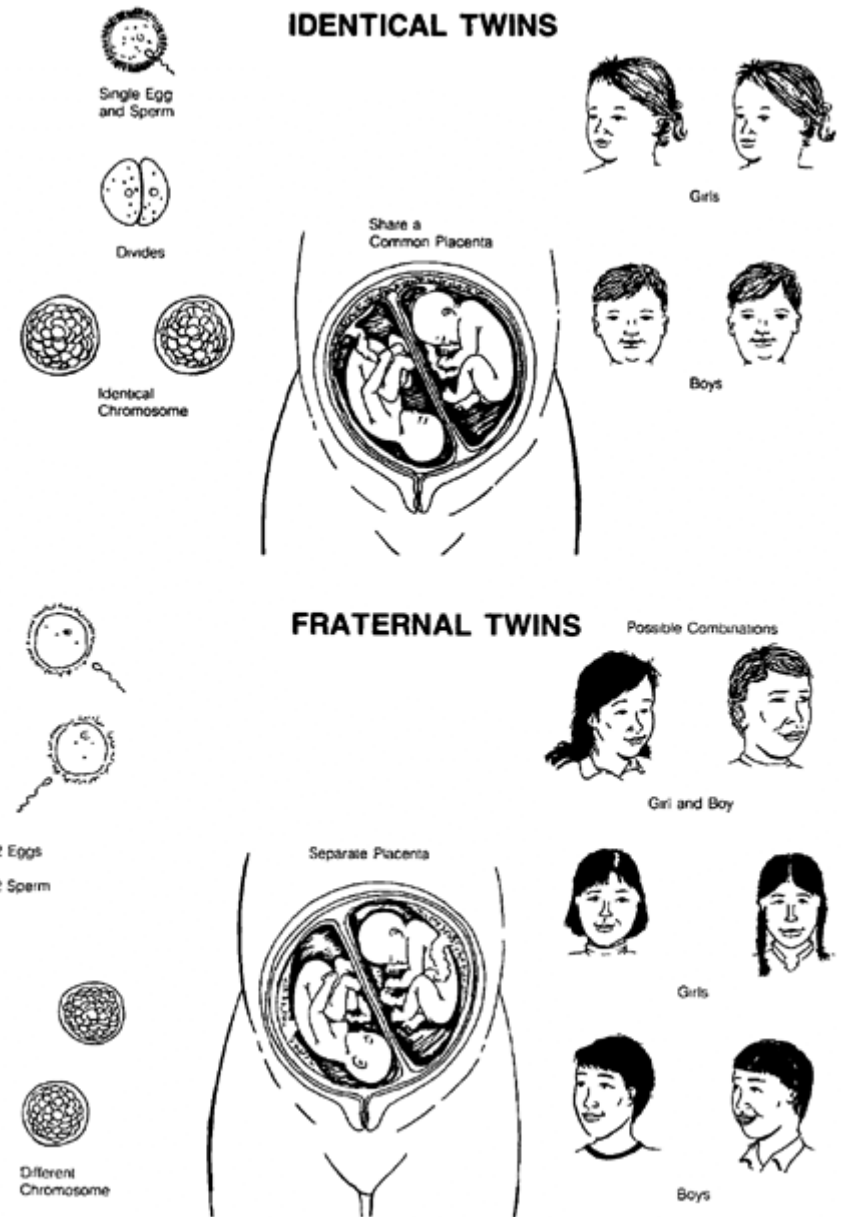
MULTIPLE BIRTHS

Once the egg is fertilized by the sperm it usually grows into a *single* embryo. However, sometimes, the fertilized egg divides into two *separate* cells and each cell goes on to grow and develop separately. Each grows into a baby. Because both came from the same fertilized egg they share the same set of chromosomes. Consequently, these two babies develop into *identical* twins. Because they share the same set of chromosomes they will look exactly like each other and be the same sex.

Siamese twins develop when the initial separation of the cells into two cell masses is not complete.

Fraternal twins develop when two different eggs are fertilized by different sperm at the same time. Normally a female only releases one ovum a month in ovulation but occasionally it does happen that two are released. Fraternal twins do not have the same set of chromosomes and may be different sexes.

Triplets usually result from the fertilization of two different ova. One of the fertilized ova separates and develops into identical twins. Triplets develop about once in 6,400 cases.



FETAL DEVELOPMENT

The union of the sperm and the egg is called *fertilization* or *conception*. When a female becomes pregnant, she has *conceived*.

Fertilization, or conception i.e., the union of the sperm and the egg usually takes place in the Fallopian tube. The new cell that is formed from this union begins a process of cell division to form a small mass of cells joined together, called an *embryo*. This embryo then begins a journey to the uterus, where it will develop into a baby. The trip from the Fallopian tube to the uterus can take up to a week.

Once the embryo has reached the uterus it attaches itself to the inner lining of the uterus, called the *endometrium*. The endometrium will supply the embryo with the food and protection it needs to survive. The transfer of nutrients and oxygen to the embryo takes place through the rich blood supply of the endometrium. The initial formation of the embryo takes about eight weeks after which time it is called a *fetus*.

During the first ten weeks of pregnancy, a mass of tissue called the *placenta* develops. It grows between the fetus and the endometrium. It allows for a better exchange system between the fetus and the mother's uterus. The placenta acts like a screen between the fetus and the uterus. The mother's blood carries nutrients and oxygen to the placenta where, through an exchange system, the fetal blood picks up the food and oxygen it needs. The blood of the mother and blood of the fetus do not mix together.

The placenta is attached to the fetus by a special cord called the *umbilical cord*. So the nutrients and oxygen are screened through the placenta and travel to the fetus through the umbilical cord. (After a baby is born the nurse/doctor will cut, or tie off, the umbilical cord between the baby and the placenta as the baby doesn't need it anymore.)

Besides allowing for the exchange of nutrients and oxygen from the mother to the fetus the placenta also acts as a *barrier*. It helps to prevent any harmful substances that may be in the mother's body from passing over to the fetus. However, some of these substances are the right shape to pass through the placenta screen and then circulate through the body of the fetus which is not physically mature enough to fight off the harmful substance.

For example, it is very dangerous for a pregnant woman to get *rubella* or German Measles. Most people have had rubella. If a female who has not had rubella gets it when she is pregnant it is very dangerous, not to the woman but to the baby she is carrying. The measles *virus* crosses the placenta screen and goes into the developing fetus. It can cause damage to the baby, e.g., deafness, blindness, brain damage and heart damage. This is why any woman who is planning to become pregnant and has not had rubella should have a rubella immunization *before* becoming pregnant.

The poisons in cigarette smoke will also cross the placenta and go into the fetus. Women who smoke during pregnancy generally have babies who have a low birth weight. This can cause problems for the baby. The effects of alcohol on the fetus are also harmful. Alcohol crosses the placenta and causes damage to the fetus including brain damage and physical defects. A female who drinks regularly, or even drinks occasionally but drinks a lot at the time, is putting her child at great risk. Since science doesn't yet know exactly how much alcohol can cause damage, a pregnant woman should avoid the use of alcohol.

At the same time as the placenta and umbilical cord are developing a thin, but strong sac develops around the placenta and fetus. This sac, called the *amniotic sac*, attaches itself to the endometrium keeping the fetus surrounded by water and protein. The purpose of the amniotic sac is to provide protection for the fetus so that when the mother moves around the movements of the fetus in the uterus are restricted. The sac also absorbs waste materials excreted by the fetus.

From the time the baby is conceived (when the sperm cell and the egg cell unite) until the time the baby is fully developed and ready to be born is about *nine months or forty weeks*.

During these nine months the fetus develops the shape and parts of a human being. It starts out very small and does not look like a human being at all. But as time passes it grows and develops to look like the babies we are used to seeing. This time of development before birth is called *prenatal development*.

The prenatal development of the fetus can be divided into three periods of time. The first, second and third months of pregnancy are the *first trimester*; the fourth, fifth and sixth months the *second trimester* and the seventh, eighth and ninth months the *third trimester*.

First Trimester

During this *first trimester* the fetus grows very rapidly. All the major organs of the body develop then. For example, the heart is actually beating within the first month. By the end of the first trimester the fetus looks like a miniature human being. It has a mouth, eyes and ears. They are not completely formed but the basic structures are there. The arms, hands, fingers, legs, feet and toes are also formed. Even the fingernails have begun to form.

Second Trimester

During the second trimester the body organs continue to develop. The fetal digestive system is functioning. Soft bones are developing and the muscles begin to move. It is during the second trimester that the mother first feels the movement of the baby. Eyebrows and eyelashes are formed by the end of the second trimester.

Third Trimester

Most of the weight of the baby develops during this last trimester. It gains approximately six pounds during this time. This weight is very important as it helps the baby survive better after it is born.

During this last trimester the fetal organs and systems are fairly well-developed except for the *lungs*. The last trimester is a very important time for the development of the lungs. Babies born early often have breathing problems because their lungs are not fully developed.

Each of these trimesters is important in terms of the baby's growth and development. But the *first* trimester is the most crucial because all the major body organs form at this time. For example, if the fetus, during the first trimester, does not receive adequate nutrition from the mother the damage done can be serious and permanent. The growth of organs, systems and shape can be stunted. Unfortunately, a woman may not realize she is pregnant until often one or two months have passed and

she may be practising lifestyle habits which are potentially harmful to the fetus e.g., drinking alcohol..

In order to give her baby the best chance for healthy development a woman should practise good health habits before and during pregnancy.

CARE OF THE BABY AFTER BIRTH

Once the baby is born the doctor or nurses or whoever is attending the birth remove any blood, amniotic fluid or mucous which may have accumulated in the baby's mouth and nose. The baby is then checked to see if it has begun to breathe on its own. One of the first things a newly born baby does is take a breath using his lungs for the first time S/he also usually starts to cry. This cry means that the baby is breathing on its own. The doctor/nurse or father cut and tie off the umbilical cord which attached the baby to the placenta. This does not hurt the baby or the mother as there are no nerve endings in the umbilical cord. The stub left on the baby will eventually dry up leaving the mark we commonly call our "navel" The baby is then given to the mother.

Following childbirth the process of milk secretion from the mother's breasts begins - lactation. Milk is not produced immediately after birth but from two to five days later The first secretions the baby receives from the breasts are called **colostrum** which is a substance of high protein content and is thought to help prevent infectious diseases during the baby's first months. Some doctors also think that colostrum helps clean mucous from the baby's intestines.

BONDING

The development of a strong emotional attachment between the parents and their baby is important to the healthy physical and emotional growth of the baby. This strong emotional attachment is called *bonding* It begins at birth. It is important that the baby receive physical and emotional affection in addition to suitable physical care.

Many people believe that the process of bonding is aided by the father's presence at and involvement in the birth and by the mother nursing the baby.

PROBLEMS IN DELIVERY

Most births are normal but sometimes problems arise. For example, usually a baby is born head first. But sometimes a baby's bottom, legs or shoulders come out first instead. This type of birth is called a *breech* birth. The positions of a breech birth make the birth more difficult as the

cervix at this point in the birth has opened enough for the head but not for anything bigger. When the head comes first it helps the cervix stretch a little more to accommodate the bigger parts of the body as they follow the head. But when the bigger parts come first the cervix does not have a chance to open gradually and is strained.

It may also happen that the umbilical cord becomes twisted around the baby's neck. This is dangerous for the baby as the cord may be twisted tightly and may cut off the circulation of blood to the baby's brain. The doctor or nurse then has to untwist the cord and free the baby.

If these or any other problems create any danger for the baby or the mother it may be necessary for the doctor to cut through the mother's abdomen wall and uterus and lift the baby out this way. After removing the baby the doctor sews up the wall of the uterus and abdomen This type of procedure to deliver a baby is called a *Caesarian section*.

There are a number of different techniques people use to prepare for childbirth Community health nurses at public health clinics or the nursing stations offer *prenatal classes* where the father and mother-to-be learn about physical and psychological training, muscle control, breathing exercises and education on the changes occurring during pregnancy, labour and delivery.

PHYSICAL CHANGES EXPERIENCED BY FEMALES DURING PREGNANCY

As the fetus develops, there are a number of effects the pregnant woman may feel. She will experience a weight gain, of anywhere between 10-13 kilograms. She may experience feelings of nausea and vomiting. This is called "morning sickness" although it can happen at any time of the day. Morning sickness is more common during the first trimester than at any other time during pregnancy. It is caused by increased amounts of hormones circulating through the body. It takes some time for the body to get used to these increased amounts of hormones. It is a very normal part of pregnancy. Not all women, however, experience morning sickness.

A pregnant woman's breasts become sore and may feel heavy, itchy or painful. They also usually enlarge during pregnancy as they develop the capacity to give milk. There may also be a definite increase in frequency of urination as the developing fetus places some pressure against the bladder.

CHILDBIRTH

It is important to remember that the uterus is mostly made up of muscle. It is this muscle which stretches during the nine months of pregnancy to fit the size of the growing fetus.

Besides being very stretchy, the muscles of the uterus, like all muscles of the body, can contract. When the muscles of the uterus contract they have the effect of pushing the baby out of the uterus. A woman's uterus always contracts a little bit during the pregnancy but it is not until the baby is ready to be born that the contractions are strong enough or frequent enough to push the baby out.

The process of childbirth is often called labour. Labour can be divided into three stages. During the first stage of labour a number of events occur which signal the woman that her baby is getting ready to be born. These events don't always occur in the exact order given.

First Stage of Labour

The main event of the first stage of labour is that the cervix begins to gradually stretch open or dilate. With this dilation a mucous plug which plugged the cervix and helped maintain a complete barrier between the uterus and vagina is expelled through the vagina. As the cervix continues to widen the baby's head becomes positioned lower. The amniotic sac breaks and the fluid drains out through the vagina.

Also, during this first stage, the uterus begins to contract. The amount of time between contractions varies between women as does the length of time for this first stage. Often the contractions begin with 20-30 minutes between each contraction. They become more frequent until they are only 2-3 minutes apart. These contractions cause discomfort for the woman. The amount of pain varies from woman to woman. Special breathing exercises can help the woman deal with the discomfort and, if necessary, drugs can be given which will reduce any pain.

This first stage may last up to 24 hours in a woman's first pregnancy. It generally lasts about 8 hours for the next one(s). These are average figures and vary from woman to woman and birth to birth.

Second Stage of Labour

The second stage of labour begins when the cervix (the opening between the uterus and the vagina) is completely dilated or widened. The baby is pushed by muscular contractions through the vagina (birth canal). Usually the head of the baby appears first as it begins its passage through the vagina. We call the first appearance of the head coming through the vagina the crowning. After the head and shoulders of the baby emerge, the rest of the body comes out easily. Sometimes the opening to the vagina is not large enough so the skin is cut to make the opening larger. This is called an episiotomy. It is simple to repair and heals rapidly.

This second stage of labour lasts about two hours for a first delivery and about one hour for subsequent deliveries.

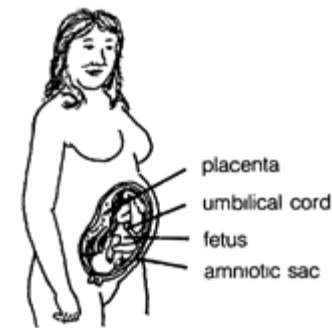
Third Stage of Labour

Although the baby is now born there is still one more stage left to the birthing process. The placenta is still inside the woman's body. Since it is no longer needed the contractions continue to force the placenta cord and membranes out of the uterus. Once these are expelled the birthing process is complete.

Prematurity

When a baby is born earlier than 40 weeks it is premature. This means that the baby was born before it was fully mature. Premature babies usually need special care after they are born and often have to stay in the hospital until they are strong enough.

