HeartSmart Kids™

Educator's Guide

HEART & STROKE™ FOUNDATION

GRADES 4 - 6

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About the cover artist: Todd Baker

Todd Baker was born in North Vancouver, British Columbia, in 1965, the grandson of the great leader and speaker Chief Khot-la-cha (Chief Simon Baker), and has lived most of his life in North Vancouver, where he completed his high school education and a few years of post secondary education. He began drawing for his tribe, The Squamish Nation, at the age of thirteen. In 1983 he had Bill Reid critique his first piece, The Thunderbird, and instead of using his thunderbird design as the new logo for the tribe, he went straight to a limited edition and hasn't looked back. Since then Todd has done numerous pieces for institutions around the country. These include the Love Doves for the Peace Federation of Canada, a variation of the doves for the Teachers Federation of B.C.

Mr. Baker's heart was in fashion, thus driving him to begin school in Los Angeles and New York, in which he won an award, a trip to Paris, for being the most accomplished artist of the school year. He began a new career as a Fashion Designer and worked for the likes of Donna Karan and the Gap.

After studying and working in New York for 9 years and living in Paris and England, Todd finally came home to his family and to carry on a cultural tradition of bringing knowledge to the people through the looking glass of the Native northwest coast graphics and their legends.

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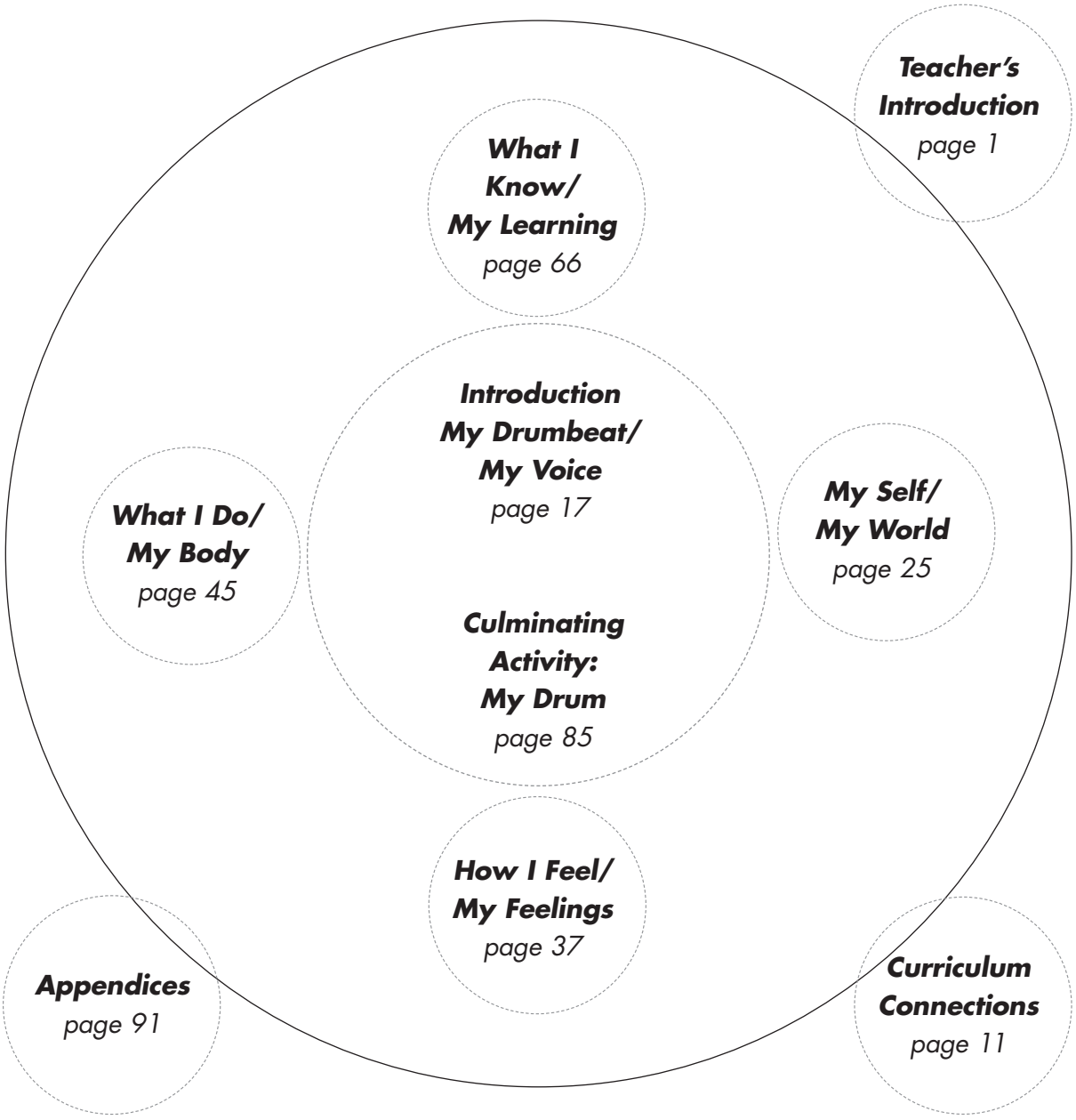
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Teacher's Introduction

Overview of the Resource

Diabetes, stroke and heart disease have become critical issues for Aboriginal people. While the rates of these diseases among the general population are high, the rates among Aboriginal peoples are, in many cases, significantly higher and increasing. But communities and individuals can take practical actions to help young Aboriginal people reduce the incidence of diabetes, stroke and heart disease that they face.

The Heart and Stroke Foundation, with funding from Health Canada and with the advice of Aboriginal leaders and educators and the Canadian Diabetes Association, developed these materials to provide culturally relevant lessons for Aboriginal students.

A holistic approach to health, combined with scientific knowledge, has guided the development of these materials to ensure that they are appropriate for use in B.C. classrooms with Aboriginal students. They lead students through a series of activities that focus on spiritual, emotional, physical and mental aspects of their health. The activities ask students to explore links between their health and their environment and community. They are not linked to any specific First Nation in B.C., but reflect a general approach to Aboriginal philosophy that is described in a later section.

The four-part circle that appears occasionally in this resource symbolizes its holistic approach. Educators who choose to can draw a connection between the four points or segments of a circle that are common to many Aboriginal symbols. Traditionally, these represent the diverse aspects of the world that together make up the whole, as the four points of a western compass make up the whole.

Teacher's Introduction

Content and Organization

The materials are made up of six units organized around the theme of the drum, a symbol of balance and wholeness. Each unit includes several activities for students to do in class, as well as general planning and teaching suggestions. The units are:

Part 1. Introduction: My Drumbeat / My Voice - a general introduction for students to the activities and the theme of the drum.

Part 2. My Self / My World - how students are connected to their environment and their community.

Part 3. How I Feel / My Feelings - some ways that students' emotions affect their health, and how they can express their feelings and maintain good health.

Part 4. What I Do / My Body - how balanced nutrition and active living contribute to physical health, and healthy choices that students can make from the options that are available to them.

Part 5. What I Know / My Learning - facts about diabetes, stroke and heart disease, and strategies to reduce them.

Part 6. Culminating Activity: My Drum - a review of what students have learned, and how their knowledge relates to their lives.

All of the units include **"Home Connections."** In any community, what students learn at home is at least as important as what they learn in class. This may be even more true in Aboriginal communities, where family and community connections are often strong. Each unit includes a reproducible letter informing caregivers about what students are learning and suggesting some ways that caregivers can support their children's learning about healthy living. Many activities also suggest ways to include caregivers in school activities. Involvement of people from students' homes and community will not only reinforce their learning, it will help spread knowledge about good health practices in the community.

Some activities suggest reading a traditional Aboriginal story to start the activity or as a follow up. Suggestions are from the collections of Aboriginal stories listed in Appendix B. However, many other stories would work as well, and teachers can easily substitute stories that are appropriate to their own students and their local culture. Appendix D is a glossary of the key words from the student handouts and activities.

While the units and activities follow a specific theme and flow, they are self-standing and need not follow the suggested organization. Teachers can choose from among them to suit the needs and abilities of their students. However, students will gain most by doing at least some activities from each unit.

Teacher's Introduction

The activities meet several of the Prescribed Learning Outcomes of the B.C. Curriculum for Grades 4 to 6, particularly in Personal Planning, Science and Physical Education. (A complete list of Curriculum Connections is found on page 11-15.) While this resource takes an approach that is particularly appropriate to Aboriginal students, the activities are equally relevant to non-Aboriginal students, whose education could be enriched by exposure to Aboriginal themes.