PREGNANCY



GRADE 9

NUTRITION

NUTRITION

GRADE: 9

LESSON: 1

THEME: FOOD SELECTION

CONCEPT: FOOD CHOICES AND HABITS ARE INFLUENCED BY MANY FACTORS

PREPARATION: 1. Prepare enough copies of the How Does It Affect Me? worksheet for each pair of students (Activity Sheet N67A)
2. Prepare a class set of the Nirkit Good Food article (Activity Sheet N67B)

VOCABULARY: factors, influence, choices, habits

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| Students will be able to: i) identify factors that influence food choices and habits | Students: 1. Name a favourite meal and explain why they would choose that particular meal. | Background information: Page - Some of this lesson has been covered in Grade 5, Nutrition, Lesson 4 and Grade 7, Nutrition, Lesson 3. If students could choose any meal, what would it be? Have students explain why they would choose it. e.g., Mother cooks it often Grandmother makes it, etc. |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

2. Brainstorm factors that influence food choices and habits.

- Factors that influence food choices and habits include:
- hunger
 - customs and traditions
 - family likes and dislikes
 - special occasions (birthdays)
 - budget for food
 - food advertising (TV, radio)
 - food availability in stores (based on store owner's decisions) - transportation costs
 - season of the year (unpredictable weather)
 - food packaging, i.e., dried, frozen, canned, fresh
 - convenience foods
 - amount of preparation time
 - storage facilities at home
 - cooking appliances at home
 - food gathering habits
 - hunting, fishing
 - unit price (i.e., price comparisons)
 - specific health problems (i.e., diabetic, dental health problems, overweight, hypertension)
 - consumer knowledge of nutritional value of foods and family needs
 - who does the shopping Discuss.

3. Complete the How Does It Affect Me? worksheet.

Refer to Activity Sheet N67A. In pairs, have students think of particular situations related to each of the factors in the previous activity, e.g., season of the year - it is winter. Write these situations down in the left hand column of the worksheet. Then decide how these situations affect them as consumers - in the decisions they make and the habits they form.

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| <p>ii) explain how food customs have changed in the NWT</p> | <p>4. Read the article "Nirkit: Good Food".</p> <p>5. Interview an elder about traditional food customs and how these customs have changed.</p> | <p>Refer to Activity Sheet N6713. Discuss how food customs have changed.</p> <p>Have the students design some basic questions to use in the interview with an elder. Suggested questions might be:</p> <ul style="list-style-type: none"> - What use did people make of the land? - Describe the traditional diet. - What methods did people use to gather food? - What attitude did people of the NWT have towards food? - What techniques were used for: food storage; preparation and cooking; and food preservation? - Describe some specialties and/or delicacies. - Describe some regional differences in food. - What agricultural achievements were made? - How did trading with Europeans and other native groups change food customs? - How did the growth of settlements change food customs? - How did water and land pollution change food customs? - How did changing work habits affect food customs? - How did the availability of refrigeration and freezer storage change food customs? - How did an increase in air transportation to the North change food customs? - How did a decrease in traditional food sources (e.g., caribou) change food customs? - How did the availability of store foods change food customs? - How did the availability of low nutrient high energy snack foods change food customs? - How did advertising change traditional food customs? |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| <p>iii) describe some of the consequences of changes in food customs in the NWT</p> | <p>6. Make a booklet on how traditional food customs have changed in the NWT.</p> <p>7. Make a list of consequences arising from changes in food customs in the NWT.</p> | <p>Use the information from the interviews with the elders.</p> <p>Brainstorm how these changes in food customs may have impacted on life in the North. Impacts include:</p> <ul style="list-style-type: none"> - people hunt and fish less - people may have to travel further to hunt or fish - people have moved into communities - some may return to living on the land - some of the skills related to hunting, etc. may be lost - poorer nutrition habits (traditional diet was very nutritious; combined with poor choices in store bought food, present diet may not be) - increase in dental health problems - increase in health problems related to diet |

HOW DOES IT AFFECT ME?

You have already identified certain factors that influence food choices and habits. For each factor, think of a particular situation. e.g., hunger - hungry when shopping. Decide how this situation affects the decisions you make and the habits you form.

| Situations | How Does it Affect Me? | |
|---|---|--|
| | Consumer Decisions | Nutrition Habits |
| <ol style="list-style-type: none"> 1. Hungry when shopping 2. Moving from the bush to a city/village. 3. On welfare. 4. Your children want some of the food they see on TV. 5. There's only a small store in your community. 6. It's winter. 7. You hate to spend a lot of time on preparing food. 8. You live in a cabin and have only an old wood stove to cook on. 9. You eat mostly country foods. 10. Your daughter is diabetic. | <p>Choose a quick energy snack to munch on at the store or on the way home.</p> | <p>Selection of poor quality snacks when shopping that have high sugar, salt and/or fat and few nutrients.</p> |

"NIRKIT:" GOOD FOOD

By Marjorie Schurman The author, a graduate of the University of Toronto with the degree of *Master of Health Science* (Community Nutrition), is head of the *HBC nutrition* program.

Eating is one of life's great pleasures and an important way of communicating with people. This fact is as true in Canada's North as it is anywhere else. If you visit Rose Okpik, an Inuit housewife on east Baffin Island, for example, you will probably be treated to strong hot tea, nutritious raisin bannock and the warmth and vitality of her personality. If you visit Rosie Veevee, you might sample a wonderful caribou stew. If you have dinner at Cora Gunn's, you would probably have an appetizer of celery and cheese, and then baked Arctic char.

These three women live in Pangnirtung - the place of the big bull caribou - a settlement of spectacular mountains, high winds and beautiful fiords, just below the Arctic Circle on Baffin Island in Canada's Northwest Territories. All three have been involved with food and nutrition education in the community: Rose Okpik as a group leader of the nutrition project which was sponsored by the Pangnirtung health committee; Rosie Veevee as one of the main leaders of the nutrition project and a member of the education committee; and Cora through an early association with a nutritionist in her home community of Cape Dorset and through her husband Jack Gunn, manager of the Hudson's Bay Company store at Pangnirtung.

Pangnirtung has had two specific community nutrition projects over the past several years. The first resulted from Rose Okpik's involvement as the Pangnirtung representative in a nutrition conference at Baker Lake in 1977. These meetings included formal discussions and practical workshops for community health representatives (who act as liaison between nurses and their own communities); doctors, nurses, nutritionists, health educators and game management officers. The motivation for the conference

was some very real concerns about Inuit health.

Traditionally, the Inuit had good food habits. They knew the importance of meat to the body's strength shown by the fact that the word for "meat" (*nirkit*) also is the word for "food". Similarly, the need for a word to describe the choosing of a healthy diet did not exist; there was no other diet and therefore no word in Inuktitut for "nutrition". New words such as this one have to be developed by ongoing committees on the Inuit language.

As with other traditional hunting and gathering societies, the foods available were relatively unchanging over time. Thus, food habits were also essentially unchanging and could be passed on from generation to generation. When hunting was good there would likely be a pot of caribou stew (meat and some dried plants) available. In the winter the food was kept frozen either outside on the roof or cached beneath rocks for storage. Fish, caribou and plants were dried during summer for a long winter. Meals were unscheduled. The Inuit ate when they were hungry, provided food was available.

The Inuit knew that anything that took away hunger also built the body and strength. They knew that using the whole animal (with certain exceptions such as the big seal called "Oguk" and the polar bear, the livers of which are toxic) made good sense both in a practical and non-wasteful way and in a healthy way, since the internal organs were also sources of strength and protection from infection.

Many of the traditional food habits which were developed over centuries can be shown to be nutritionally sound, according to Dr. Otto Schaefer who has studied nutrition among the Inuit and Indian populations for 20 years. "Seal meat and seal liver

"NIRKIT:" GOOD FOOD (cons.)

compared to beef meat and beef liver were found to be richer sources for a number of elements. . . but particularly iron" - the mineral for good red blood. The chewing of the soft ends of bones provided calcium that was readily available to build and strengthen bones and teeth. The eating of the marrow inside the bones provided iron, while liver and other organ meats supplied much Vitamin A, various B vitamins and iron. Raw meat over the winter months provided sufficient Vitamin C to prevent scurvy, with its symptoms of loose teeth and bleeding gums, in the spring.

Schaefer also points to the traditional use of plant materials as health practices. "The Inuit used whenever available, whatever vegetable matter was available . . . such as berries, herbs, willow buds, some roots and the predigested reindeer moss and other herbs from the stomachs of caribou, arctic hare and ptarmigan. Seaweed was regularly collected by women and children even in midwinter in those areas in the Eastern Arctic where high tides exposed them." The minerals and vitamins of these plant materials provided protection against infection.

Today, the Inuit find themselves in transition of food sources and food habits. Many people are choosing wage employment and are hunting or fishing only on weekends. Many of the traditional foods such as organ meats are being abandoned by the younger generation who are influenced by what Dr. Schaefer calls our "steak culture". At the same time more foods are being purchased from the store (a particular favourite in Coral Harbour is pizza).

However, caribou and char are still major food sources, are seen as good food, and are preferred. An Inuk complaining of stomach upset was asked by the nurse when he had eaten. He replied that he had had no food for two days. On further questioning the nurse learned that while the person had eaten store foods (including fresh fruit and perhaps too much of it at one time) he had had no caribou or char for two days. Therefore he had eaten no "food".

One of the difficulties of the changes in food habits is that while one proven method is dropped, a new but also proven way is not adopted. The northern tradition of chewing on the spongy ends of bones has all but been abandoned, but the southern pattern of consumption of milk or milk products has not yet been fully adopted.

Schaefer says that "the effects of such drastic changes in nutritional habits in children and adults were manifold". He specifically cites problems of dental care, acne, obesity, vitamin deficiencies (including Vitamin A, Vitamin C, folate and Vitamin D) and iron and calcium deficiencies. These health problems were in part identified in the early 1970s through Nutrition Canada - an extensive Canada-wide survey including anthropometric, clinical and biochemical assays of nutrition status - and continue to be explored by Schaefer through the Northern Medical Research Unit of the Charles Camsell Hospital in Edmonton, Alberta

NUTRITION

GRADE: 9

LESSON: 2

THEME: FOOD SELECTION

CONCEPT: FAMILY NEEDS AND PREFERENCES INFLUENCE THE PLANNING AND PREPARATION OF NUTRITIOUS MEALS

PREPARATION:

1. A copy of the NWT Food Guide
2. Prepare a class set of the Lifecycle Nutrient Needs (Activity Sheets N68A and 68B)
3. Prepare a class set of the Preparing a Nutritious Feast Checklist (Activity Sheet N69)

VOCABULARY: modify

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|---|
| Students will be able to: i) plan a menu for a feast that is suitable for family members of various ages | Students: 1. Review the NWT Food Guide and recommended daily servings for different age groups. 2. Brainstorm a menu for a feast that uses country foods and/or storebought foods, and is suitable for various family members. | Background information: Page N58 to N63 Review the four food groups and the recommended number of daily servings from each for various age groups (nutritional needs of various age groups was covered in Grade 7, Lessons 1 and 2). As a class, have students select the basic menu for a feast. |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|---|--|
| | <p>3. Modify the basic menu to reflect the needs of specific groups.</p> <p>4. Compare the menus to the checklist on Preparing a Nutritious Feast.</p> <p>5. Make menus for the different age groups.</p> | <p>Refer to Activity Sheets N68A and 68B. Have students work in small groups to modify the menu for</p> <ul style="list-style-type: none"> -infants - pre-schoolers - pregnant women - elders <p>Use the Lifecycle Nutrient Needs as a resource. Record how the food will be prepared, cooked, the food forms, serving size and numbers of serving.</p> <p>Refer to Activity Sheet N69.</p> <p>Have students make attractive menus for the different groups of family members, e.g., a children's menu, which can go on the wall.</p> |

LIFECYCLE NUTRIENT NEEDS

Infants (to age 2)

- The quality and kind of food suitable for an infant change quickly during the first two years of life.
- Daily servings are not included in Canada's Food Guide for that reason.
- Mother's milk is nutritious, readily available, easily digested and contains antibodies to help combat infection especially.
- Breast milk or formula is the basic food from birth to six months.
- Iron enriched cereal can be added at four to six months.
- Iron enriched cereal, fruit and vegetables, meats, fish, eggs and milk are added at varying times from seven to 24 months.
- Commercial infant formulas are available as an alternative to breast feeding. The doctor or nurse recommends the type and amount of commercial formulas and food group items as the baby grows.
- The doctor or nurse recommends a vitamin supplement during infancy. Salt, sugar and fat should not be added to any foods.

Pre-schoolers and Children (up to 11 years)

- Children need a wide variety of foods from the four food groups.
- Energy needs lessen during periods of slow growth and increase during periods of rapid growth; respect the size of the child's appetite.
- Portions of food served at meals may vary and small nutritious snacks will ensure that children get daily nutritional requirements.
- Snacks high in sugar and fat interfere with appetite and contribute to tooth decay or to being overweight.

Adolescents

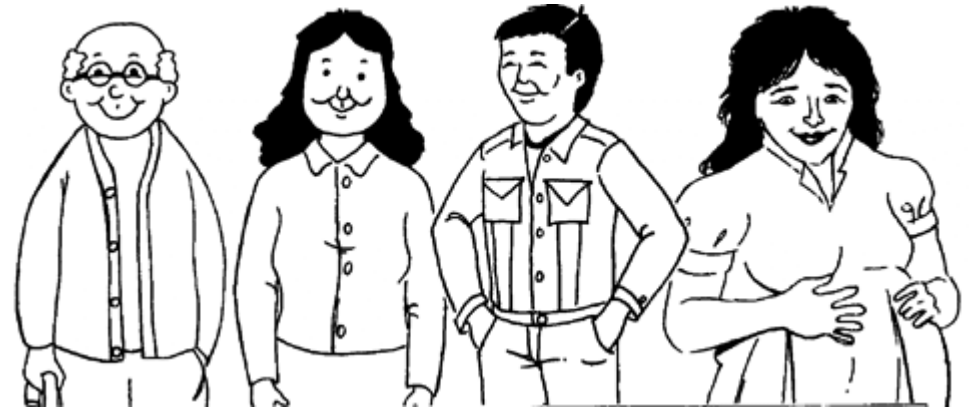
- Nutrient needs are highest in this age group because of rapid growth and maturation.
- There is an increased need for calcium for skeleton growth.
 - Increased physical activity may result in extra energy needs and more snacking. Food selection is in the upper ranges of all four food groups.



LIFECYCLE NUTRIENT NEEDS

Adults

- Weight is often gained gradually over the adult years as activity level usually decreases, and the body's metabolic rate slows down two to three per cent every decade.
- Prevention of obesity is an important challenge. Careful food choices and regular physical activity are needed
- Nutrient needs are unchanged but choosing foods that contain a high proportion of nutrients compared to energy (calorie) content is important.
- Entertainment and more relaxation time after children leave home may contribute to over eating, alcohol consumption and weight gain.
- Prevention of obesity and related health problems such as diabetes is important.



Pregnant and Nursing Women

- Rapid growth of the fetus and maternal tissues during pregnancy requires increased intakes of many nutrients. Daily milk production requires the same.
- Calcium, protein and Vitamin D needs increase.
- Energy (calorie) needs increase.
- Vitamin B, iron and carbohydrate needs increase.
- Fibre needs increase to reduce constipation.
- Small frequent meals and nutritious snacks reduce nausea and heartburn.
- A variety of foods rich in Vitamin A and C are needed.

Adapted from *Canada's Food Guide Handbook* (revised), Minister of Supply and Services, Health and Welfare Canada, 1987.

Older Adults/Elders

- Food practices may change as health problems are experienced, e.g., disability, lack of energy, bone fragility, constipation, depression and loneliness, dental problems.
- Reduced income, changes in living accommodation, lack of physical activity and rising food costs may affect food practices.
- Nutrient needs are not changed although energy (calorie) requirements are less.
- Wise selection of foods that have higher nutrient density without being high in energy (calorie) content is important.
- Rising food costs and dental problems may reduce selection of fruits and vegetables and lead to inadequate intake of Vitamins A and C.
- Fruits and vegetables should be carefully prepared and or cooked to retain nutrients.
- Older women are particularly affected by osteoporosis. Calcium rich foods, such as milk and milk substitutes, are to be continued throughout life.
- Positive social environments enhance mealtime enjoyment and nutritional adequacy of diets.

PLANNING A NUTRITIOUS FEAST: CHECKLIST

| | YES (✓) | NO (✓) |
|--|---------|--------|
| 1) Menu selection includes: | | |
| - Milk and Milk Substitutes | | |
| - Bannock, Breads and Cereals | | |
| - Fruit and Vegetables | | |
| - Meat, Fish, Birds and Eggs | | |
| 2) Low salt | | |
| 3) Low fat | | |
| 4) Low sugar | | |
| 5) Variety of foods | | |
| 6) Fibre food | | |
| 7) Reflects special needs of family members | | |
| - form of food | | |
| - serving size | | |
| - how it is cooked | | |
| - number of servings | | |
| 8) Fresh or raw fruit or vegetables, if possible | | |
| 9) Easy to prepare | | |
| 10) Attractive and appealing foods | | |
| | | |

NUTRITION

GRADE: 9

LESSON: 3

THEME: FOOD SELECTION

CONCEPT: FAMILY NEEDS AND PREFERENCES INFLUENCE THE PLANNING AND PREPARATION OF NUTRITIOUS MEALS

PREPARATION: 1. All materials/ingredients for the feast
2. Invite family members to the feast

VOCABULARY:

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|---|
| Students will be able to: i) prepare a feast that is suitable for family members of all ages | Students: 1. List the tasks which need to be done in preparation for the planned feast. | Background information: Page N58 to N63 The following tasks will need to be addressed: - decide who will attend (family members) - invite guests - determine how much money will be available - arrange for a place to hold it - select recipes - prepare a shopping list - shop for food/obtain from hunters |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| <p>ii) demonstrate a willingness to participate in the feast</p> | <p>2. Prepare for the feast.</p> <p>3. Participate in the feast.</p> | <ul style="list-style-type: none"> - prepare food - cook food - clean up afterwards - decorate the room - set tables - welcome and seat guests <p>Divide students into pairs or small groups and allow them to select which tasks they will look after. Parents or elders may be invited to assist with the preparation.</p> <p>Have all students take part in the feast with their guests.</p> |

NUTRITION

GRADE: 9

LESSON: 4

THEME: LIFESTYLE

CONCEPT: POSITIVE NUTRITION LIFESTYLE PRACTICES PROMOTE HEALTH

PREPARATION: 1. Prior to the class, invite a community health nurse or regional nutritionist to talk about nutritional problems
2. Pamphlets or booklets related to nutritional problems

VOCABULARY: obesity, diabetes, hypertension, anorexia nervosa, bulimia

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|---|--|
| Students will be able to: i) list some nutritional concerns in the NWT and Canada | Students: 1. Make a list of some nutritional concerns in the NWT and Canada. | Background information: Page N64 Have students brainstorm some nutritional concerns. These include: - overweight - bulimia - obesity - anaemia - diabetes - malnutrition - hypertension - anorexia nervosa |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| ii) describe one nutrition concern in the NWT | <p>2. Discuss common nutritional concerns.</p> <p>3. Research one common nutritional concern in the NWT.</p> | <p>Prior to the class, invite the community health nurse or the Regional Nutritionist to discuss some of the common nutritional concerns. The following topics can be addressed:</p> <ul style="list-style-type: none"> - how common it is in that community/region - causes/contributing factors - brief description - consequences - how to prevent it <p>Using pamphlets or booklets from the nursing station or from health organizations, have students complete a research project on one of these nutritional problems. Share the projects with the rest of the class. The projects should answer these questions:</p> <p>What is _____?</p> <p>What are the symptoms of _____?</p> <p>What causes _____?</p> <p>Who is most likely to suffer from _____?</p> <p>How can _____ be treated?</p> <p>How can _____ be prevented?</p> |
| iii) identify preventive behaviours related to nutrition | 4. Brainstorm ways of reducing or preventing nutritional problems. | <p>Ways of reducing/preventing nutritional problems include:</p> <ul style="list-style-type: none"> - following the recommended number/size of daily servings in the NWT Food Guide - eating regularly during the day - choosing nutritious snacks - eating a morning meal before going to work or school - choosing a variety of foods from each food group - eating food which does not belong to any food group in moderation |

NUTRITION

GRADE: 9

LESSON: 5

THEME: LIFESTYLE

CONCEPT: POSITIVE NUTRITION LIFESTYLE PRACTICES PROMOTE HEALTH

PREPARATION: 1. Materials for posters
2. Prepare a class set of the Eating for Health worksheets (Activity Sheets N70A and 70B)

VOCABULARY: dietary, recommendations, polyunsaturated

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|---|---|
| Students will be able to: i) identify the four Canadian Nutrition and Dietary Recommendations | Students: 1. Discuss the Canadian Nutrition and Dietary Recommendations. | Background information: Page N58 to N63 The four recommendations are: - eat a nutritionally adequate diet based on the NWT (Canada) Food Guide - limit the energy (kilocalories) derived from fat to 35% of total energy intake; include a source of polyunsaturated fatty acid (e.g., linolenic acid) |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|--|--|
| <p>ii) identify positive behaviours that reflect the four Canadian Nutrition and Dietary Recommendations</p> <p>iii) design a personal nutrition program based on a behaviour which promotes one of the recommendations</p> | <p>2. List healthy behaviours that reflect the Canadian Nutrition and Dietary Recommendations.</p> <p>3. Make posters based on the behaviours which they identified.</p> <p>4. Select a behaviour that promotes one of the recommendations.</p> <p>5. Design a personal nutrition program based on the selected behaviour.</p> <p>6. Practise their personal programs for a given time period.</p> | <p>- eat a diet which emphasizes whole grain foods, fruits and vegetables and reduces intake of alcohol, salt and refined sugar</p> <p>- reduce excess energy (kilocalorie) intake and increase physical activity to prevent and control obesity</p> <p>Divide students into four groups. Have each group take one of the recommendations and make a list of behaviours that reflects that e.g., eating whole wheat bread instead of white bread. Have each group report back to the whole class. Discuss.</p> <p>Either individually or in pairs, design a poster based on one of the behaviours. Display posters around the classroom, or in public places in the community.</p> <p>Refer to Activity Sheet N70A.</p> <p>Refer to Activity Sheet N70A. Teachers should work individually with students to ensure that goals are specific, measurable and realistic. e.g., "I'm going to eat 2000 kcal a day and go to an exercise class twice a week for one month", NOT "I'm going to eat less and exercise more."</p> <p>Refer to Activity Sheet N70B. Have students record their own progress on a daily basis for a fixed length of time</p> |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|---|
| iv) evaluate the effectiveness of the program | 7. Describe the degree of success of their personal programs. | Refer to Activity Sheet N70B. Have students refer to the evaluation data for their programs. These programs can be continued over an extended length of time. Goals can be altered as necessary. |

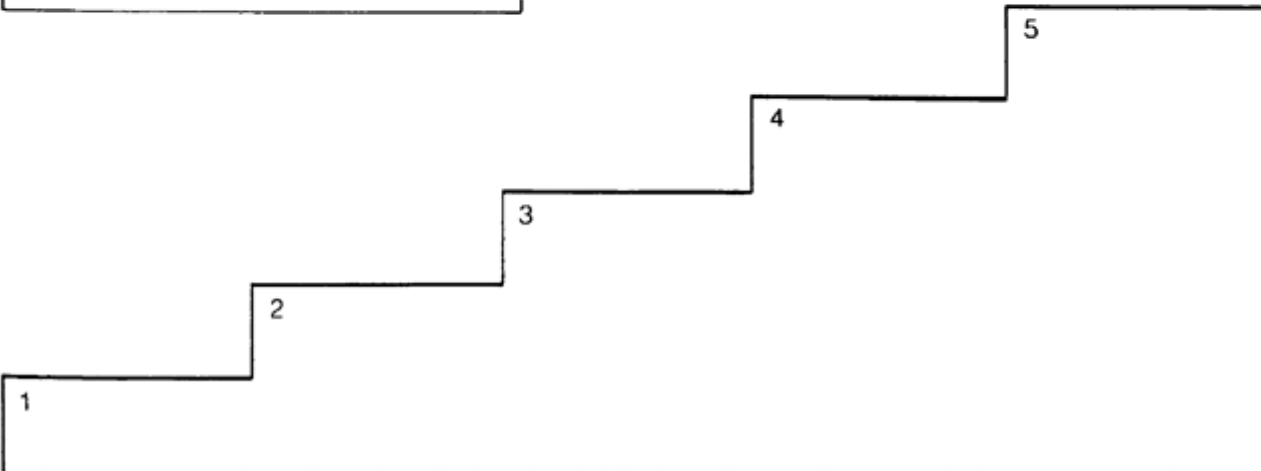
EATING FOR HEALTH

Select one thing that you can do personally to improve your own nutrition. Develop an action plan to achieve your goal.

MY GOAL

WHY I CHOSE THIS GOAL

STEPS TO REACH MY GOAL
(What I have to do to reach my goal)



SUPPORT I NEED TO REACH MY GOAL

PROGRESS

(Chart your daily progress)

| | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY | SUNDAY |
|--------|--------|---------|-----------|----------|--------|----------|--------|
| WEEK 1 | | | | | | | |
| WEEK 2 | | | | | | | |
| WEEK 3 | | | | | | | |
| WEEK 4 | | | | | | | |

HOW DID I DO?

(Summarize your progress and assess how well you did)

GRADE 9

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

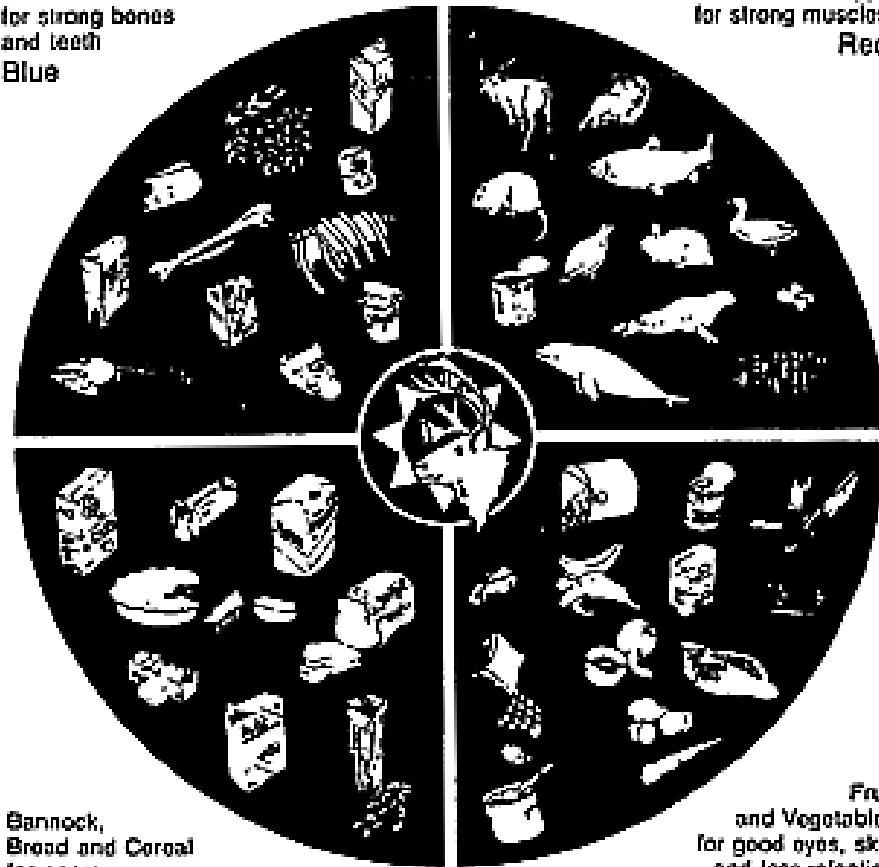
animal brains
 bannock*
 bone marrow
 bread *
 flour *
 liver
 macaroni *
 muffins
 muktuk
 oatmeal *
 pancakes
 pilot biscuits *
 rice *
 soda crackers *
 spaghetti *
 whole wheat
 wild rice

N.W.T. FOOD GUIDE

Eat foods from each group every day for health.

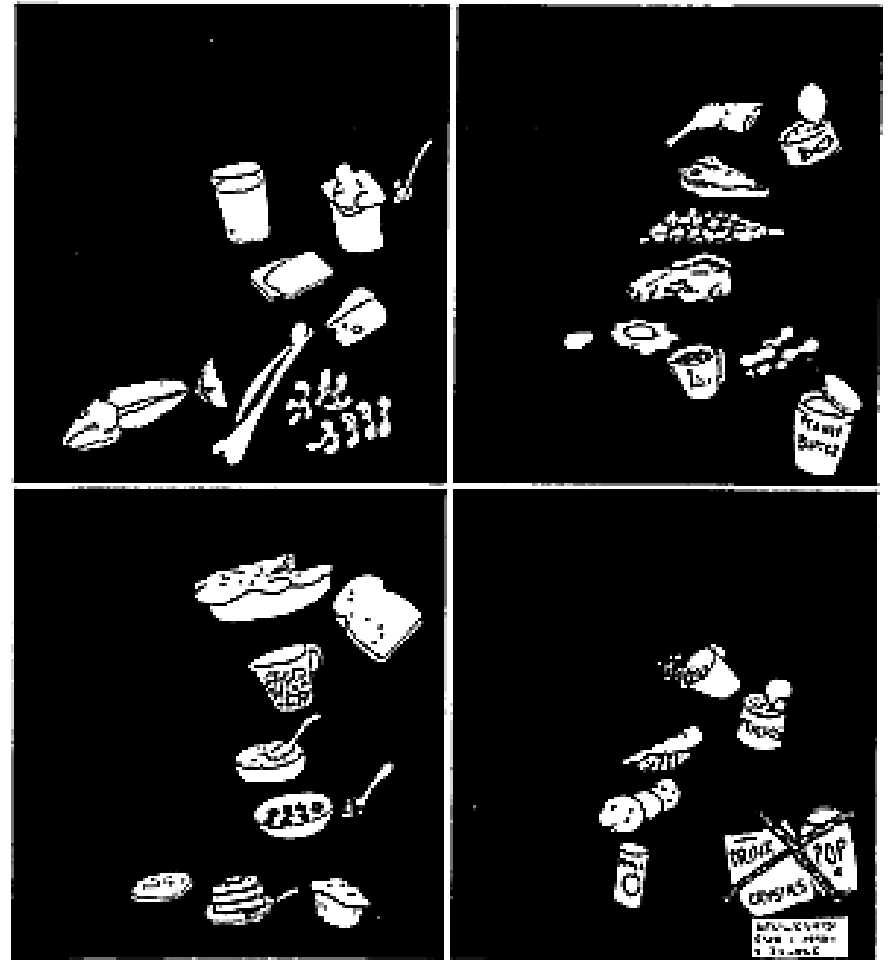
Milk and milk substitutes
for strong bones
and teeth
Blue

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

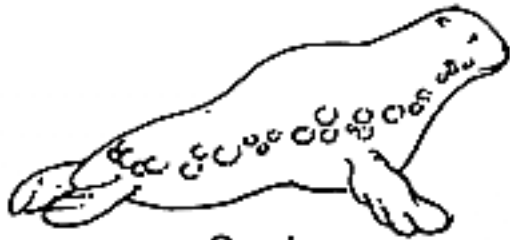
Bannock with peanut butter, cheese, berries, raisins, etc.; celery sticks with peanut butter or cheese; mini pizza (English muffin or roll with tomato or spaghetti sauce and cheese); peanut butter on toast or bread; cheese on toast or bread; cheese and crackers; cheese and fruit; raw fruits or vegetables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



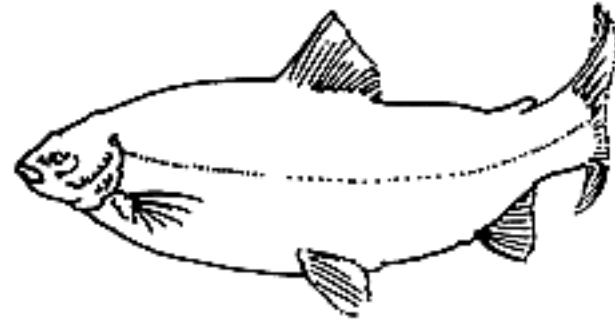
Snacks can be served with unsweetened fruit juice or milk as a beverage. To quench thirst, water is the best!