The activities also follow the guidelines in the B.C. Ministry of Education's publication *Shared Learnings: Integrating B.C. Aboriginal Content K-10* available from the Ministry's publications office or its Internet site. *Shared Learnings* contains many valuable suggestions on integrating materials for Aboriginal students and on involving Aboriginal communities in the classroom.

The Drum, Its Use and Meaning in This Resource

The drum and its circular shape can be a strong symbol for wholeness and health. In many Aboriginal cultures, it represents the voice of the nation and the voice of the ancestors. It is used at times of celebration and learning. It links many Aboriginal people to their families and their friends. Young people, whether Aboriginal or not, enjoy using a drum to express themselves.

For many people, the drum also has a deeper significance:

- It can be used to communicate who the drummer is, the drummer's philosophy (wisdom) and the source of his or her internal strength (heart). No two drums ever sound alike. (See the story, Making a Drum, on the next page.)
- A drum has to have a purpose (which could be decorative or ceremonial). It has to be made with care and with good thoughts. It has a spirit. It demands commitment because making a drum is hard work and maintaining it takes care.
- A drum must be kept in balance. If it is stretched too much, it can break. If it is not stretched enough, it will not sound at all. If the face of the drum is stretched too much on one side or another, it will not play properly and it will sound wrong.
- It is important to take care of a drum, massage it and warm it up before drumming, protect it and keep it in good hands.

These principles reflect a way of living a healthful life, a life of good thoughts and balance. Care of the drum teaches how an individual should look after himself or herself. And like the drummer's own body, the drum will sound good and work right only if the drummer takes care of it.

The lessons in these materials relate to and flow out of the symbol of the drum.

Teacher's Introduction

NOTE: A shorter version of this story for students is included in Handout 1.1.

Marjean Brown is a teacher in Burnaby and a member of the Nisga'a nation.

MAKING A DRUM

By Marjean Brown

Making a hand drum requires a lot of time, energy and focus.

This hadn't occurred to me until I was right in the middle of making my first drum. I remember our teacher telling us not to touch the material or start working until our thoughts were good and pure. We tried to think of things that made us feel happy or something that was positive. This was the kind of energy our teacher encouraged us to put into the drum we were about to make. I thought about my work with children and how much I enjoyed what I was doing. It wasn't hard for me to concentrate on this as I worked because it was all right in front of me.

The drum-making took all day and we had to wait for a few hours while the hide soaked in water. During that time we made our drumstick. We also talked about who we were going to give our first drum to because that is another tradition when making your first drum. You must give it away to someone you know will honour it as much as you would.

While stretching the drum over the wooden frame, we had to work in partners. We needed to help each other using sinew to secure the hide tightly onto the frame. If we both committed ourselves to this work and both had good thoughts, we were told that our drum would have a good sound.

The sound of the drum is what many of our people say is the heartbeat of our nations. Our drums are our voices and they remind us that we are alive and well. But in order for us to maintain this sound we must also know how to take care of our drum. It is important to rub the face of your drum to warm it up before using it so that it will produce a better sound.

Our teacher also told us that we would hear the expanding and contracting sounds that the drum makes when it is not in use. This is the drum's spirit speaking to us. We were told not to ignore it because a drum is a living thing and it also needs attention and respect. Our teacher emphasized that we must never touch anyone else's drum without their permission. Nor should we let anyone who we know will not be respectful touch our drum. It is our duty to teach people about the drum and how to take care of it and respect it.

The drum is a very personal reflection, so our teacher advised us to think carefully about what we were going to paint on it. It must be something meaningful to us or the person we are giving it to.

So, as you can see, making a drum is not a simple task but a process of personal growth and reflection.

Teacher's Introduction

Sensitivity

Food, body image, family histories of illness and similar subjects may be highly sensitive to students and their families. Diabetes, stroke and heart disease are widespread in Aboriginal communities, and students may have family members who are sick or have died from them.

You may wish to consult with a school nurse or counselor about getting support when raising these issues. The following guidelines will help deal with the topic in a sensitive way:

- Use positive language that stresses options open to students and their families.
- Invite students to discuss any personal concerns they have after class.
- Allow students to avoid discussing their family histories if they choose.
- Avoid language that blames people for their illnesses, poor eating habits or low levels of physical activity.
- Avoid implying that previous generations of Aboriginal people chose activities that have resulted in the current levels of diabetes, stroke and heart disease.
- Allow students to work in small groups whenever possible.
- Ensure that all students are respectful of each other.

Assessment

The activities that follow provide a variety of alternatives for assessing students' learning. Most include several opportunities to monitor students' learning in classroom, group or individual settings. Many also include specific suggestions for collecting evidence on the understanding of individual students in the form of written or graphic materials, or on audio-tapes, computer files and other formats. These are summarized in each unit under the title Evidence for Assessment. Additional suggestions for assessment of Aboriginal students are available in *Shared Learnings*.

DIABETES, STROKE AND HEART DISEASE

1. OVERVIEW OF DIABETES AND HEART HEALTH INFORMATION FOR TEACHERS

Diabetes

Diabetes, or diabetes mellitus, is a disease that causes the body to lose its usual controls over **blood sugar** (glucose). Blood sugar levels are normally regulated by **insulin**, a hormone produced in the **pancreas**. Insulin works in several ways: It helps blood sugar to enter the body's cells; it moderates the breakdown of the body's reserves of carbohydrates, proteins and fats into blood sugars; and it inhibits glucose production in the liver. By controlling these processes, insulin keeps the body from becoming overloaded with breakdown products or glucose.

Normally, the production of insulin increases when blood sugar levels rise – after meals, for instance. When insulin cannot do its work, short- and long-term problems occur, including an increased risk of infections, dehydration and coma. Prolonged periods of high blood sugar in the body lead to complications that affect the large blood vessels (macrovascular) or the small blood vessels (microvascular). Heart attacks and strokes are examples of large-vessel complications, while small-vessel complications include blindness and kidney disease. Severe complications can lead to death.

Evidence suggests that careful, early control of blood sugar levels can significantly reduce the risk of complications.

There are two common forms of diabetes:

- **Type 1, or insulin-dependent diabetes, sometimes called juvenile diabetes.** About 10 per cent of cases are of this type, which is generally diagnosed before the age of 30. In this form, a reaction in the body prevents the pancreas from producing insulin, either partially or completely. People with Type 1 diabetes must monitor blood sugar levels closely, and usually have to take insulin injections. People are at greater risk for Type 1 diabetes if they come from a Caucasian group or if someone in their immediate family has Type 1 diabetes.
- **Type 2, or non-insulin-dependent diabetes, sometimes called adult-onset diabetes.** In this form of diabetes, the pancreas does not produce enough insulin, or the cells of the body become unable to respond to it normally. About 90 per cent of cases are Type 2, which is usually diagnosed after the age of 45, but is becoming more common among younger people, especially those of Aboriginal families. Physical activity and nutrition control in youth appear to delay or prevent this type of diabetes. There are many risk factors that increase the likelihood of getting Type 2 diabetes, including:

- obesity
- age
- high blood pressure
- family history
- apple-shaped figure
- sedentary lifestyle
- high cholesterol levels
- ancestry of Aboriginal, African, Latin American or Asian origin

- **Other forms of diabetes**, such as gestational diabetes, which occurs during pregnancy, are less common.

No cure is yet available for diabetes, but it can be managed and the risk of complications can be reduced. Education is a critical element in management, not just for those affected by the disease but also for their families. Management also includes:

- meal planning;
- physical activity;
- achieving or maintaining a healthy weight (especially important for people with Type 2 diabetes);
- medication (Type 1 requires daily insulin, whereas Type 2 may rely on oral medications and/or insulin, or it may be managed by regular physical activity and careful nutrition);
- lifestyle management (with special attention to stress control); and
- blood-sugar monitoring.

Regular monitoring and medical treatment are essential. Diabetes can affect many different body organs, so ongoing care by a variety of specialists may be needed.

For more detailed information, refer to the Internet sites for Health Canada (www.hc-sc.gc.ca/fniah-spnia/index-eng.php), the Canadian Diabetes Association (www.diabetes.ca) or the National Aboriginal Diabetes Association (www.nada.ca).