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

Leader Nutrients: Protein, Iron



Seal



Fish



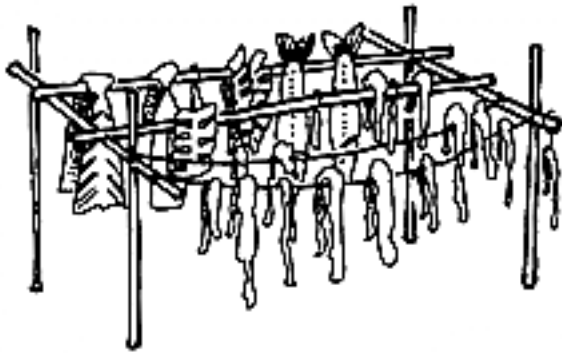
Rabbit



Whale

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

Leader Nutrients: Protein, Iron



Dried Meat and Fish



Caribou



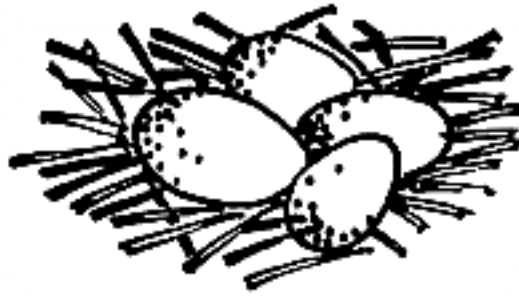
Muskrat

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

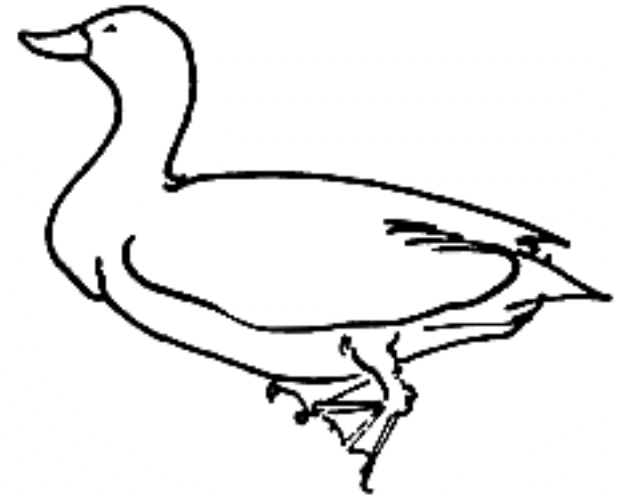
Leader Nutrients: Protein, Iron



Ptarmigan



Eggs



Duck

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



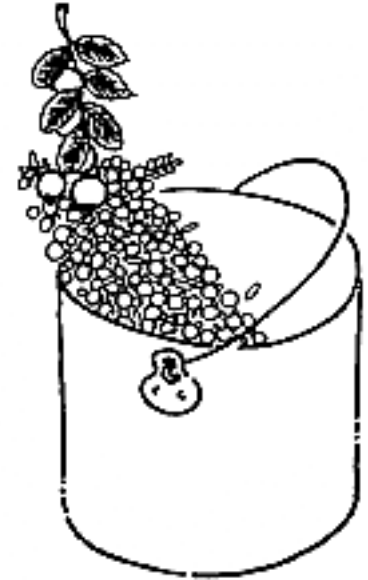
Seaweed



Clover



Dock



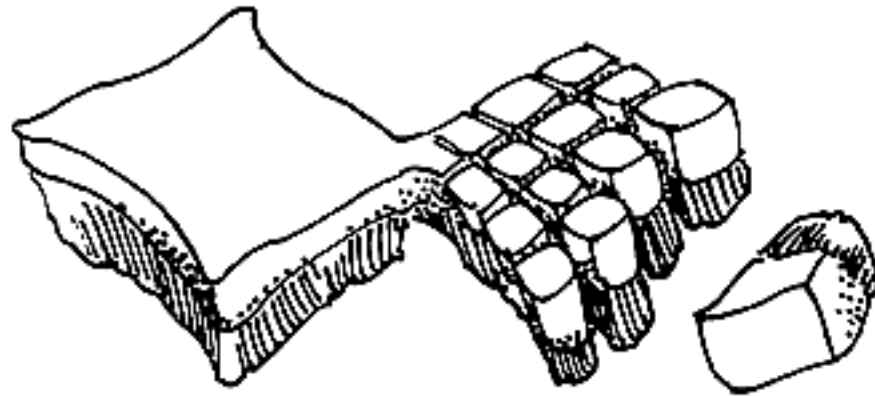
Berries

COUNTRY FOODS FROM THE FRUIT AND VEGETABLES GROUP

Leader Nutrients: Vitamin A, Vitamin C



Seal Fat

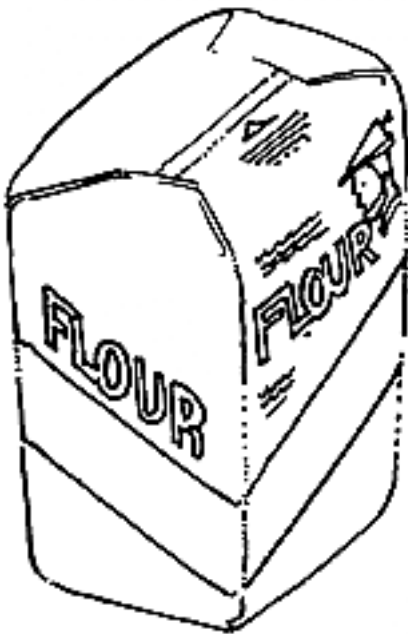


Muktuk

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



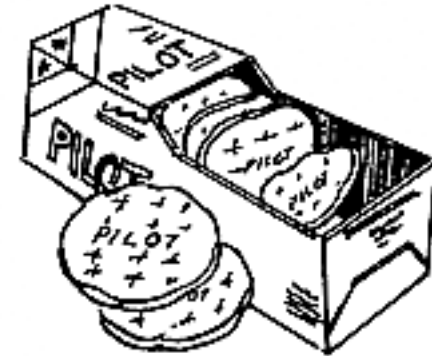
Flour



Oats



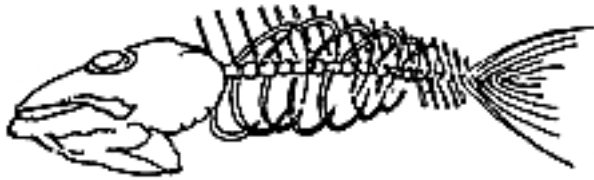
Bannock



Pilot Biscuits

COUNTRY FOODS FROM THE MILK AND MILK SUBSTITUTES GROUP

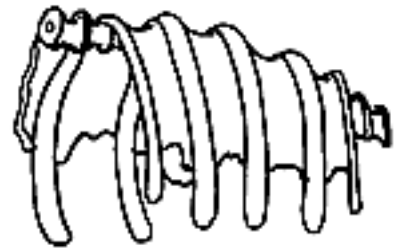
Leader Nutrient: Calcium



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.

COMMON FOOD ADDITIVES

| Preservatives | Enriching Additives | Fortified Additives | Emulsifiers (thickening agent) | Leavening Agents |
|--|--|---|---|------------------|
| acetic acid adipic acid amylases *artificial coloring artificial flavoring (Vitamin C) ascorbic acid ascorbyl palmitate benzoic acid (sodium benzoate) **butylated hydroxyanisole (B.H.A.) **butylated hydroxytoluene (B.H.T.) caffeine lactic acid (calcium lactate) sorbic acid (calcium, sodium or potassium sorbate) chewing gum base citric acid casein corn syrup sugar (sucrose, dextrose, invert sugar) monosodium glutamate (MSG) group meat tenderizers fumanc acid glycine hydrogenated vegetable oil (shortening) imitation beef and chicken flavors lactic acid (calcium lactate) malt flour modified starch oxysteann saccharin salt silicone dioxide *sodium nitrate *sodium nitrite sorbital sugar sulphur dioxide sodium bisulfite tannin, tannic acid vanilla (ethylvanilla) | ascorbic acid niacin (Vitamin B3) riboflavin (Vitamin B2) Thiamin (Vitamin B11) | beta carotene calcium phosphates ergosterol (Vitamin D) ferrous gluconate reduced iron riboflavin thiamin | agar propylene glycol alginate *carrageenan corn syrup dextrin gelatin glycerine (glycerol) hydroxylated lecithin karaya gum lecithin furcelleran locust bean gum modified starch mono and diglycendes pectin polysorbate 60,65,80 sorbitan monostearate larch gum | gluconic acid |

Note: * Additives with one asterisk refer to those additives that may be harmful and some are thought to be carcinogenic. ** The necessity of these additives is questionable.

LIFECYCLE NUTRIENT NEEDS

The quantity of nutrients needed depends upon a person's age, sex, weight, special physiological needs and activity level. The N.W.T. or CANADA'S FOOD GUIDE can assist Canadians in choosing foods to satisfy these varying nutrient needs as recommended in the Recommended Nutrient Intakes for Canadians.

The basic number of servings from the FOOD GUIDE provides 4000 - 6000 kJ (1000 - 1400 kcal). However, most people need a greater energy intake daily to maintain energy balance. There are two ways to get that additional energy:

- by increasing the number and size of servings from the food groups
- by adding other foods and beverages that are not included in the FOOD GUIDE

These sources of energy increase the FOOD GUIDE's flexibility and the variety in foods which Canadians can enjoy in their meals and snacks.

PREGNANT AND LACTATING WOMEN

Adequate nutrition during pregnancy is essential for the health of the child and the mother. During pregnancy maternal and fetal tissues grow at a rapid rate, and during lactation there is daily production of milk. These physiological functions require increased intakes of many nutrients.

Energy needs increase by about 400kJ (100 kcal) a day in the first trimester of pregnancy, and 1300 kJ (300kcal) a day in the second and third trimesters. During lactation an additional 1700 kJ (400 kcal) are recommended. Pregnancy is not the time for weight reduction diets. Inadequate food intake could deprive the fetus of essential nutrients and energy. Weight gain during pregnancy should be gradual and monitored by the medical doctor.

Quality and quantity of food eaten are especially important during pregnancy and lactation. For example, by increasing MILK AND MILK SUBSTITUTES to three or four servings daily, a pregnant or lactating woman can get the additional protein, vitamin D, calcium and phosphorus she needs. Five servings from the BANNOCK, BREAD AND CEREAL group will contribute to the need for more thiamin, riboflavin, niacin, iron and energy.

Pregnant and lactating women need to include choices from the FRUIT AND VEGETABLES group that are rich in vitamin A, vitamin C and folacin. Green leafy vegetables, asparagus, mushrooms, broccoli, lima beans, lemons, bananas, strawberries and cantaloupe are wise choices for supplying folacin.

Whole grain BANNOCK, BREAD AND CEREALS and FRUIT AND VEGETABLES help prevent constipation, a common problem during pregnancy. Small frequent meals and nutritious between-meal snacks reduce nausea and heartburn.

Women in the childbearing years, whether or not they are pregnant, have the most difficulty meeting their requirements for iron. They need to take special care to include iron-rich choices in their daily food patterns: foods such as egg yolks, dried peas and beans, nuts, dark green vegetables and red meats. Liver is a wise choice from the MEAT, FISH, BIRD, EGGS group because of its iron content as well as the amount of protein, vitamin A, folacin, thiamin, riboflavin and niacin it supplies.

SAMPLE MEAL PATTERNS FOR WOMEN BASED ON CANADA'S FOOD GUIDE

| | |
|--|--|
| A 30-year old woman might have | A 30-year old pregnant woman* might have: |
| 2 servings 2% milk | 4 servings 2% milk |
| 3 slices bread | 4 slices bread |
| 1 serving cereal | 1 serving cereal |
| 2 servings fruits | 2 servings fruits |
| 3 servings vegetables | 3 servings vegetables |
| 2 servings meat, fish, poultry or alternates | 2 servings meat, fish, poultry or alternates |

*for normal pregnancies

INFANTS

Specific recommendations for infants are not included in CANADA'S FOOD GUIDE because the quality and kind of food appropriate for an infant change rapidly during the first two years.

Human breast milk is optimal in nutritional content and digestibility for young infants, especially during the first six months after birth. It has the added advantage of containing antibodies which help in combating infectious diseases. Also, infants are less likely to be allergic to human milk than to cow's milk.

Breast-feeding enhances bonding between mother and child. It promotes a special closeness, both emotionally and physically, which helps to build a secure and loving relationship.

If a mother is unable to breast-feed, she can use one of the many commercial infant formulas available. Whole cow's milk should not be used for infants under six months of age. Health professionals recommend not using partly skimmed (2%) or skimmed milk before twelve to eighteen months. Some health professionals recommend not using skimmed milk before two years of age.

Nutritionists, dietitians or medical doctors can advise mothers on their infants' feeding programs, and can provide pamphlets on infant feeding techniques and the introduction of solid foods.

PRE-SCHOOLERS AND CHILDREN

Children need to establish patterns of good nutrition, normal weight and an active lifestyle which will last them a lifetime. Experience and example are the two major influences on a child's habits. Parents have a special responsibility to set a positive example in their own eating habits and to provide children with a wide variety of foods from the four food groups.

It is important to respect the size of a child's appetite. At certain times, especially during the pre-school years, the child is not growing quickly - energy needs lessen. Constant coaxing to eat "just a few bites more" can contribute to the serious and often lifelong problem of obesity.

This is the time when the portion of food served at a particular meal may be less than the serving size recommended in CANADA'S FOOD GUIDE. But the GUIDE is still useful for pre-schoolers. The meal pattern only needs changing. Preschoolers often need small between-meal snacks from CANADA'S FOOD GUIDE. Snacks which are high in sugar or fat content can interfere with a child's appetite for more nutritious foods, and can contribute to dental caries.

ADOLESCENTS

Nutrient needs are highest during the adolescent years because of the demands of growth and maturation. Teenagers need calcium, particularly for skeletal development. Three to four servings of MILK AND MILK PRODUCTS for this age group are recommended.

An adolescent's lifestyle may include frequent snacking. By having available plenty of food choices from the NWT or CANADA'S FOOD GUIDE, and by setting a good example themselves, parents can encourage nutritious snacking habits. Schools, recreation centres and other institutions can reinforce good food habits by making wise food choices available.

A physically-active teenager has an increased energy requirement, while the energy needs of an inactive student are considerably less. Concern over body image can lead to inappropriate food patterns. Unfortunately, many adolescent girls choose diets which are low in calcium and iron. They may also need some assistance in planning nutritious weight control diets to prevent overweight or underweight.

The pregnant adolescent must meet the nutritional needs of her own growth as well as the nutritional demands of pregnancy. She will need to follow carefully the advice given for pregnant and lactating women, and will also require additional servings from the MILK AND MILK PRODUCTS group to meet her own protein and calcium requirements.