Heart disease and stroke

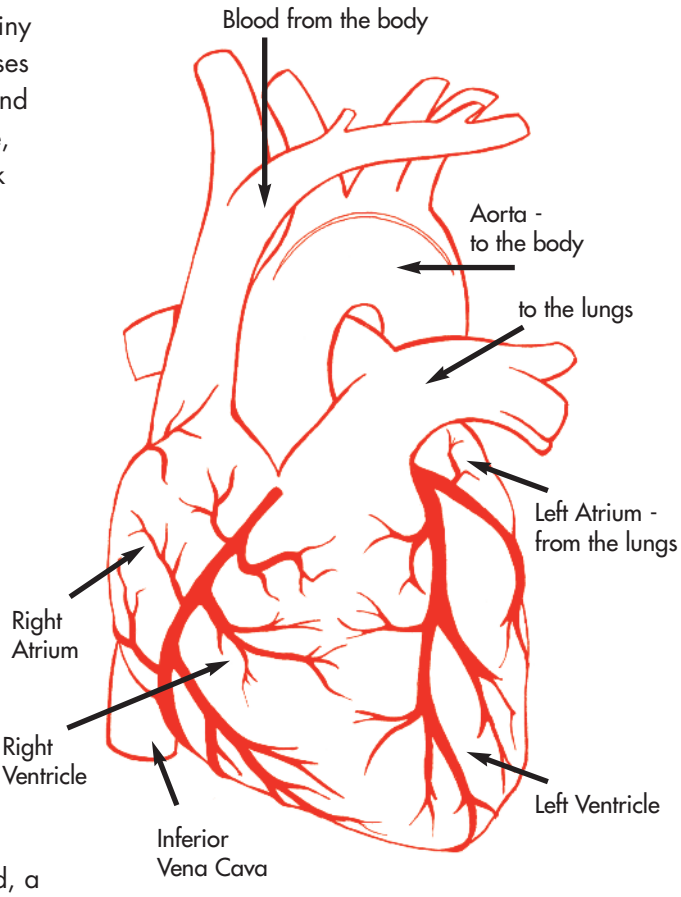
The cardiovascular system delivers oxygen and energy to every part of the body to keep them alive and healthy. At the same time it collects waste products for elimination. The pumping of the heart drives the system. If it weakens or stops, the body quickly stops working.

Most school district resource or instructional centres have a model of a heart available for classroom use.

The heart is a hollow two-part pump of muscle that works by tightening and relaxing. A wall divides it down the middle. On its right side, the atrium receives blood returning from the body and passes it to the right ventricle, which pumps it to the lungs where it exchanges carbon dioxide from the cells for fresh oxygen. It circulates back to the left atrium and the left ventricle, which pumps it out through the great artery, the aorta. Since the powerful pumping of the ventricle is on the left side of the chest, it sounds like the heart is on the left, but in fact it is in the centre. The thumping sound is caused by the valves of the heart snapping shut to prevent blood from flowing backward.

The oxygenated blood travels through arteries through the body. The arteries divide into

smaller and smaller tubes, until they form tiny capillaries, which are fine enough that gases and nutrients can pass through the walls and into the cells. As the exchange takes place, the red oxygenated blood becomes a dark bluish purple. It returns through veins back to the atrium of the heart to begin circulating again. The entire trip takes about 26 seconds.



If any part of the circulatory system becomes blocked or damaged, the cells that were receiving oxygen and nourishment from the blocked vessels can die. (This is one of the complications of diabetes.) If one of the arteries that brings blood to the heart tissue becomes blocked, the tissue of the heart can become damaged. The result may be a weakening of the heart, or the heart may stop beating. This is known as a **heart attack**. If one of the arteries that brings blood to the brain becomes blocked, a part of the brain may die. This is known as a **stroke**.

A number of diseases may cause weakening or damage to the heart, but the most common cause of damage is a build-up of fatty deposits in the blood vessels. These deposits make it more difficult to pump blood through and may block a blood vessel completely. People are more at risk for heart disease if they have one or more of the following conditions:

Conditions people can control

- high blood pressure or cholesterol
- lack of exercise
- being overweight
- stress
- a diet high in fat
- drinking too much alcohol
- exposure to tobacco smoke
- diabetes

Conditions people cannot control

- age
- gender
- race
- heart disease in the immediate family

Some of these factors, such as high blood pressure, usually show up only in adults. Except for genetic factors, people can maintain good heart health by active living, a balanced varied diet that is low in fat and salt, and smoke-free living.

For more detailed information, refer to the Internet sites for Health Canada or the Heart and Stroke Foundation of Canada (www.heartandstroke.ca).

2. PREVALENCE IN ABORIGINAL COMMUNITIES

Diabetes, stroke and heart disease occur as much as two to three times more frequently in many Aboriginal populations than in the general Canadian population. (The numbers vary with specific diseases, and with specific Aboriginal groups.) However, as recently as the 1950s, diabetes was almost unknown in Aboriginal populations, and stroke and heart disease had lower prevalence rates than they did in the general population. The rates for these diseases among Aboriginal populations is continuing to rise, even among groups such as the Inuit who previously did not show high levels.

While this increase reflects a trend that exists in non-Aboriginal populations as well, it is more extreme among Aboriginal peoples.

Although no direct cause of the increase is known, it is almost certainly related to changes in lifestyle. Contemporary Aboriginal people live a more sedentary life than they did a few decades ago and often eat foods that are higher in fat, salt and carbohydrates than traditional foods were. Some observers speculate that Aboriginal peoples historically adapted to high-protein, low-carbohydrate diets, or to alternating seasons of high consumption and fat production followed by low consumption and fat reduction.

These patterns of consumption would be very different from the continuously available high-fat, high-carbohydrate foods of contemporary society. They could result in high levels of obesity, which is a risk factor for diabetes, stroke and heart disease. However, by adopting the recommended guidelines for healthy eating and physical activity, Aboriginal people can make deliberate, positive changes in their physical health.

For more information on health in Aboriginal communities, refer to the Canadian Health Network Internet site on Aboriginal peoples.

3. REDUCING RISK FOR DIABETES, STROKE AND HEART DISEASE

Some of the conditions that create a risk for diabetes, stroke and heart disease are genetic and can be controlled only by medical procedures. Most, however, are related to factors that people can control themselves: nutrition, physical activity, tobacco and substance abuse, and blood pressure.

Teacher's Introduction

Blood pressure mainly affects adults and can usually be controlled with lifestyle modification and, if necessary, medication. Body weight above the recommended maximum is a significant risk, and in most people it can be controlled by healthy nutrition and physical activity. The risk for diabetes can be controlled with the strategies that reduce risk for heart disease and stroke.

Risk factors that can be influenced by behavioral changes are summarized in three guidelines:

- **Eat a variety of healthy foods**. This means eating foods from each of the four food groups: Grain Products; Vegetables and Fruit; Milk and Alternatives; and Meat and Alternatives. Canada's Food Guide to Healthy Eating summarizes these groups in a four-colour rainbow, including serving suggestions. The key idea for students is to choose a variety of foods when they have the option and to choose grain products and vegetables and fruits more often than milk and alternatives or meats and alternatives. Other types of foods, including fat and salty foods, are considered extras, to be enjoyed occasionally. Encourage your students to eat healthy foods first, and the extra foods after. Most families can make culturally appropriate choices within their budget even in smaller communities.

- **Live an active life**. The heart is a muscle and, like other muscles, needs regular work to stay strong. Active games such as tag, hiking, cycling or jumping rope can provide sufficient exercise for the heart. Most students will form good habits if they enjoy these activities. They do not need to set aside time for a workout if they get enough active play in their lives. Active play also helps regulate the amount of blood sugar in the body, thus reducing the risk for diabetes.

- **Avoid cigarette smoke and other harmful substances**. Tobacco smoke damages the lungs, and it also has serious effects on other organs, including the heart and circulatory system and the pancreas. These effects are particularly magnified in young children. Young people don't need to be told to avoid smoke, they do it instinctively. But they are exposed to tobacco smoke from friends and family, and before their teens many feel pressured to try a cigarette. The best defense against these pressures is the knowledge and ability to say, "Please don't smoke around me," or "No thanks, I don't like to smoke." Although most students may try smoking, they will quit sooner and more easily if they learn how to say "No" before they start. While smoke has a special cultural significance in many Aboriginal cultures, it is not inhaled on ceremonial occasions. Young Aboriginal people recognize the difference between recreational and ceremonial use of tobacco and can avoid cigarettes without giving offense.

Curriculum Connections

Curriculum connections matrix

IRP PRESCRIBED LEARNING OUTCOMES

PERSONAL PLANNING - GRADE 4	UNIT#					
PLANNING PROCESS	**1**	**2**	**3**	**4**	**5**	**6**
use a goal-setting process to set short-term, long-term and group goals	•	•	•	•	•	
explain how various factors influence personal and group goal achievement		•				
relate the support services available in the school and community to personal needs		•				
HEALTHY LIVING						
identify factors that promote health	•	•	•	•	•	•
classify foods into groups, including the food groups identified in Canada's Food Guide to Healthy Eating	•					
describe the influence of the media and the community on their attitudes and values regarding healthy living		•			•	
identify health-related services and resources that can contribute to healthy living		•				
MENTAL WELL-BEING						
explore appropriate strategies for sharing and expressing feelings	•	•	•			
identify positive ways to initiate, maintain, and end friendships		•				
demonstrate an awareness of factors that influence self-esteem		•	•			
demonstrate responsibility for their choices		•				
FAMILY LIFE EDUCATION						
identify how their own responsibilities in the family may change		•				
demonstrate thoughtful, caring behaviors to enhance personal relationships		•	•			
SUBSTANCE ABUSE PREVENTION						
identify possible effects of inappropriate use of substances			•			
identify strategies for preventing or avoiding substance abuse		•	•		•	
SAFETY AND INJURY PREVENTION						
explain reasons for school and community safety rules		•				

Curriculum Connections

IRP PRESCRIBED LEARNING OUTCOMES

PERSONAL PLANNING - GRADE 5	**UNIT#**					
PLANNING PROCESS	**1**	**2**	**3**	**4**	**5**	**6**
set personal goals	•	•	•	•	•	
explain the concept of a personal support network		•	•		•	
HEALTHY LIVING						
give examples of how people can achieve balance in their lives	•		•	•	•	•
identify factors that influence their attitudes regarding healthy living	•	•	•	•		•
describe Canadian health issues			•	•	•	
MENTAL WELL-BEING						
use appropriate strategies to share and express feelings		•	•			
describe the dynamics of individual and group friendships		•				
propose ways to be self-reliant		•				
SUBSTANCE ABUSE PREVENTION						
describe the possible effects of substance abuse on individuals and families		•	•			
identify factors that contribute to use, misuse, and abuse of substances		•	•			
identify sources of support and information related to substance abuse prevention		•				

Curriculum Connections

IRP PRESCRIBED LEARNING OUTCOMES

PERSONAL PLANNING - GRADE 6	**UNIT#**					
PLANNING PROCESS	**1**	**2**	**3**	**4**	**5**	**6**
analyse the factors that could influence personal goals		•				
outline their progress in meeting short- and long-term goals	•	•	•	•	•	
analyse how personal support networks contribute to achievement of personal, educational and career plans		•				
predict possible problems associated with particular situations or courses of action		•	•			
HEALTHY LIVING						
explain the benefits of good nutrition and exercise as part of a balanced life	•			•	•	•
demonstrate an awareness of cultural influences on attitudes toward healthy living	•	•	•	•	•	•
MENTAL WELL-BEING						
refine their strategies for sharing and expressing their feelings		•	•			
encourage others to contribute to a safe school and community					•	•
demonstrate interpersonal skills for maintaining positive relationships		•				
describe their individuality within a social group		•				
FAMILY LIFE EDUCATION						
access and evaluate sources of information related to their physical, emotional and social development			•			•
SUBSTANCE ABUSE PREVENTION						
use problem-solving strategies and assertiveness skills to prevent substance abuse in various settings and relationships		•	•		•	

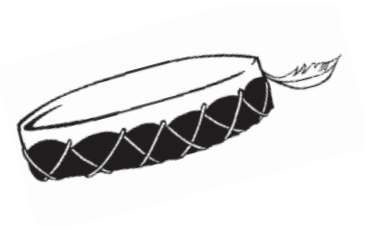
Curriculum Connections

INTERMEDIATE IRP PRESCRIBED LEARNING OUTCOMES MAJOR HEADINGS	UNIT #					
	1	2	3	4	5	6
ENGLISH LANGUAGE ARTS - GRADE 4						
Comprehend & Respond (Strategies & Skills)	•	•	•	•	•	•
Comprehend & Respond (Comprehension)	•	•	•	•	•	•
Communicate Ideas & Information (Knowledge of Language)	•	•	•	•	•	•
Communicate Ideas & Information (Composing & Creating)	•	•	•	•	•	•
Communicate Ideas & Information (Presenting and Valuing)	•	•	•	•	•	•
Self & Society (Personal Awareness)	•	•	•	•	•	•
Self & Society (Working Together)					•	
Self & Society (Building Community)	•	•	•	•	•	•
SOCIAL STUDIES - GRADE 4						
Society and Culture		•		•	•	•
Economy and Technology		•				
SCIENCE - GRADE 4						
Applications of Science		•		•		
Life Science	•				•	
PHYSICAL EDUCATION - GRADE 4						
Active Living				•		
Movement (Dance)	•			•		
Movement (Games)			•			
HOME ECONOMICS - GRADE 4						
Needs and Wants in Families				•		
MATH - GRADE 4						
Patterns and Relations (Patterns)				•		
Shape and Space (Measurement)				•		
Statistics and Probability (Data Analysis)				•	•	

Curriculum Connections

INTERMEDIATE IRP PRESCRIBED LEARNING OUTCOMES MAJOR HEADINGS	UNIT #					
	1	2	3	4	5	6
ENGLISH LANGUAGE ARTS - GRADE 5						
Comprehend & Respond (Strategies & Skills)	•	•	•	•	•	•
Comprehend & Respond (Comprehension)	•	•	•	•	•	•
Communicate Ideas & Information (Knowledge of Language)	•	•	•	•	•	•
Communicate Ideas & Information (Composing & Creating)	•	•	•	•	•	•
Communicate Ideas & Information (Presenting and Valuing)	•	•	•	•	•	•
Self & Society (Personal Awareness)	•	•	•	•	•	•
Self & Society (Working Together)					•	
Self & Society (Building Community)	•	•	•	•	•	•
PHYSICAL EDUCATION - GRADE 5						
Active Living				•		
Movement (Dance)	•			•		
Movement (Games)				•		
MATH - GRADE 5						
Patterns and Relations (Patterns)				•		
Shape and Space (Measurement)				•		
Statistics and Probability (Data Analysis)					•	
HOME ECONOMICS - GRADE 5						
Living in Families				•		
ENGLISH LANGUAGE ARTS - GRADE 6						
Comprehend & Respond (Comprehension)	•	•	•	•	•	•
Communicate Ideas & Information (Knowledge of Language)	•	•	•	•	•	•
Communicate Ideas & Information (Composing & Creating)		•	•	•	•	•
Communicate Ideas & Information (Presenting and Valuing)	•	•	•	•	•	•
Self & Society (Personal Awareness)	•	•	•	•	•	•
Self & Society (Working Together)					•	
Self & Society (Building Community)	•	•	•	•	•	•
SCIENCE - GRADE 6						
Applications of Science			•		•	
PHYSICAL EDUCATION - GRADE 6						
Active Living				•	•	
Movement (Dance)				•		
Movement (Games)				•		
MATH - GRADE 6						
Patterns and Relations (Patterns)				•		

Part 1. Introduction: My Drumbeat / My Voice



Overview

The class reviews what students know about drums and prepares for activities to learn more about diabetes, stroke and heart health.

The Big Idea

By using the drum as a symbol of health, students will be able to relate key health concepts to their own lives and cultures. This unit allows students to explore their initial knowledge about drums in various cultures.

Curriculum Areas

Personal Planning, English Language Arts, Social Studies, Science, Physical Education

Outcomes

Following this activity, students will be able to:

- State what they know and want to learn about drums
- State three key health messages

Key Words

diabetes, drum, drumbeat, heart, heart health, heartbeat, instrument, percussion, sinew, stroke

1 Introduction

Materials:
• chart paper and markers
• a drum

Time required:
one lesson

Level of difficulty:
simple

Suggested Approach

Choose activities from these suggestions that are appropriate for your class.

1. KNOW-WONDER-LEARN

a) **Preparation**: Before the class, have students question their parents or others in the community on the use of drums in their cultures. If necessary, prepare a class web to suggest questions that students could discuss. Suitable questions could include:
- Does any one in the family (or other friends in the community) use drums?
- What kinds of drums?
- What do the drums look and sound like?
- How are the drums played?
- When are the drums used?
- Where did the drums come from?
- What other instruments or objects are drums used with?