COMPARISON OF MEAL PATTERNS FOR CHILDREN AND TEENAGERS

A 15-year-old boy has greater nutrient requirements than a 9-year-old girl. To meet those extra needs, the boy can choose more servings within the ranges in the FOOD GUIDE. With the patterns below, both the boy and the girl meet or exceed the nutrient recommendations of the Recommended Nutrient Intakes for Canadians in all respects, except energy. To satisfy energy requirements, they will need additional foods of their own preference.

A 9-year old girl might have: A 15-year-old boy might have:

3 servings 2% milk
2 slices bread
1 serving cereal
2 servings fruits
2 servings vegetables
2 servings meat, fish, poultry
or alternates

4 servings 2% milk
4 slices bread
1 serving cereal
2 servings fruits
2 servings vegetables
2 servings meat, fish, poultry
or alternates

ADULTS

If a person's eating habits remain constant during the adult years, he/she will probably gain weight gradually because the body's metabolic rate slows down by two or three per cent every decade. As well, many people let their activity level drop as they get older.

A person who gains "only" 1 kg (2.2 pounds) a year starting at age 20 will accumulate 20 kg (44 pounds) by age 40. The prevention of obesity is a most important challenge during the adult years. A combination of sensible food selection and physical activity are the answers to weight control.

Although energy requirements decrease with age, an adult's needs for most other nutrients remain unchanged. Therefore, food selection must take into account the nutrient density of foods; that is, the ratio of nutrient to energy content. Wise choices are those foods that contain a high proportion of nutrients compared to energy content. This is possible within the framework of the NWT and **CANADA'S FOOD GUIDE**. In each food group, food choices range in energy content while still supplying nutrients.

As children grow up and leave home, adults often find that they have more time to enjoy relaxing meals. At the same time, they can experiment with new recipes and cooking methods now that they are shopping and preparing meals for just one or two.

OLDER ADULTS

Food choices for older adults are affected by a number of factors. Disability and illness, depression and loneliness, reduced income and possible changes in living environment can lead to inappropriate food practices. A number of problems experienced by this age group - lack of energy, bone fragility, constipation ---- are aggravated by poor food habits. The NWT or CANADA'S FOOD GUIDE also provides a framework for wise food choices for this age group.

Because physical activity may be further reduced in older adults, energy requirements are less. However, nutrient needs do not decrease. Wise food choices for this age group are those of higher nutrient density, namely foods providing nutrients without being high in energy content. A reduction in the use of additional foods and beverages is advisable.

Unfortunately, some older adults let dental problems and rising food costs interfere with their food intake, especially of FRUIT AND VEGETABLES. This can lead to inadequate intakes of vitamin A, vitamin C, thiamin, folacin and fibre. Carefully prepared and cooked fruits and vegetables and juices can provide these nutrients.

Osteoporosis, a condition of decreased bone density and weakened bone structure, is a serious problem, particularly in older women. One probable cause is inadequate calcium and vitamin D intake over a period of years. Continued emphasis on MILK AND MILK SUBSTITUTES is needed in the senior years.

In cases where depression and loneliness are affecting food intake, a change in social environment may be the solution. Sharing meals with friends, participating in community meal programs or simply watching television while eating can make mealtimes more enjoyable.

WEIGHT CONTROL

Obesity is a major problem in Canada and is associated with health problems such as diabetes and heart disease. Obesity results when energy intake exceeds energy expenditure; that is, when a person eats too much or is inactive or both.

At the same time, an increasing number of Canadians are too concerned about their body size. In an effort to lose pounds some are following nutritionally inadequate diets. Others are maintaining body weights too low for optimum health.

Energy intake and energy output are both important parts of the energy balance equation. Both are measured in kilojoules.

1 kilocalorie = 4.184 kilojoules
(1 kilocalorie is what was commonly referred to as a calorie)

Body weight remains constant when energy intake equals energy expenditure. To lose weight, a person needs to increase physical activity, reduce daily energy intake, or both. In order to gain weight, energy intake must exceed energy expenditure.

Energy Intake: Because the energy content of individual foods within each food group varies greatly, it is possible to select foods either high or low in energy and still enjoy a varied diet within the framework of the NWT and CANADA'S FOOD GUIDE.

People wishing to reduce their energy consumption need to frequently choose foods that are lower in energy, and avoid the foods highest in energy. In addition, they should minimize their use of additional foods and beverages that are not in the FOOD GUIDE. It is especially important to moderate the use of alcohol, fats and sugars for the prevention and control of obesity.

Energy Output: The energy needed to maintain basic functions such as breathing, blood circulation, normal body temperature and growth depends upon fixed factors such as age, sex, body build and physiological state. People can do little about these basic needs; however, they can decide to increase their energy needs for physical activity.

Physical activity includes work activity, both on and off the job, and leisure activity. The degree of activity a person does depends on major decisions such as choice of profession (a lumberjack usually has more opportunities for vigorous exercise than a bus driver), and choice of recreational activities (it requires less energy to play cards than it does to crosscountry ski).

Energy expenditure hinges on a multitude of day-to-day choices, whether to walk to the local store or take the car; use the stairs or the elevator; rake the leaves oneself or hire a neighbourhood youngster to do it; go out for a bicycle ride after supper or watch a TV show. How physically active a person's life is depends as much on attitude as it does on opportunity.

Exercise is an excellent way to alter energy output to match or exceed intake.

Regular exercise has additional benefits. The physically active person has better cardiovascular fitness, decreased fatigue, increased stamina and firmer muscles. Also, an active person can enjoy that feeling of well-being not always experienced by a sedentary person.

Even the person wishing to gain weight requires regular but not excessive exercise. It will help in maintaining a normal appetite and in ensuring that weight gain is muscle tissue, not just fat.

Energy Adjustments; There are tables suggesting ideal weight for height, but usually the mirror test is all that is needed. An honest evaluation of body appearance, without clothes, using a full-length mirror will tell a person whether there is too much or too little body fat. A gradual weight loss or gain of 0.5 to 1 kg (1 to 2 pounds) per week is advisable, with a realistic short-term goal of 3 to 5 kg (6 to 10 pounds) over a period of a month.

Fad Diets: Any diet which omits one or more food groups or concentrates on just a few selections is dangerous to health. Weight loss achieved on such diets is frequently temporary, either because the person returns to previous food habits or because the weight loss is largely loss of fluids.

Books, magazines and weight-loss clubs sometimes seem to offer easy answers. The best way to assess any diet is to compare it with CANADA'S FOOD GUIDE.

NUTRITION PROBLEMS WITH WHICH STUDENTS MAY BE FAMILIAR

| Problem | Cause | Brief Description |
|------------------|--|---|
| anemia | diet low in iron or the inability to use iron | mainly seen in girls, women of menstruating age or pregnant women |
| anorexia nervosa | loss of one's appetite due to extreme anxiety or seeing oneself as too fat | <ul style="list-style-type: none"> - malnutrition results - mainly seen in teenage girls - seek medical attention |
| bulimia | extreme anxiety | <ul style="list-style-type: none"> - extreme binge eating, followed by self-induced vomiting or prolonged overuse of laxatives to purge the body - seek medical attention |
| diabetes | genetic and/or environmental predisposition; possible virus | <ul style="list-style-type: none"> - inability to make or utilize insulin to break down blood sugar - a controlled diet and/or insulin injections may be necessary |
| hypertension | <ul style="list-style-type: none"> - overweight - too much salt in diet - smoking - family history - lifestyle | <ul style="list-style-type: none"> - blood vessels narrow causing the heart to beat harder - over time, the extra pressure can cause heart and blood vessel damage |
| malnutrition | <ul style="list-style-type: none"> - poor or inadequate diet - some medical factors | <ul style="list-style-type: none"> - body requires foods from the four food groups every day - the body, through disease may lose the ability to utilize certain foods |
| obesity | <ul style="list-style-type: none"> - energy consumed by the body is more than the energy required for activity - many contributing factors; poor diet, lack of regular exercise, heredity, lifestyle | <ul style="list-style-type: none"> - may affect physical and mental health - associated with increase in incidence of diabetes and heart disease - mental problems due to poor body image - 15% or more over optimum weight |
| overweight | same as obesity | <ul style="list-style-type: none"> - not as severe as obesity - 10% over optimum weight |

GRADE 9

DENTAL HEALTH

DENTAL HEALTH

GRADE: 9

LESSON: 1

THEME: FACTORS AFFECTING
DENTAL HEALTH

CONCEPT: MANY BEHAVIOURS PROMOTE ORAL AND DENTAL HEALTH

PREPARATION: 1 Prepare a class set of Dental Myths Who's Spreading Those Rumours (Activity Sheet D61 A) and several Answer Sheets (D61B)
2 Prepare a series of questions for Hollywood Squares (Student Activity 2)

VOCABULARY: crevice, dislodge, abrade, prematurely, manual dexterity, mandatory, inherited, cure-all, prevent-all

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|---|--|
| Students will be able to: i) identify behaviours/factors which promote oral and dental health | Students: 1 Complete Dental Myths Who's Spreading Those Rumours worksheet. | Background Information Page DH23 to 24, DH35 to 38 All information in this lesson has been covered in previous grades. This lesson should therefore be used as a review. Refer to Activity Sheet D61 A and D61 B (Teacher Answer Guide). Have students complete the worksheet individually and then discuss their answers in small groups. Prepare sufficient answer sheets so that each group has one. Have one student in each group act as the moderator to lead the discussion and then read the answer for each question. |

OBJECTIVES

STUDENT ACTIVITIES

TEACHER NOTES

2 Play Hollywood Squares.

Review student knowledge of behaviours which promote oral and dental health by playing Hollywood Squares, modelled after the T.V. program of the same name .

1 Arrange 9 students (the stars) in TIC TAC TOE formation



Choose 2 contestants (X and O) and one host. (If you have a large class have 2 stars in each square.)

2 Prepare in advance a series of questions related to dental health. For example:

- a) True or False - A baby cannot get nursing bottle mouth if the bottle contains only milk.
- b) Name one way to prevent dental injuries while playing sports.
- c) Does this community have fluoridated water?
- d) Name a dental health worker in this community.
- e) What does it mean if toothpaste has the Canadian Dental Association seal.

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|--------------------|---|
| | | <p>3 The goal of the game is for each contestant to try to win 3 squares in a row (horizontally, vertically or diagonally). The first contestant to do so wins.</p> <p>4 One contestant (say X) chooses a star, the host asks the star a question, the star answers it (either truthfully or by bluffing), and the contestant decides whether or not s/he agrees with the star's answer. If the contestant is correct, X gets the square, if not O (the opponent) gets the square.</p> <p>5 Contestants alternate until one wins.</p> <p>6 Members of the audience provide correct answers if not already done so by the chosen star.</p> |

DENTAL MYTHS: WHO'S SPREADING THOSE RUMOURS

Read each statement below. Circle T if you think the question is true. Circle F if you think the question is false.

1. We should brush our teeth the way they grow . up from the bottom teeth and down from the top. T F
2. We should brush our teeth three times each day to avoid getting cavities. T F
3. For most people, a *soft* bristle toothbrush is better than a *medium* or *hard* bristle brush. T F
4. Toothpaste tastes nice, but it's not really necessary to get your teeth clean. T F
5. We can use dental floss or devices such as "Water Pik" instead of the toothbrush. T F
6. Waxed dental floss cleans the teeth better than unwaxed dental floss does. T F
7. We should see the dental health worker every six months (twice a year) to make sure we are in good dental health. T F
8. One strong factor in causing cavities is the *amount* of sweets we eat. T F
9. People who live in communities with fluoridated water supplies do not have to be concerned about their children's teeth. T F
10. Children who live in areas where the community water supply is *not* fluoridated will have a lot of cavities. T F
11. Cavities in baby teeth should cause little concern since baby teeth will fall out anyway and be replaced by permanent teeth. T F
12. Some parents must accept the fact that their child's teeth are going to cause problems because the child just will not keep them clean. T F
13. Some people have a more difficult time fighting cavities because "soft teeth" run in their families. T F
14. Aspirin can help relieve the pain of a toothache until you get to your dental health worker, but it should be swallowed and not held on the aching tooth or on the gums. T F

DENTAL MYTHS: WHO'S SPREADING THOSE RUMOURS

(Answer Sheet)

1. False! For years, dentists recommended brushing in this manner. In more recent years, however, it has become clear that this technique does not clean the area between the tooth and the gum. The toothbrush should be placed at a 45 degree angle to the tooth so that some of the bristles extend into the crevice between the tooth and the gums. The brush is then rotated in very small circles to dislodge the plaque. Finally, the brush is swept toward the biting surface of the tooth. Other techniques are probably just as effective, but this one is easily taught and easily learned. Emphasis on techniques should be secondary to effectiveness; i.e., if a child is achieving cleanliness, he does not need to change his brushing techniques. *The brushing technique is appropriate if the plaque is thoroughly removed, without damaging the gums.*
2. False! The fact is that you could brush your teeth 10 times a day and still get cavities if you are not thorough. The reason you brush is to remove plaque. Plaque is a sticky, almost invisible material made up mostly of germs. After you remove it by brushing, it takes about 24 hours to reform to the point that it can damage our teeth and gums. It is extremely important that at least one brushing per day be very thorough. If it is, the number of brushings decreases in importance

Another factor in the desired number of brushings is the number of times you eat something. Every time you eat, you are at risk of acid production leading to cavities. Combining these two factors, we can recommend brushing after eating while emphasizing the importance of thoroughness in at least one brushing per day. After brushing, it is a good idea to use a disclosing tablet or even a couple of drops of food colouring swished around your mouth. This will stain the plaque and you can see what you missed. Then you can go back a second time to ensure thoroughness. Just remember that how clean you get your teeth each day is much more important than how many times you brush each day!

- 3 True! *A brush with soft nylon bristles with rounded ends is generally preferred.* The soft bristles will bend to get into nooks and crannies where medium and hard bristles cannot go. Plus, the harder bristles can abrade the tooth and can damage the gums. It is important to replace toothbrushes every 3 months, as frayed bristles do not clean properly.

4. True! The toothbrush is what cleans your teeth. Toothpaste adds a nice taste, may help remove plaque and, most importantly, will add protection by providing exposure to fluoride (assuming it contains fluoride). The important thing, however, is that ***you can clean your teeth even when you run out of toothpaste.***
5. False! To keep the teeth and gums clean and healthy, you need to use a toothbrush AND dental floss. Neither one can replace the other. The toothbrush cannot clean between the teeth where many cavities begin. For this, you need dental floss. Water irrigation devices, like Water Pik, cannot replace either the toothbrush or dental floss since they are ineffective in removing plaque.
6. False! Unwaxed dental floss cleans the teeth best, but waxed floss may be needed if teeth are crowded, tight, and have fillings in between.
7. False! Some people may need to see a dental health worker as often as every couple of months while others may be able to go as long as 18 months between visits. Most offices set recall appointments between 6 and 12 months. The condition of your teeth and gums, your diet, how well you clean your mouth at home and other factors determine how often you need professional attention. Only your own dental health worker can set the time that is best for you.
8. False! Actually, the amount of sweets you eat has little to do with the number of cavities you have. Much more important is the stickiness of the sweets and the frequency with which they are eaten. Sticky sweets which stay on the tooth for a long time, such as caramel candy, provide the germs in plaque a longer opportunity to produce acid than would a sweet which clears the mouth quickly, such as a soft drink. And, of course, the more frequently you eat sweets, the more frequently your teeth are bathed in acid. While this response may generate cries of "trick question", it is important to be aware of the difference between ***amount***, and ***frequency***, or ***type***.
9. False! If the local water supply is fluoridated, everyone receives benefits from it. However, fluoridated water is not a cure-all or prevent-all for teeth. It dramatically reduces the number of cavities you have, but you still need to ***keep your teeth clean, pay attention to your diet and visit your dental health worker regularly.***
10. False! While there is no comparable substitute for drinking fluoridated water from birth, there are other means of providing fluoride protection. In some cases, school-based fluoride mouthrinse programs or fluoride tablet programs can be implemented with minimal cost and with minimal inconvenience. Fluorides still represent the most effective and most economical preventive dental measure available.

11. False! Cavities in baby teeth can lead to pain and infection just as cavities in permanent teeth can. A child needs his baby teeth for chewing, speech and appearance. And finally, baby teeth maintain proper spacing for the permanent teeth. If a baby tooth is lost prematurely, other teeth will shift into the space and the permanent tooth may grow in crooked. Preventive dental health begins with the baby teeth.
12. False! Children under the age of 12 do not have the manual dexterity and the attitude required to clean their teeth alone. Parental guidance is mandatory and, in the young child, parental assistance in the actual brushing and flossing is necessary.
13. True or False? Most of the statement is true, but probably for a different reason than you thought. When someone says "soft teeth" or "bad teeth" run in their family, they usually mean that their teeth are bad because of some inherited problem. The fact is that inherited diseases and conditions which lead to cavities are few and far between. Usually, bad teeth run in a family because parents who fail to take proper care of their own teeth also do not take proper care of their children's teeth. At the very least, a child's teeth should be inspected after a thorough brushing each day.

14. True! You would not think of placing an aspirin on top of your head for a headache, so do not place aspirin on top of your tooth for a toothache. Aspirin is an acid which can cause a severe burn if left in contact with the gums and cheeks. *Aspirin is made to be swallowed, not held in the mouth.*

Your Score:

Count #13 correct regardless of your answer. Add the number of correct answers and compare with the following categories:

All 14 correct - You were supposed to answer the questions yourself before looking at the answers! Good work!

10-13 correct - Your dental health knowledge is excellent, and you are not easily misled by "old wives' tales"!

7 - 9 correct - Not bad, but do not believe everything you hear!

4 - 6 correct - Do not believe anything you hear!

3 or less correct - So *you* are the one spreading these rumours

DENTAL HEALTH

GRADE: 9 LESSON: 2

THEME: DENTAL CAREERS

CONCEPT: CAREER PLANNING IN DENTAL HEALTH INVOLVES PERSONAL ASSESSMENT, CAREER OPPORTUNITIES AND DECISION MAKING

PREPARATION: 1 Pamphlet, Health Careers In The N W T , available in all schools or from Otto Schaefer Resource Centre, Yellowknife
2 Prior to class invite a dental health worker to discuss his/her career training and opportunities

VOCABULARY: qualifications, employment opportunities, working conditions, salary range, auxiliary, benefits

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|--|--|---|
| <p>Students will be able to:</p> <p>i) examine a variety of dental health careers and their requirements</p> | <p>Students:</p> <p>1 Research dental health careers available in N W T and Canada</p> | <p>Background Information Page DH30 to 31</p> <p>For an assessment of personal interests and attitudes refer to the Grade 9, Mental and Emotional Well-Being unit of the School Health Program.</p> <p>Refer to pamphlet "Health Careers in N.W.T." Dental careers include dentist, dental hygienist, dental therapist, dental nurse, dental technician, dental assistant.</p> <p>Have students select one or more professional or auxiliary dental health careers to research. Include:</p> <ul style="list-style-type: none">- qualifications required- locations where training is offered- type of tasks performed- working conditions- opportunities- salary range- benefits |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|--|--|
| | 2 Discuss with a dental health worker his/her career, training and employment opportunities. | Prior to class invite a dental health worker to discuss his/her career, training and employment opportunities. |

DENTAL HEALTH

GRADE: 9

LESSON: 3

THEME: LIFESTYLE

CONCEPT: POSITIVE LIFESTYLE PRACTICES PROMOTE HEALTHY TEETH FOR A LIFETIME

PREPARATION: 1 Arrange with elementary grade teachers to have students work with younger students
 2 Obtain lessons for Dental Health, Grade 3, Lesson 2, Grade 4, Lesson 2, Grade 4, Lesson 5

VOCABULARY:

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|---|---|--|
| Students will be able to: i) teach positive lifestyle practices related to dental health | Students: 1 Develop and implement a strategy to teach specific dental health practices to a selected group or individual | Background Information Page DH23 to 24, DH35 to 38 Each student is to select and teach a particular aspect of dental health to another individual or group. For example: 1 Demonstrate proper brushing and flossing to grade 3 students (Grade 3, Lesson 2, Student Activities 1 and 3) 2 Work with a grade 3 teacher to teach all of Grade 3, Lesson 2. 3 Work with a grade 4 teacher to teach Grade 4, Lesson 2, Student Activity 3 4 Assist with the play "Saved By The Brush", Grade 4, Lesson 2, Student Activity 5 |

| OBJECTIVES | STUDENT ACTIVITIES | TEACHER NOTES |
|------------|---|--|
| | <p>2 Describe feelings about teaching others, and whether or not it affected their own dental health practices.</p> | <p>5 Make large drawings of the pictures in "Flossie The Tooth", Grade 4, Lesson 5, Student Activity 1. Then read the story to a class of grade 4's using the illustrations to highlight the story.</p> <p>6 Work with a small group to write a play Perform for other students.</p> <p>7 Conduct an experiment with younger students to show children what happens when acid comes into contact with tooth-like material. Put some pieces of eggshell into two cups (Eggshell is mostly calcium, like teeth). Cover the eggshell in one cup with plain water, in the other with vinegar, which is an acid. Leave them until all the water and vinegar has evaporated. What happened to the eggshell in vinegar? Explain to students that this process is similar to what happens in their mouths. This is why it is important to keep the mouth clean and not give bacteria the sugar it needs to produce acid.</p> <p>Source: First Teeth, Canadian Dental Association.</p> <p>All students should work in a small group to plan their projects so that students can support and coach each other throughout the preparation phase. Students can even practise their lesson on their peers.</p> <p>Following the actual teaching of some aspect of dental health have students discuss their experiences in the same small groups. Students should identify.</p> <ul style="list-style-type: none"> - their feelings about the teaching (before, during, after) - what went well - what could be improved - whether or not their own dental health practices were affected by teaching others |

GRADE 9

TEACHER BACKGROUND INFORMATION

DENTAL HEALTH

DENTAL DECAY

The strange thing about dental decay is that it is so prevalent when so much is known about its causes and prevention.

There is no doubt that dental decay is a bacterial disease and is specifically related to the activity of dental or bacterial plaque which forms on teeth. If the teeth are thoroughly cleaned, this bacterial film or plaque will reform within 24-36 hours. The plaque progressively thickens if left undisturbed for several days, and in some areas of the mouth may become covered by food debris. Much of this food debris can be removed by rigorous mouth rinsing with water, but the plaque itself is only removed by brushing and flossing. The particularly damaging property of dental plaque is the ability of the bacteria to thrive on dietary sugar and to rapidly produce acids which can dissolve the tooth material.

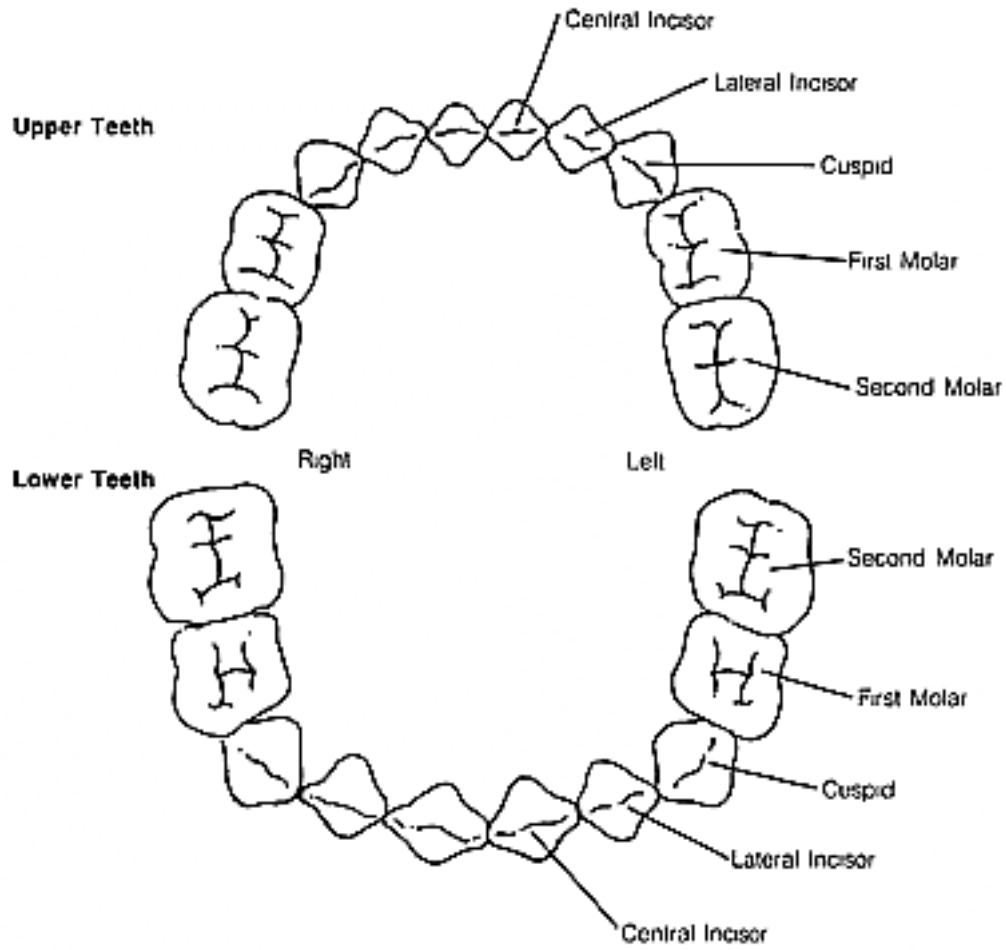
It is apparent that diet is an important factor in decay. The typical Canadian diet is high in refined carbohydrates, and is highly conducive to dental decay. Sticky candies or confections which adhere to the teeth or hard candies which are kept in the mouth for long periods of time are particularly damaging since they provide sugar to the plaque, and hence destructive acids, for a prolonged period of time. It is the food remaining in the mouth that is important to plaque activity. Hence, regular and thorough removal of food and plaque could theoretically eliminate the decay producing activity of the diet. In reality, it would be dangerous to rely completely on oral hygiene for the prevention of dental decay.

The role of heredity in dental disease is not well understood. Despite seemingly inherited bad gums or proneness to decay, personal neglect and poor quality dentistry are leading causes of poor teeth. Experience does indicate that some mouths are more prone to decay than others, but not because of so-called soft teeth. People who believe they have soft teeth often despair of their chances to keep their teeth. This despair is often associated with poor oral hygiene, dental neglect, faulty nutrition, or experience with poor-quality dentistry. With good home care, regular dental visits and the conscientious application of the principles of modern dentistry, most people should be able to enjoy a healthy mouth and retain their teeth for their lifetime.

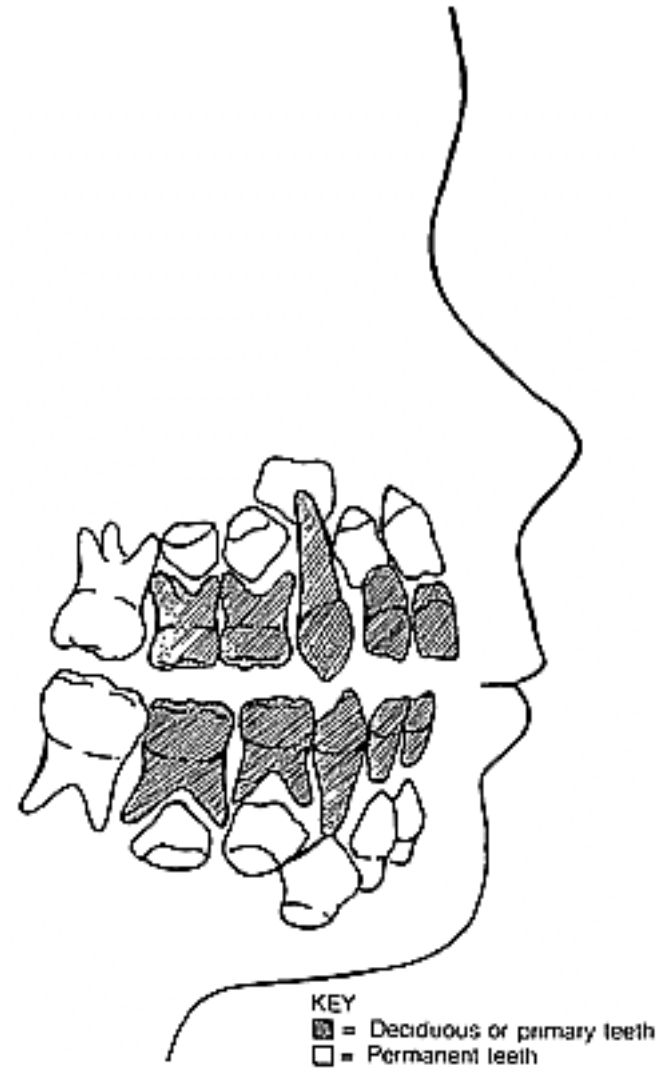
Good oral hygiene (proper brushing after each meal and brushing and flossing prior to going to bed) is difficult enough for adults to establish, for children, it is doubly difficult. Not only do young children lack the dexterity to brush and floss their teeth properly, but the benefits of such skills would be considerably reduced in the typical young "continuous eater". Parents should not only assist their young children in the brushing technique and floss their children's teeth up to about age 8, but should strive to keep the snack habit to the minimum, particularly of foods and drinks containing sugar. In lunches or at snack time children should not be given hard or sticky treats such as lollipops or toffee having sugar that remains in the saliva for a long time.