Invite students to bring a drum from home to demonstrate for the class.

OPTION: Invite a community member to join the class to tell or read a story about a drum. Involve the visitor in the questions and making the web.

b) Have students form a circle or semi-circle and place a drum in the centre of the circle. Invite students to describe a time when they played a drum and what kind of drum it was. Ask if anyone wants to demonstrate how they played a drum using their own drum or the one in the circle. Ask if anyone danced to a drumbeat before and can demonstrate to the others.

c) Ask students to tell the class what they learned about drums from questioning their families, and from their own knowledge. Write their responses on chart paper. If necessary, prompt them with questions such as the following:
- What are the main parts of a drum?
- How do drums look?
- What different sounds can drums make?
- What different types of drums are there?

d) Ask students what questions they still have about drums and write their questions on a separate piece of chart paper.

e) Post the charts under the headings "What We Know" and "What We Wonder." Explain that the activities that follow will focus on drums and how they can help people stay healthy. Refer to the charts as the activities progress to confirm what students know or to answer their questions.

2. DRUM STORY

a) Give students a copy of Handout 1.1, "Making a drum," and have them read it in groups or as a class.

b) Ask students to summarize the main points in the story. E.g.:
- Making a drum is a serious activity that requires positive energy.
- There are many traditions associated with making a drum.
- The drum can be the voice of a nation and of a person.
- A person's drum reflects who he or she is and how he or she feels.

c) Ask students to act out or describe some real or imaginative ways that drums can help people stay healthy. If necessary, prompt them with questions such as the following:
- How could a drum help someone who was lost in the forest? (E.g.: By beating on it, a person could call for help or drum out a message.)
- How could a drum help someone be active? (E.g.: By beating a rhythm to dance to.)
- How could the shape of a drum help someone think about good health? (E.g.: A drum is a balanced circle, and good health is also a balance of personal, emotional, physical and mental factors.)

d) Explain that the activities that follow will use drums to deliver three important messages about being healthy. Write the following messages on the chalkboard or chart paper:
- Eat a variety of healthy foods.
- Live an active life.
- Avoid cigarette smoke and other harmful substances.

e) Have students work in groups to write, draw, act out or audiotape a story in which a drum gives an important message about health.
   i) Give each group at least one piece of health information to include in their story. (E.g.: The drum is like a heartbeat. Our bodies need a variety of healthy foods. Being active keeps us healthy. Sometimes people misuse harmful substances like tobacco. The heart pumps blood and the pancreas helps us digest sugar. Etc.)
   ii) Have each group present its story to the class in a dramatic and entertaining way. If feasible, have students invite family members or others from the community to attend the presentations.
   iii) After each presentation, have the class identify any health information from the story, and how the drum gave the message. If necessary, prompt them with questions such as the following:
- What message did the story contain?
- How does the message help people live a healthy life?
- In the story, how did the drum give the message?
- How can we use the message in our own lives to live a healthy life?

Materials:
- copies of Handout 1.1, "Making a drum," for each student

Time required:
two or three lessons

Level of difficulty:
moderate

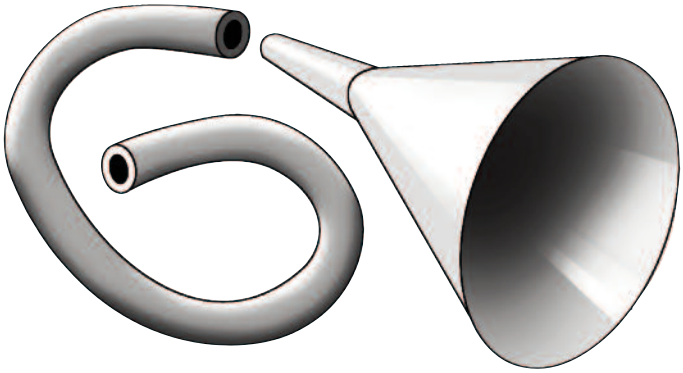
Materials:
- a drum
- OPTIONAL: stethoscope

Time required:
one lesson

Level of difficulty:
simple

3. DRUMBEAT/HEARTBEAT

a) If students have a stethoscope available, have them work in pairs to listen to their own heartbeats.
OPTION: Use the instructions in the Student Activity Book to make a stethoscope.



b) Ask students to describe what a heartbeat sounds like, and in what ways it is like a drumbeat.

c) Invite students to chant their names or other words in time to a heartbeat.
E.g.: Ro - bert, Girl - friends.

d) Invite students to play a drum using the same rhythm as a heartbeat. Have them vary the rhythm to show what the heart sounds like when a person is very active, excited or sleepy.

e) Ask students how the heart sends messages in its beating. E.g.:
- When it beats very fast, it means that it is working hard or it is excited.
- When it beats slowly, it means that it is relaxed and calm.
- Sometimes it beats in irregular patterns which a doctor can read to find out if a person is well or sick.

Closing the Circle

- Have students review the charts that the class created in Activity 1, and add to it any new information or ideas they learned. Have them make a portfolio for the Drum and Health activities and save their materials in the portfolio.
- Give students a copy of Handout A, "Drum Face" (see Appendices), or have them draw a circle to represent the blank face of a drum. Have them draw a design for the face of a drum that illustrates their ideas of what healthy living means. Have them save their design, along with any notes or other materials from the lesson, in their portfolio.
- Have students discuss their design with their families and invite students' families to add to their portfolio any images or stories about healthy living in the family's history.
- Have students use Handout C, "Goal-setting" (see Appendices), to set a personal goal related to healthy living and monitor its achievement over a period of time.

Extension and Integration

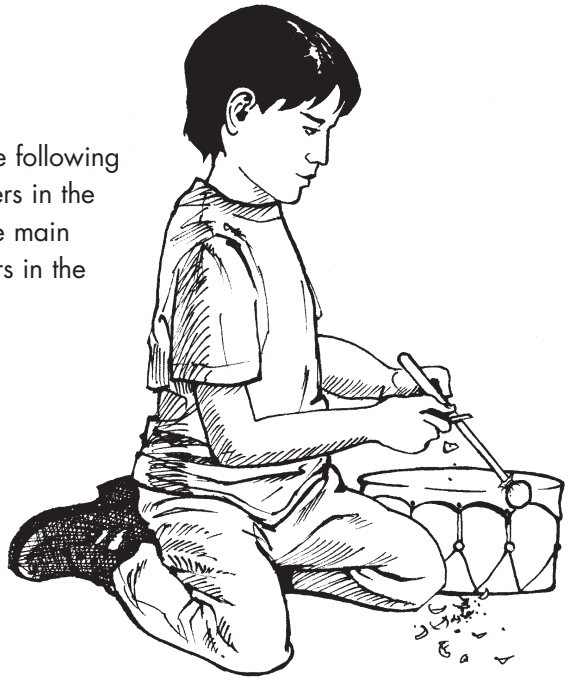
- Invite students, their family members, a music specialist or people from the community to bring in drums from a variety of cultures, show and play them, and discuss how and when they are used, what role they play in the culture, etc.

Evidence for Assessment

- Review the students' drum stories to ensure they can represent a way in which a drum can give a message.
- Monitor the class discussion to ensure that students can identify and state the three basic health messages.

Home Connections

- Have students take home the letter on the following page and read it to their families or others in the community. Ask them to explain the three main health messages to their families or others in the community.



Dear Parents, Guardians and Family,

Our class has started learning about diabetes, stroke and heart health. We will be using drums to learn about living a healthy life.

Since health involves home as well as school, you can help your child's health and learning by doing these activities with your child:

- Ask your child to tell you three important health messages. The three we learned in school are:
  1. Eat a variety of healthy foods.
  2. Live an active life.
- Ask your child to read the story called Making a Drum.
- Share some ideas, stories, wishes or memories about drums with your child.

Your child is collecting information about drums and health in a portfolio at school. If you would like to add family stories or pictures to your child's portfolio, we would be honoured to include them.

Your notes about your child's learning:

HANDOUT 1.1

MAKING A DRUM

By Marjean Brown
Marjean Brown is a teacher in Burnaby and a member of the Nisga'a nation.

Making a hand drum takes a lot of time and energy. I discovered this when I made my first drum.

"Do not start working until your thoughts are good and pure," our teacher said. We tried to think of things that made us feel happy or positive. I thought about teaching children because it is what I like to do.