Adapted from 'Dental Health A Teacher's Guide K-12,' Health and Welfare Canada

PRIMARY (BABY) TEETH

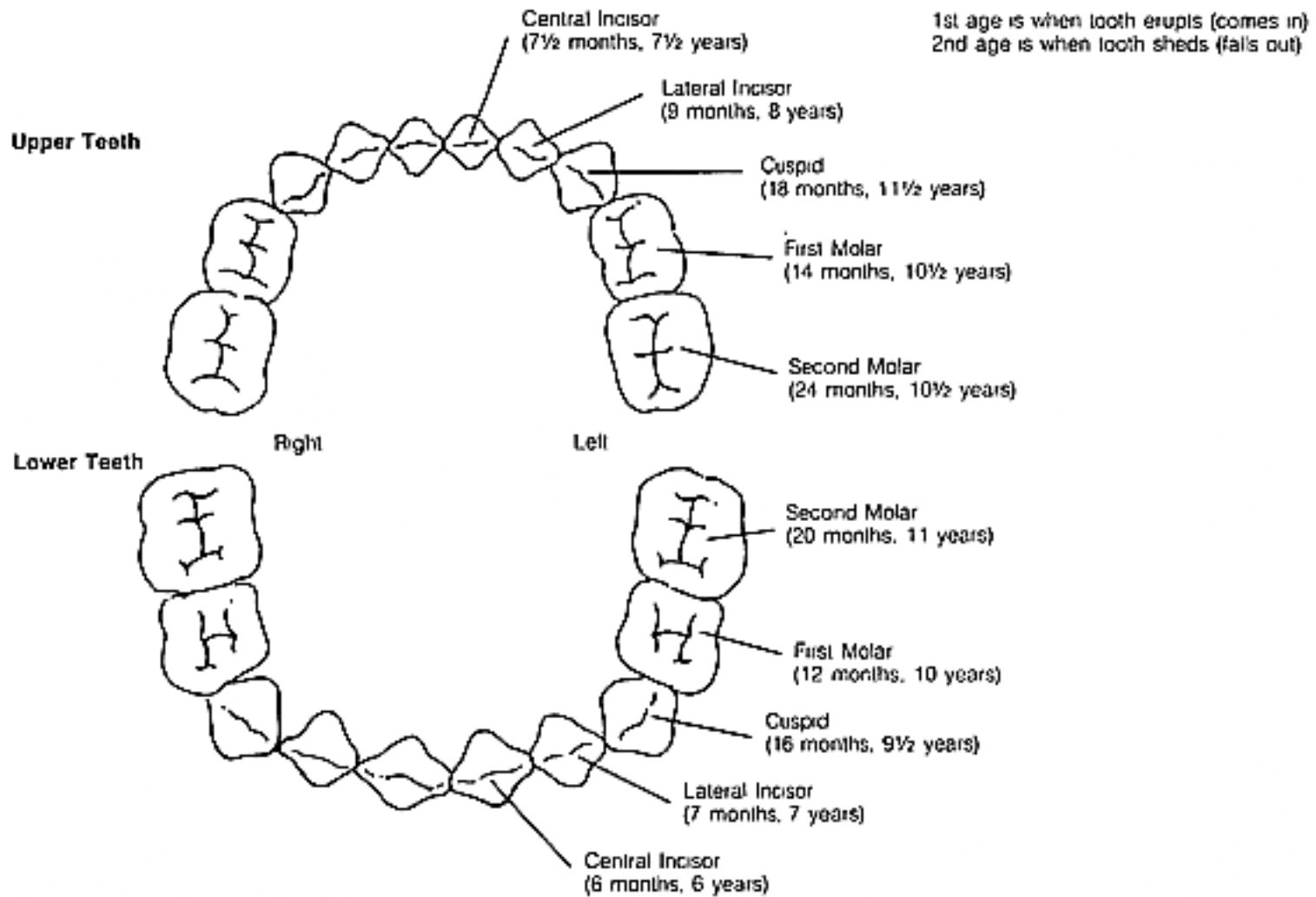


LOCATION OF TEETH AT 6 YEARS OF AGE



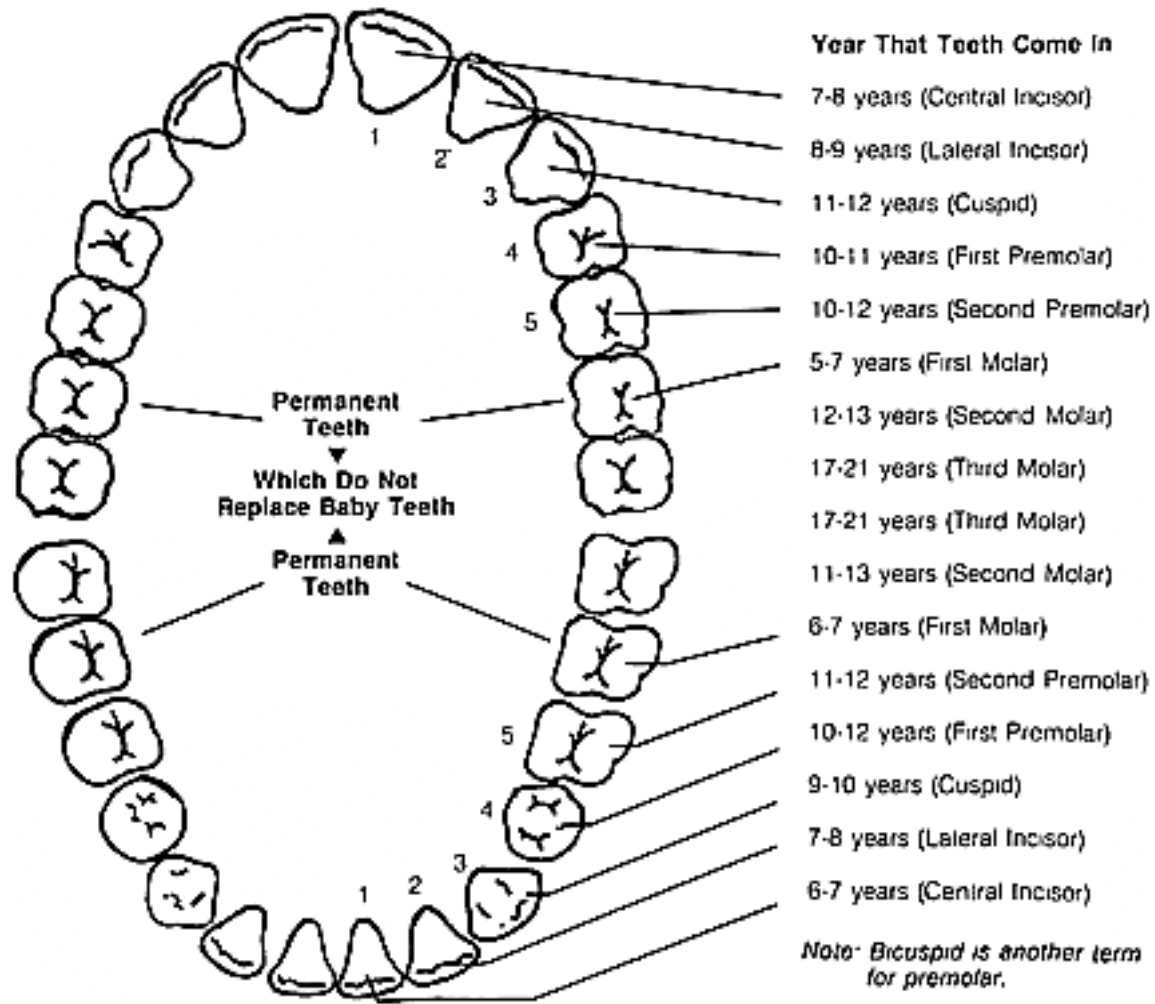
AGE SCHEDULE FOR PRIMARY TEETH

PRIMARY (BABY) TEETH



AGE SCHEDULE FOR PERMANENT TEETH

(Teeth numbered 1 to 5 replace baby teeth)



TOOTHBRUSHING - REMOVAL OF PLAQUE

How to Brush

Toothbrushing disrupts and removes plaque from the inner, outer and top surfaces of the teeth.

Place the toothbrush inside the mouth with the bristles along the upper last two teeth pointing at a 45° angle toward the gum line. This ensures that the bristles cover both teeth and gum surfaces

Vibrate the brush in a slight back and forth or circular motion directing gentle pressure towards the gums. This movement keeps the brush alongside the same two teeth and allows some of the bristles to clean the surfaces under the edge of the gums. Do not scrub.

Count to ten and then, move to the next group of teeth.

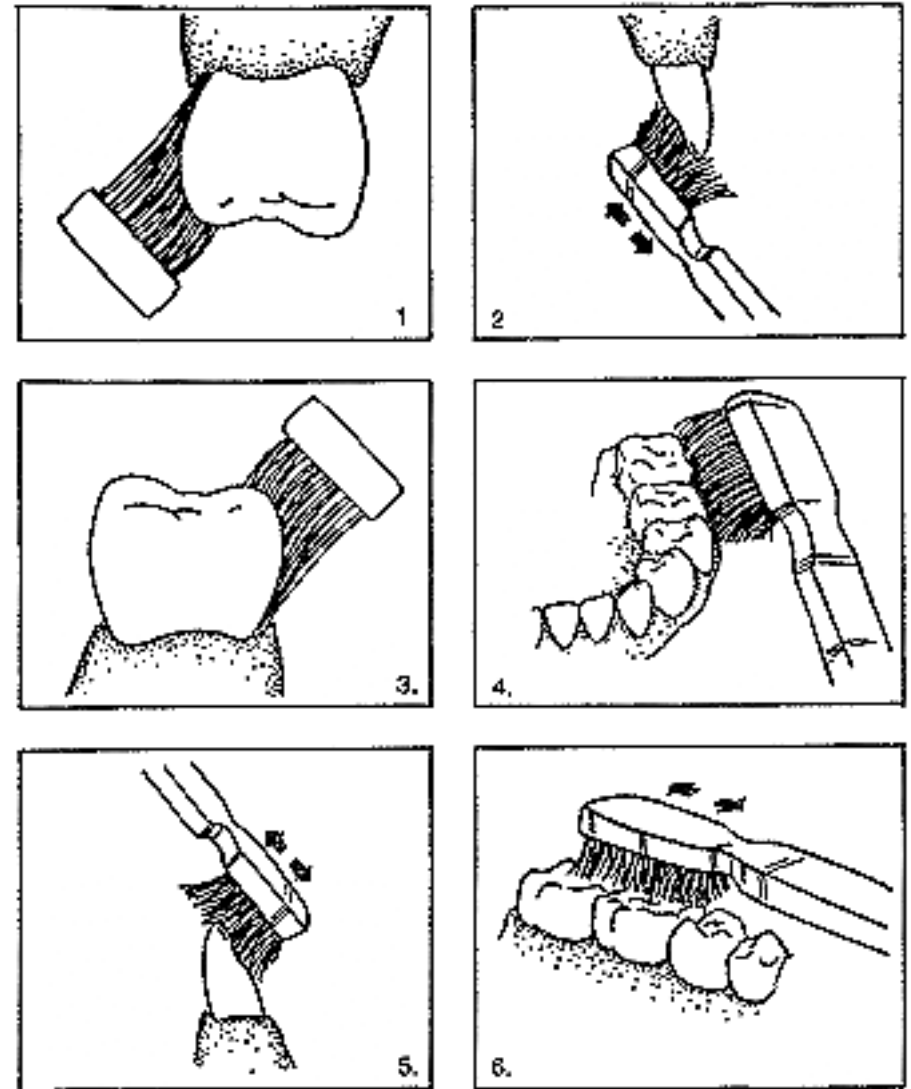
All inside and outside surfaces of teeth are cleaned in this way. The top surfaces of the back teeth are cleaned with a back and forth motion the bristles directly on top of the teeth.

To ensure all surfaces are brushed, the same circuit is followed every time.

This is where toothbrushing should begin.

1. Position of brush for brushing upper inside back teeth
2. Position of brush for brushing outside upper front teeth.
3. Position of brush for brushing lower inside back teeth
4. Position of brush for brushing lower outside middle teeth
5. Position of brush showing brushing of lower outside front teeth.
6. Position of brush showing brushing of top surface of back teeth.

From: CDA, "Do It Yourself Oral Hygiene", 1981



A BASIC TECHNIQUE FOR DAILY PLAQUE REMOVAL

Flossing - Removal of Plaque

How to Floss

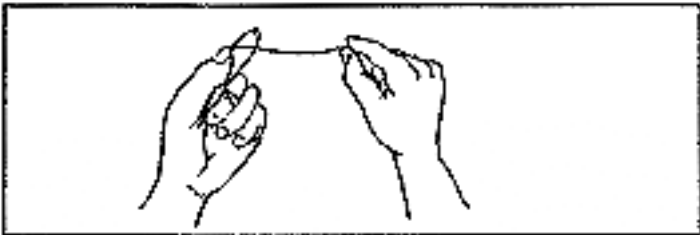
Flossing disrupts and removes plaque between the teeth and under the edges of the gums

To floss properly, use about 46 cm of dental floss. Wind most of the floss around the middle finger of one hand and the rest around the middle finger of the other hand. This leaves about 8 cm free.

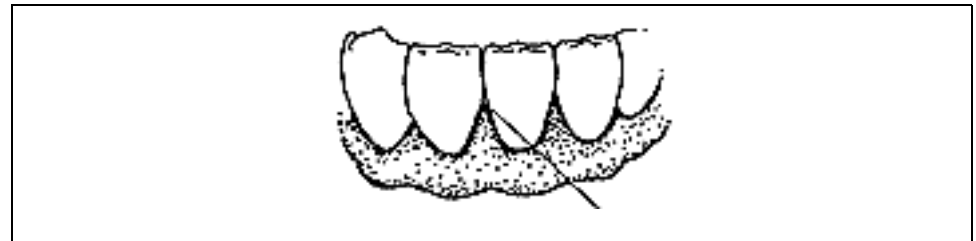
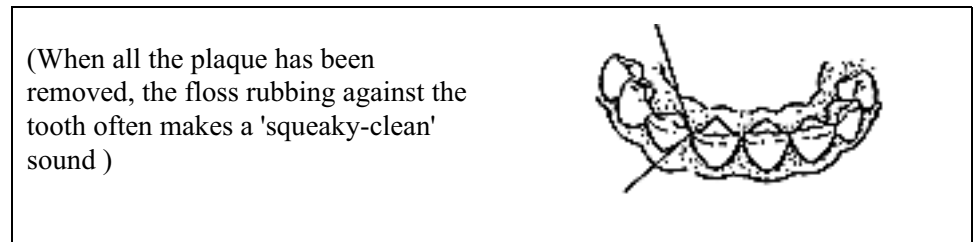
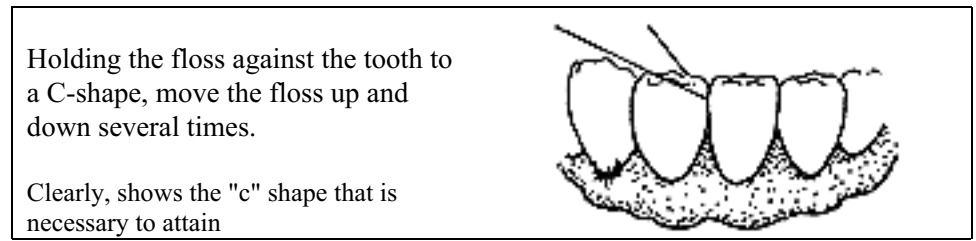
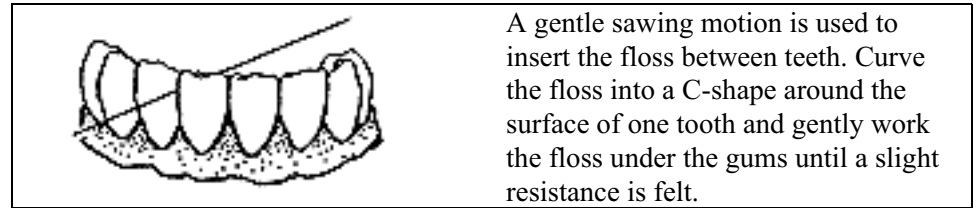
The free part of the floss is grasped with the thumbs and 1st fingers of each hand, leaving about 2.5 cm as the 'working portion' of the floss.



When flossing lower teeth, the floss is guided mainly by the 1st finger of each hand.



For upper teeth, exert pressure with the thumb of one hand and the forefinger of the other hand.