The drum-making took all day. We soaked the hide in water. While it soaked we made our drumstick. We also talked about who we were going to give our first drum to. That is our tradition. You must give your first drum to someone who will honour it.

We had to work in partners to stretch the drum over a round wooden frame. We helped each other use sinew to tie the hide tightly onto the frame. Our teacher said that our drum would have a good sound if we worked hard and had good thoughts.

Our people say that this sound is the heartbeat of our nations. Our drums are our voices. They remind us that we are alive and well. To keep a good sound, we must take care of our drum. We rub the face of the drum to warm it up before using it so that it will make a better sound.

Our teacher said that we must never touch anyone else's drum without their permission. Nor should we let anyone touch our drum if we know that they will not respect it. We must teach people about the drum and how to take care of it and respect it.

We had to think carefully about what we were going to paint on the drum. Our teacher said it must be something important to us or the person we were giving it to.

So, as you can see, making a drum is not a simple task. When you make a drum, you must think about yourself and others in your community.

Part 2. My Self / My World

Overview

The class explores the characteristics of their favourite animals and how they can stay healthy by focusing on the healthy qualities of certain animals. They identify people and places in the community that can help them stay healthy, and discuss how some principles of Aboriginal philosophy can help resolve contemporary issues.

The Big Idea

The health of an individual is affected by how the person sees him or herself, and his or her connections with the world. This unit allows students to explore their personal connections with the community and the natural world, and how that connectedness helps them stay healthy.

Curriculum Areas

Personal Planning, English Language Arts, Social Studies.

Outcomes

Following this activity, students will be able to:

- List some things they like about their favourite animals;
- List some positive qualities of certain animals, and describe how those qualities could help them live a healthy life;
- Describe ways that they are connected to their communities and the environment, and identify people and places in the community that can help them live a healthy life;
- Describe some principles of Aboriginal philosophy, and discuss how they can help resolve contemporary issues.

Key Words

Aboriginal, agility, animal, calmness, communication, community, companionship, connected, connection, cooperation, determination, environment, favourite, healing, imagination, knowledge, philosophy, physical, principle, qualities, self-esteem, shelter, spiritual, stone, symbol, teachings, thoughtfulness, traditional, vision

Materials:
- copies of Handout 2.1, "My favorite Animal," for each student
- writing supplies
- a drum

Time required:
one lesson

Level of difficulty:
simple

Suggested Approach

Choose activities from these suggestions that are appropriate for your class.

1. FAVOURITE ANIMALS

a) Have the class name a variety of animals from the local environment and list them on the chalkboard. Have students describe some physical and non-physical characteristics of each animal. E.g.:
   - A housecat is small, furry, sleepy, fast-moving, etc.
   - A frog is green, slippery, a good swimmer, a good singer, etc.

b) Have students work in pairs to choose their favourite animal from the list or an animal that they feel the closest connections to. Give students copies of Handout 2.1, "My Favourite Animal," and have them list three things they like about the animal they chose, three ways it is like them and three ways it is not like them.

2. ANIMAL QUALITIES

a) **Preparation**. Have each student bring at least one clean flat small stone to class. Or take students to the playground and have them select a small smooth stone, wash it in a sink and bring it to class.

b) Give students a copy of Handout 2.2, "Animal Qualities", and have students brainstorm ways that the qualities listed help the animal live a healthy life. Have students refer to the animals they listed in Activity 1, "Favourite Animals," and add some animals from the list to Handout 2.2. Invite students to add animals from traditional or modern stories that they know.

c) OPTION: Have students make cards to match the animals with their characteristics and use the cards in matching games.

d) Have each student draw on a stone an image or symbol representing one of the animals. Ensure that the class makes at least one stone for every animal listed.

e) Have students choose one of the stones, hold it for a period of time (e.g., an hour, a day), and think about ways that the animals' qualities could help them.

f) At the end of the time, have students share in small groups ways that they could make their health or other aspects of their life better by imitating the animal's qualities. (E.g.: Students who held the eagle stone might breathe clean air by avoiding cigarettes.) Have students write, draw or record a journal entry describing how the animal can help them live a healthy life.

g) If feasible, repeat steps e) and f) on subsequent days so that students can hold a variety of stones. After holding several stones, have students list the three animals that are most important to them.

Materials:

- copies of Handout 2.2, "Animal Qualities," for each student
- coloured felt pens
- a small flat stone for each student to draw on
- journal-writing or similar supplies

Time required:
one lesson, plus later follow-up times

Level of difficulty:
simple to moderate

Materials:
- chalk and chalkboard
- writing supplies, art supplies or similar materials as required

Time required:
one lesson, plus time for writing, art, etc.

Level of difficulty:
simple to moderate

3. ANIMAL CONNECTIONS

a) Lead a class discussion to create a web on the chalkboard showing how animals are connected to their environment. If necessary, prompt students with questions such as the following:
- What are some animals that live in our local environment? (E.g.: birds, mice, dogs, deer, etc.)
- How do the animals find food in the environment? (E.g.: some eat local plants, some eat other animals, some eat foods left by people, etc.)
- How do the animals find shelter in the environment? (E.g.: some live in caves, some build nests in trees, some live in holes made by other animals, some live in boxes left by people, etc.)
- How do animals help other animals to live? (E.g.: some become food for others, some make paths in the forest that others can use, people make homes for some animals, etc.)

b) Lead students in a discussion to create a second web showing how students are connected to their families, community and environment. If necessary, prompt them with questions such as the following:
- Where do you find food and shelter? (E.g.: at home, at the homes of relatives and friends, at the grocery store, at school, sometimes in the forest, the sea, etc.)
- Where do you go to play? (at home, at the homes of relatives and friends, at school, at the community centre, etc.)
- Where do you learn how to live a safe and healthy life? (E.g.: at school, at home, at the homes of relatives and friends, etc.)
- How do people help animals, or animals help people? (E.g.: some animals are good to eat, some are good to play with, some are fun to watch, etc.)

c) Make a Venn diagram with the class showing what people have in common with animals and what is different. Or have students draw pictures showing people and animals in related settings. (E.g.: a bear family in a shelter and a human family in a shelter.)

d) Have students use the webs to make a class mural, newspaper or hypertext document showing a variety of links between animals and the environment, and between people and the environment.

4. STAYING HEALTHY IN THE COMMUNITY

a) Refer to the web that the class created in Activity 3 b). Ask students to name some people and places that make up the community they live in. (E.g.: school, home, playing fields, community centre, library, grocery store, etc.; family members, friends, Elders, teachers, etc.) As they do, list them on the chalkboard.

b) Have students identify ways that people and places in their community can help them stay healthy. E.g.:
- Family and friends can join in active games.
- Family can make healthy food choices.
- Elders can give advice about traditional healing and activities.
- Community centres and schools can be places for active games.

c) Invite Elders, health workers or others from the community to describe traditional ways that Aboriginal people stayed healthy.

d) Have students read and discuss a story describing traditional life (such as *Neekna and Chemai)*.

Materials:
- chalk and chalkboard
- writing supplies, art supplies or similar materials as required

Time required:
one to two lessons

Level of difficulty:
simple

Materials:
- chalk and chalkboard
- Handout 2.3, "Principles of Aboriginal Philosophy"
- writing supplies, art supplies or similar materials as required

Time required:
one to two lessons

Level of difficulty:
moderate to advanced

Students can find the complete Twelve Principles on the website of the Saskatchewan Education department

5. PRINCIPLES OF ABORIGINAL PHILOSOPHY

a) Ask students to think of a rule they have to follow at school or in the community. Discuss whether they accept the rule and why. If necessary, prompt them with questions such as the following:
- Do you think the rule is a good one? Why or why not?
- Why do you think the rule came about?
- What ideas or needs led to the rule?

b) Ask the class how people know whether behavior such as smoking or running in the halls is allowed, and explain that rules help people to know what kinds of behavior are allowed. Explain that rules for behavior are based on ideas about what is right and wrong, what is safe, healthy, etc. These ideas are called principles. They come from many sources, such as common sense, religious writings, teachings of Elders or other wise people, scientific study, etc. They reflect the ways that people relate to each other, to their community and environment.

c) Have the class form a circle or semi-circle and ask students to suggest some principles or rules that could guide students in living a healthy life in the community. Write their ideas on the chalkboard. Encourage students to think about themselves and their connections to their community as they suggest appropriate principles. If necessary, prompt them with questions such as the following:
- When you do something, whom does it affect? (E.g.: self, family members, others nearby, others in the community, etc.)
- When you know your actions will affect other people, what should you do? (E.g.: try to reduce harmful effects, increase beneficial effects, avoid endangering others, etc.)
- What kinds of effects on others are there besides physical effects? (E.g.: making others feel happy or sad, making others feel pain, giving others good ideas or bad ideas, helping others understand a difficult lesson, etc.)
- What kinds of changes can people make in their own lives? (E.g.: people can develop their strengths, overcome weak areas, develop new strengths, etc.)
- How can people make changes that will help them and their community? (E.g.: by making thoughtful decisions, by acting to help others, by acting to improve themselves, etc.)

d) Have students work in small groups and refer to the notes from the class discussion to list two or three principles they think lead to a healthy life. Have the groups share their ideas with the class.

e) With more advanced students, give each student a copy of Handout 2.3, "Principles of Aboriginal Philosophy," and have them work in their groups to compare their ideas of principles for a healthy life with the principles in the handout. Have the groups share with the class any similarities and differences they found.

f) Have students think of a problem in their own life or that a young person might face, and have them write, draw or record an explanation of how one of the principles in the handout or their own ideas could guide them in resolving the problem.

Closing the Circle

- Give students a copy of Handout A, "Drum Face" (see Appendices), or have them draw a circle to represent the blank face of a drum. Have them draw a design for the face of a drum that illustrates how they are connected to other things around them. Have them save their design, along with any notes or other materials from the lesson, in their portfolio.

- Have students discuss their design with their families and invite students' families to add to their portfolio any images or stories about how the family is connected to the community or the environment.

- Have students use Handout C, "Goal-setting" (see Appendices), to set a personal goal related to an animal quality that they would like to have (such as the animal qualities they wrote on stones) and monitor its achievement over a period of time.

Extension and Integration

- Have students make stones such as those in Activity 2, "Animal Qualities," representing important principles. Have them choose the stones representing what they need to focus on, and carry the stones or put them in a safe place to remind them of their focus.

- Have students use the library or Internet to research one of the animals they want to know more about. Invite them to tell the class what they found in their research, or make a puppet or papier-mâchè representation of the animal to show the class.

- Have students read a traditional story about an animal and the values it represents. Have students read a traditional story about an animal and the environment. (E.g., "How Chipmunk Got His Stripes," "Screech Owl" and "Raven" (*Our Tellings*, page 81); "Why the Deer and Wolves are Enemies" (*Children of the Thunderbird*, page 131); "Blue Jay" (*Ktunaxa Legends*, page 33).

Evidence for Assessment

- Review the students' animal stories and journal entries to ensure they can identify a variety of animal qualities and how the animals use those qualities to keep good health.
- Review their community stories to ensure they can identify positive health aspects of both traditional and modern Aboriginal culture.
- Review their class presentations and problem solving to ensure they can explain how Aboriginal philosophy can help resolve contemporary issues.
- Monitor the class discussion to ensure that students can describe ways in which they have connections to their community and environment, and in which their community can help them stay healthy.

Home Connections

Have students take home the letter on the following page and read it to their families or others in the community. Ask them to describe to their families or others in the community ways that the community can support healthy living.

Dear Parents, Guardians and Family,

Our class has learned some ways that our community can help us live a healthy life. We learned that there are people and places where we can get advice about health and be part of healthy activities.

Since health involves home as well as school, you can help your child's health and learning by doing these activities with your child:

- Ask your child to tell you some places in the community where they can play active games. Some examples are:
  - Community centres
  - Playing fields
  - School yards and gyms
- Ask your child to read the page called Principles of Aboriginal Philosophy.
- Tell your child a story about a time you or a family member found help from someone in the community.

Your child is collecting information about the community and health in a portfolio at school. If you would like to add family stories or pictures to your child's portfolio, we would be honoured to include them.

Your notes about your child's learning:

HANDOUT 2.1

MY FAVOURITE ANIMAL

Name: _____ Date: _____

The animal I like is _____

Draw your favourite animal here.

Three things I like about this animal are:

1. _____
2. _____
3. _____

Three ways this animal is like me are:

1. _____
2. _____
3. _____

Three ways this animal is not like me are:

1. _____
2. _____
3. _____

HANDOUT 2.2

ANIMAL QUALITIES

Name: _____ Date: _____

Animals can stay healthy in the places where they usually live. Frogs can stay healthy in a pond, and deer can stay healthy in a forest. They have qualities like strength, speed or intelligence that help them stay healthy.

Here are some qualities that help animals stay healthy. Some qualities are easy to see. Some qualities you can see only after watching the animals for a long time.

Animal qualities

frog	vision, knowledge, drinks lots of water
hummingbird	active life, joy, mate for life
mouse	knowledge, eats good food
eagle	strength, agility, freedom, breathes clean air
bear	strength, gets lots of rest
heron	stress-free life, calmness
salmon	determination, strength
goose	cooperation, loyalty
deer	calmness, resilience, durability
wolf	self-esteem, family ties
raven	communication, imagination
turtle	strength, healing
salamander	healing
killer whale	companionship, strength
owl	vision, thoughtfulness

Add your own favourite animals and qualities that help them stay healthy.

HANDOUT 2.3

PRINCIPLES OF ABORIGINAL PHILOSOPHY

Aboriginal Elders, leaders and others from across Canada met in Lethbridge, Alberta, in December 1982. They discussed the main beliefs of Canadian First Nations. They listed twelve principles that most First Nations peoples accept. Some are similar to the beliefs of other people living in Canada, while others are different.

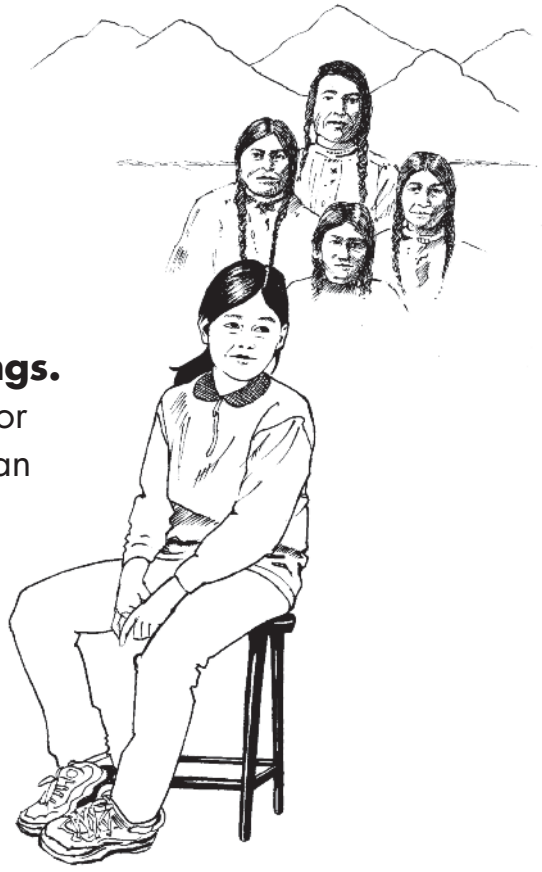
Here are some of the main points they found:

1. **Wholeness.** Everything is connected in some way to everything else. Together, they form one whole.

2. **Change.** All things change. One season follows another. People are born, live and die. There are two kinds of change: things coming together, and things coming apart.

3. **Change occurs in patterns.** Changes do not happen by accident. We cannot always see how one change leads to another. Even if we cannot see the pattern, it is still there.

4. **The physical world is real. The spiritual world is real.** The spiritual world includes dreams, ideas, teachings and goals. Together with the physical world, they are two sides of one reality. A balanced life honours both sides.



5. **People are physical and spiritual beings.** People live in both worlds. Objects can help or harm people. Ideas, dreams and teachings can also help or harm. Both sides are important.

6. **People can gain new gifts or qualities, but they must struggle to do so.** People must make a choice to develop their gifts. They must work at it. But when they do, they will find teachers and protectors to help them.

Part 3. How I Feel / My Feelings

Overview

Students use a drum to express a variety of feelings, and describe how their body reacts to certain feelings. Students learn to relax their bodies by using calm breathing, and use a smoking simulation to look at the harmful effects of smoking cigarettes. They discuss sources of harmful stress, and ways to manage it.

The Big Idea

An individual's emotional health affects her or his physical health. This unit allows students to focus on their feelings, and ways to express them, and explores ways that emotions may be linked to cigarette smoking.