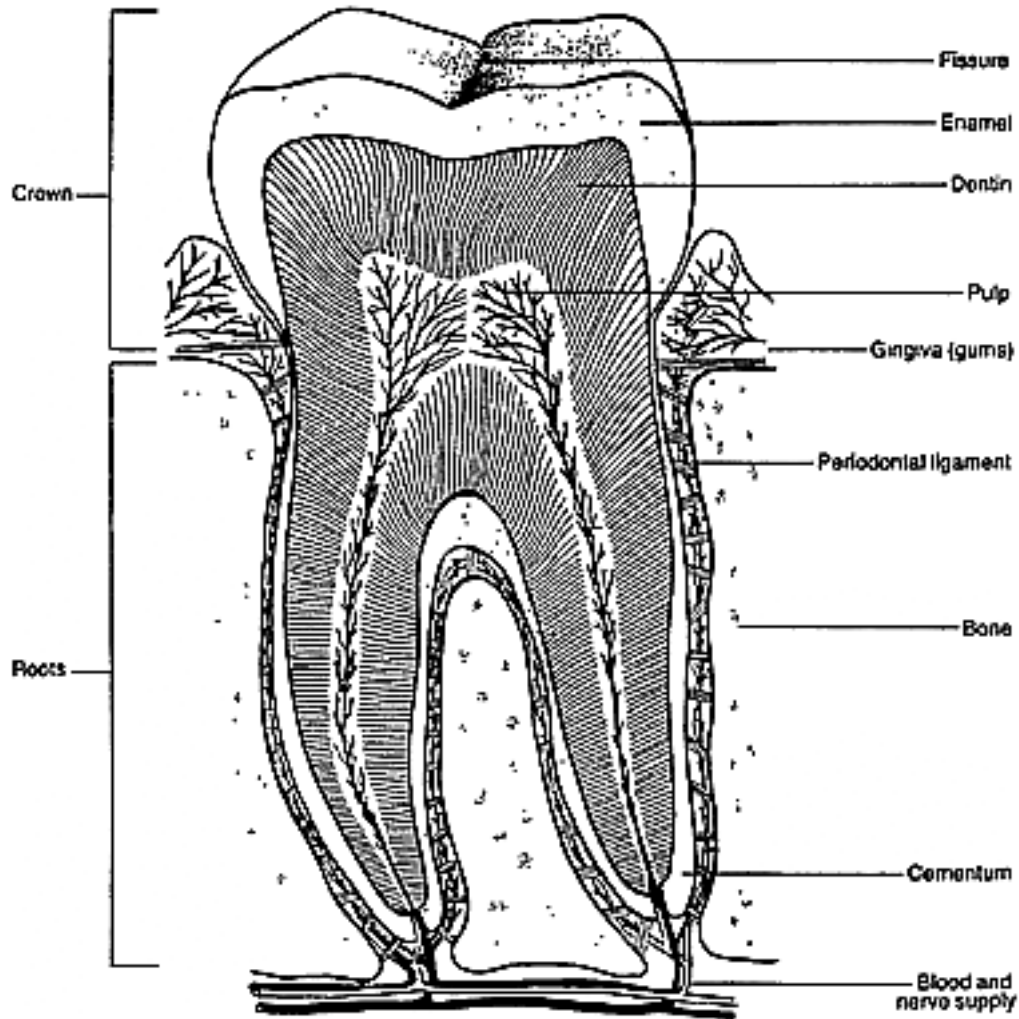


Repeat the procedure on the adjacent tooth surface at the same site.

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.

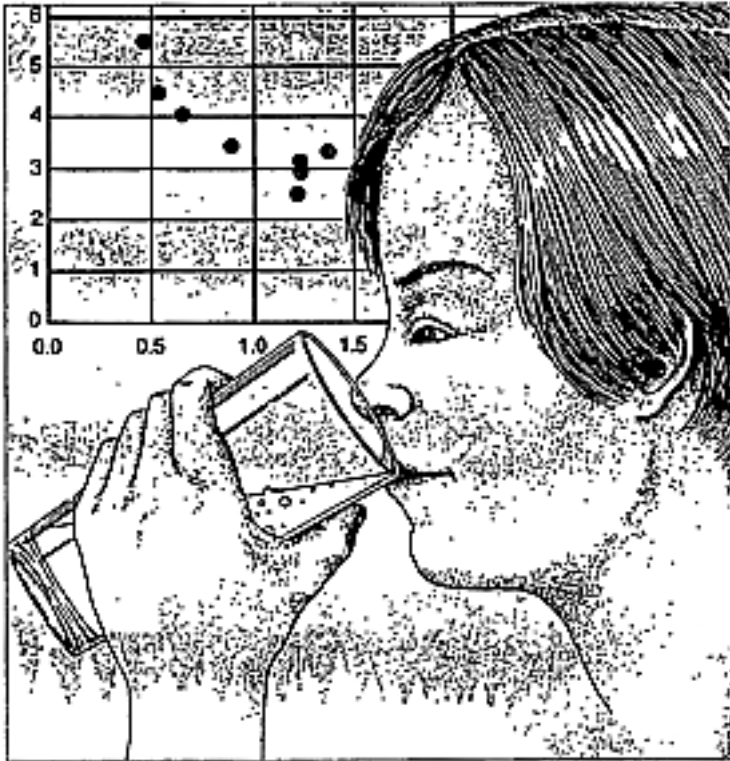
Jawbone: the bone surrounding and supporting the roots of the teeth

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

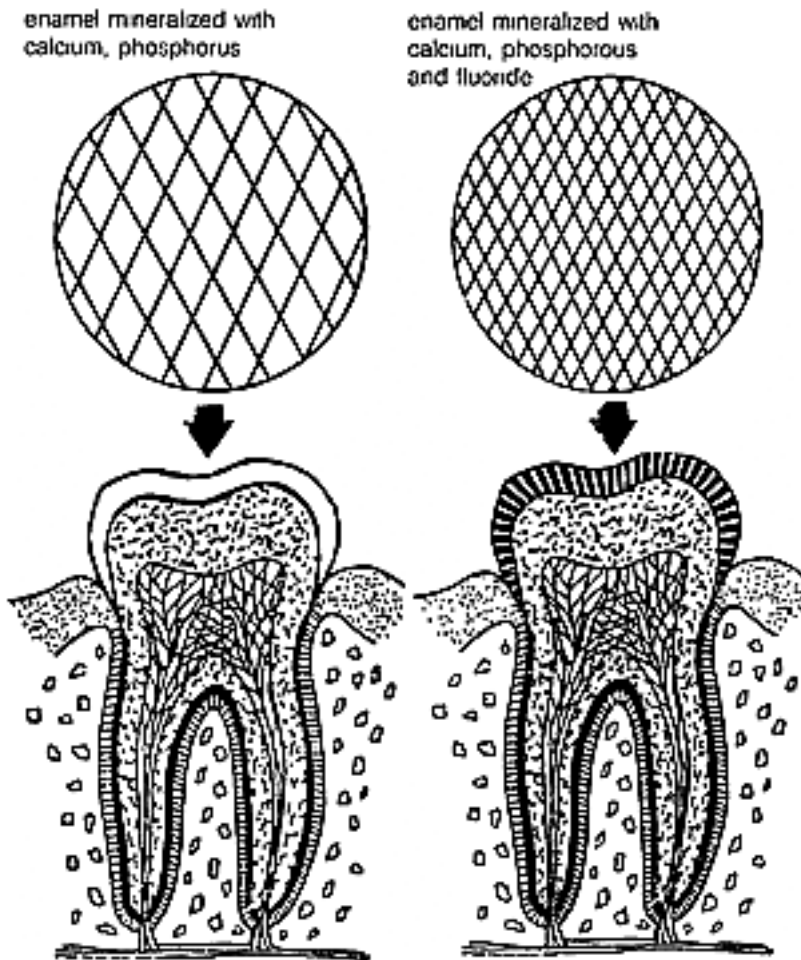
Fluorides in the form of water fluoridation, a good diet with sugar consumption kept to a minimum, especially for between-meal snacks, brushing and flossing thoroughly each day and brushing after meals if possible (fluoride toothpaste) will prevent most dental decay and gum disease. These four preventive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

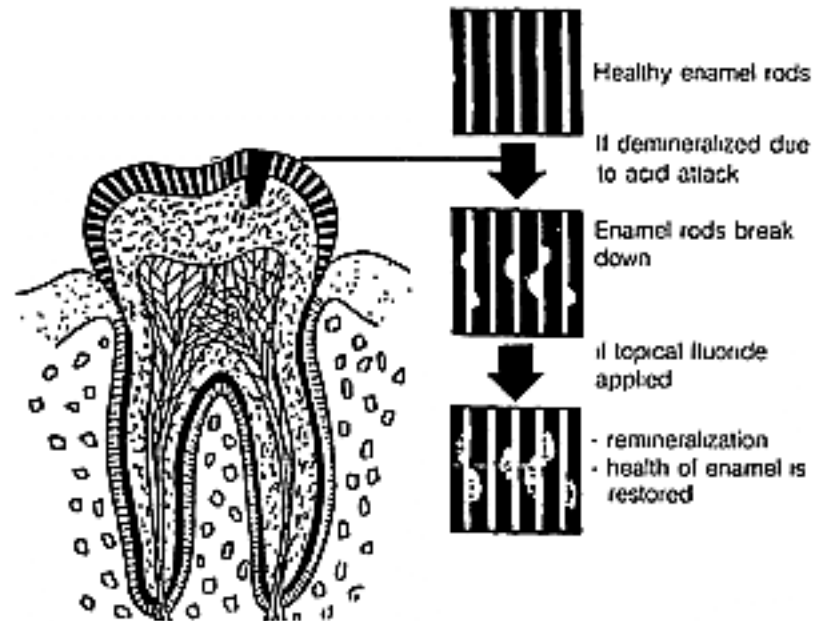
Systemic Fluoride

- 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.

NUTRITION AND DENTAL HEALTH

Foods can be classified as either Go, Caution or Stop foods

Go



Foods both dentally and nutritionally recommended

High in Nutrients, Low in Sugar.

Go foods are high in nutritional value. Whether they are selected as a part of meals and/or as between meal snacks, such foods can contribute significantly to the total daily nutrient needs. Since they are also low in sugar, they do not promote tooth decay.

Sample Foods

| | |
|--|---|
| White milk, (homo, 2%, 1% or skim) | Raw or cooked fruits and vegetables |
| Buttermilk | Unsweetened fruit* and vegetable juice |
| Plain yogurt | Tossed salads and coleslaw |
| Cheese or cottage cheese | Devilled or hard cooked eggs |
| Plain whole grain or enriched breads | Nuts (peanuts, pistachios, almonds, etc.) |
| Melba toast | Seeds (sunflower, pumpkin, sesame) |
| Meat, poultry, fish, eggs, cheese or peanut butter | |
| Hamburgers, pizza | |

* *Unsweetened fruit juices are acceptable, but should not be taken too frequently during the day as they contain natural sugars which can damage teeth just as refined sugars do. Water is good for thirsty people.*

Caution



Foods that are either not recommended dentally or nutritionally

A. Dentally poor foods that have nutritional value

Moderately High in Nutrients, High in Sugar

These popular foods have some nutritional value, but are also high in sugar content. They are less harmful to the teeth if consumed with bigger meals instead of as single snacks. Greatly increased flow of saliva during a main meal will help neutralize the harmful acids that are formed in the mouth from the sugar. Between meals, the flow of saliva is much decreased, hence the natural protection for the teeth is lacking.

Sample Foods

| | | |
|-------------------------|-------------------|--------------------------------|
| Milk puddings | Ice Cream sodas | Unsweetened fruit |
| Milkshakes | Yogurt, sweetened | juices, if taken frequently |
| Chocolate milk or drink | Sherbert | Raisins and other dried fruits |
| Ice Cream | Sweetened fruits | |

B. Foods nutritionally poor but dentally acceptable

Low in Nutrients, Low in Sugar

Although these foods are relatively harmless to the teeth due to low sugar content, they contribute little toward fulfilling body nutrient needs. Since they contain few nutrients in relation to the calories provided, they should be chosen infrequently. Only people on otherwise well-balanced diets can afford to indulge in these occasionally.

Sample Foods

Popcorn, without salt or butter
Sugar-free soft drinks and sugarless gum

Stop



Products nutritionally and dentally unacceptable

Low in Nutrients, High in Sugar

These products are high in sugar and are not acceptable. They are also low in nutrient value and should never be allowed to replace the high-nutrient foods in the diet. Avoid them as much as possible.

Sample Foods

Sweet baked goods
Chocolate bars, candies,
lozenges, regular gum and
breath mints
Honey, jams, jellies, syrup

Beverages containing sugar such
as regular soft drinks, tea and
coffee with added sugar, drink
crystals
Popcorn with salt and butter
Cheesies, potato chips, etc

Read the label. "Sugar" can be spelled many ways - sucrose, glucose, fructose, lactose, molasses, honey, syrup

Source: Eating Properly For Better Dental Health, Canadian Dental Association, 1979

VITAMINS AND MINERALS ESSENTIAL FOR DENTAL HEALTH

Vitamins, minerals and water are not digested by the body as are carbohydrates, fats and proteins. They are released from foods and absorbed by the body's tissues. These nutrients maintain specific body functions. Required for dental health are calcium, phosphorus and fluoride, as well as vitamins A, C, D

| mineral | function | good-excellent sources |
|------------|---|---|
| calcium | <ul style="list-style-type: none"> - maintains bones and teeth - blood clotting - nerve and heart activity | <ul style="list-style-type: none"> - milk products, seaweed (kelp, laver), lambs-quarters, dried, salted codfish, canned salmon with bones, sardines, herring, eggs, broccoli, soft animal bones |
| phosphorus | <ul style="list-style-type: none"> - develops bones and teeth - aids muscle activity - releases energy in metabolism | <ul style="list-style-type: none"> - milk, egg yolk, meat, birds, fish, whole grain cereals, nuts, legumes |
| fluoride | <ul style="list-style-type: none"> - strengthens teeth, bones | <ul style="list-style-type: none"> - fish, fluoridated water, seafoods, tea |

| vitamin | function | good-excellent sources |
|---------|---|--|
| A | <ul style="list-style-type: none"> - maintains healthy teeth, bones, eyes, skin | <ul style="list-style-type: none"> - milk products, egg yolk, green and yellow vegetables, eel, crab, organ meats, caribou stomach contents |
| D | <ul style="list-style-type: none"> - builds and maintains bones and teeth - helps absorb phosphorus | <ul style="list-style-type: none"> - fortified milk, eggs, sun (ultraviolet) light on exposed skin |
| C | <ul style="list-style-type: none"> - keeps teeth firmly in gums - heals wounded tissue - aids in iron absorption | <ul style="list-style-type: none"> - raw fruits and vegetables, vitamized fruit juice, rosehips, dock, lambsquarters, cranberries, black currants, gooseberries, raw oysters, citrus fruits |

LIFESTYLE BEHAVIOURS WHICH PROMOTE ORAL AND DENTAL HEALTH FOR A LIFETIME

DO

- 1 Eat a well balanced diet according to the NWT Food Guide
2. Brush and floss thoroughly at least once a day
3. Rinse the mouth with water when brushing is not possible
- 4 Use disclosing tablets from time to time to ensure all plaque is being removed, and to check for effectiveness of brushing and flossing
- 5 Use a fluoride toothpaste and a brush with soft nylon bristles with rounded ends.
- 6 Drink fluoridated water, or take fluoride drops or pills daily until about age 14
- 7 Visit the dental health worker regularly (usually every 6 months).
- 8 Wear protective equipment when playing sports, or driving ATV's and snowmobiles.
- 9 Wear seat belts in cars and trucks.
10. Go to the dental health worker immediately in the event of any dental or mouth injury

DON'T

1. Eat too many sweet or sticky foods
- 2 Eat sweet or sticky foods too often.
3. Let a baby fall asleep with a bottle (unless it contains only plain water).
- 4 Use sweets as a reward or treat for children
- 5 Use a worn out, frayed toothbrush It does not clean effectively.
- 6 Push others near dental hazards, such as drinking fountains and playground equipment.
- 7 Put harmful objects in the mouth

DENTAL HYGIENE AIDS

There are many products designed to clean the surface of the teeth as well as the area between the teeth and under the gum line. In addition to the toothbrush these include.

Dental floss - unwaxed
- waxed
- flavoured

Dental tape - used to clean spaces between widely spaced teeth

Super floss - a special floss designed to clean under bridgework

Stimudents - an interdental cleaner, similar to a toothpick

Proxabrush - a small brush used to clean between widely spaced teeth

Water pik - an irrigation device which can remove debris from around the teeth and gums

Caution

The following products should be used only after recommendation and instruction by a dental professional: water piks, stimudents, dental tape, super floss, fluoride supplements and rinses, and toothpastes for sensitive teeth

If you are uncertain about any dental product, always ask a dental health professional