Curriculum Areas

Personal Planning, English Language Arts, Social Studies, Science

Outcomes

Following this activity, students will be able to:

- Express an emotional feeling by beating a drum;
- Describe how their body feels when students express emotions;
- Relax by using a calm breathing exercise;
- Describe chemicals that result from smoking cigarettes;
- Discuss the effects of smoking cigarettes on people;
- Describe bodily feelings of stress;
- Describe strategies for managing stress in the lives of young people.

Key Words

addicted, anxiety, arteries, bloodstream, breathe, breathing, cancer, ceremonies, chemicals, cigarette, diabetes, disorder, distracted, emotions, energy, feelings, gas, lungs, nicotine, poison, relax, relaxation, simulation, smoke, smoking, sleeplessness, smudge, strategy, tar, tenseness, tension, tiredness, tobacco, veins, worried, worry

3 How I Feel / My Feelings

Materials:
- drums or similar objects for groups of students
- OPTIONAL: pre-printed cards representing a variety of emotions

Time required:
one lesson

Level of difficulty:
simple

Suggested Approach

Choose activities from these suggestions that are appropriate for your class.

1. EXPRESSING FEELINGS

a) Divide students into small groups in a gym or outdoor area, and give each group a drum or similar object they can beat. Option: You can also use a bucket, yogurt container, etc.

b) Call out a feeling (E.g.: playfulness, happiness, sadness, anger, friendliness, etc.) and have the members of each group take turns beating the drum in different ways to express the way their heartbeat shows that feeling. Have one member from each group demonstrate for the class how she or he expresses the feeling by beating the drum.

c) Repeat step b) until students have expressed a variety of feelings.

d) Have students describe how their body feels when they express various emotions. Invite them to draw faces, animals or other figures on the chalkboard to express their feelings if necessary. Or use one of the graphic sets representing a variety of emotions available from various education suppliers.

2. CALM BREATHING

Materials:
- none

Time required:
one lesson

Level of difficulty:
simple

a) Have students demonstrate how people breathe when they have various emotions. (E.g.: slow breaths when calm, short and sharp when angry, short and shallow when tired or scared, deep when stressed.)

b) Explain that the feelings that people have can make their bodies react in various ways, and that when people act as if they are calm and relaxed, their bodies feel more calm and relaxed. For this reason, people can use a deep breathing exercise to become relaxed.

c) Lead the class in practicing conscious deep breathing to relax, using the steps below. Have the class:

i) Stand or sit calmly and let their muscles relax.

ii) Take a slow, deep breath in, feeling the air enter and expand the lungs. Have them put one hand on their stomach and feel their stomach expand as well.

iii) Slowly let the air out of the lungs. Feel the muscles in the body relax as the air goes out.

iv) Repeat steps ii) and iii) three to five times until the body is fully relaxed.

d) Ask students to describe how their body feels after the breathing activity, and compare it to how their body felt before. Encourage students to use the breathing activity whenever they feel stressed or over-active. Lead the class in the exercise periodically (E.g.: before exams or shots, after gym or recess).

e) Discuss with the class how smoking cigarettes is like deep breathing, but is not a healthy way to relax. If necessary, prompt students with questions such as the following:
- How is cigarette smoking like deep breathing? (E.g.: Both involve breathing into the lungs, people use both as a way to relax.)
- How is cigarette smoking unlike deep breathing? (E.g.: Deep breathing relaxes people with clean air, cigarette smoking smells bad and makes people cough.)
- Why do you think people smoke cigarettes? (E.g.: Some smoke to relax, or to look cool or look older, etc.)
- What's wrong with smoking to relax? (E.g.: When people take deep breaths, they breathe in harmful substances and can become addicted.)

How I Feel / My Feelings

Materials:
writing supplies

Time required:
one to two lessons

Level of difficulty:
advanced

3. FEELING STRESS

Stress is born out of anxiety. Anxiety is normal and natural; however, too much can be unhealthy

a) Ask students to explain what the feeling of stress is, and write their suggestions on the chalkboard. (E.g.: A worry, a tension, anxiety, a feeling of being pushed or of being under pressure.)

b) Have students identify the bodily feelings that indicate stress. (E.g.: Feeling distracted, feeling worried, tenseness, sleeplessness, tiredness, constant headache or upset stomach may be signs of stress.)

c) Explain that stress may be a good thing if it keeps someone alert or if they enjoy it, but people can try to reduce stress that feels bad. Ask students to suggest healthy ways to reduce the bad feelings of stress and write their suggestions on the chalkboard. E.g.:
- Deep breathing can make people feel more relaxed.
- Playing an active game can help the muscles relax and distract people from worries.
- Resting and getting enough sleep lets people relax and regain energy.

d) Have students brainstorm events in the lives of young people that can cause stress. (E.g.: When your mom gets mad at you; when you don't understand something at school; when your friends want you to do something you don't want to do; or when you know you are doing the right thing but others don't agree.)

e) Have students in small groups choose one of the events they listed and describe how they could help a friend in that situation, as if they were peer counselling their friend. Have the groups describe the strategy to the class, explain how the strategy can reduce stress and ask what other strategies the class could suggest.

f) Have students roleplay their strategies to help reduce stress, and discuss with the class other ways that the characters could have managed the stressful situation.

g) Have students write a letter to an imaginary classmate summarizing one or more strategies to respond to such a stressful event.

How I Feel / My Feelings

Closing the Circle

- Give students a copy of Handout A, "Drum Face" (see Appendices), or have them draw a circle to represent the blank face of a drum. Have them draw a design for the face of a drum that illustrates how they feel when they have good feelings. Have them save their design, along with any notes or other materials from the lesson, in their portfolio.
- Have students discuss their design with their families and invite students' families to add to their portfolio any images or stories about feelings in the family's history.
- Have students use Handout C, "Goal-setting" (see Appendices), to set a personal goal related to managing stress and monitor its achievement over a period of time.

Extension and Integration

- Read the class some simple story books such as *Everyone Needs a Rock* by Byrd Baylor (New York: Simon and Shuster, 1985) and discuss the impact that situations, people and decisions can have on the way a character feels.
- Have students draw a human figure and use colours or symbols to show where their body reacts when they felt stress and what they can do to respond to it.
- Have students use cartoons or puppets to make up humorous replies or "snappy comebacks" to the scenario situations from Activity 4.
- Have students draw or make exaggerated papier-mâchè models of what they think their heart and lungs would look like after smoking. Or have them draw a comic strip showing a healthy body fighting off an attack of cigarette smoke.
- Have students roleplay ways to respectfully decline if someone offers a cigarette, or to ask for a smoke-free area at home.
- Have students organize and conduct a survey of smokers in the school or in the community asking if they have tried to quit, and if they would quit if they could. Have them identify sources of help in the community for people who want to quit smoking or avoid cigarette smoke.
- Have students read traditional stories/animal stories showing how various characters let their emotions become unbalanced, and what the consequences were. (E.g., "Coyote and Wood Tick" (*Our Tellings*, page 53); "We-gyet and the Swans" (*We-gyet*, page 42).

3 How I Feel / My Feelings

Evidence for Assessment

- Monitor the students' expressions of feeling on the drum to ensure they can express a variety of feelings and describe their bodily feelings.
- Monitor their calm breathing to ensure that they can control their breathing to relax their bodies.
- Monitor class discussion about smoking and review their written summaries to ensure that students can identify some compounds produced by smoking cigarettes and their potential health effects.
- Monitor class discussion and student roleplays, and review their letters, to ensure they can describe feelings of stress and some strategies to manage it.

Home Connections

Have students take home the letter on the following page and read it to their families or others in the community. Ask them to describe to their families or others in the community ways to feel more relaxed and to avoid stress.

Dear Parents, Guardians and Family,

Our class has learned about healthy feelings and stress. We learned ways to feel more relaxed when stress makes us feel bad.

Since health involves home as well as school, you can help your child's health and learning by doing these activities with your child:

- Ask your child to show you some ways to feel more relaxed. Some examples are:
  - Deep breathing
  - Walking or playing an active game
  - Resting and getting enough sleep
- Ask your child to read a story and explain to you how the characters feel.
- Discuss any rules you have about smoking in the home and ways to help your child live smoke-free.
- Tell your child a story about a time you or a member of your family were able to reduce stress in your life, or were able to help someone in the community reduce stress.

Your child is collecting information about feelings and stress in a portfolio at school. If you would like to add family stories or pictures to your child's portfolio, we would be honoured to include them.

Your notes about your child's learning:

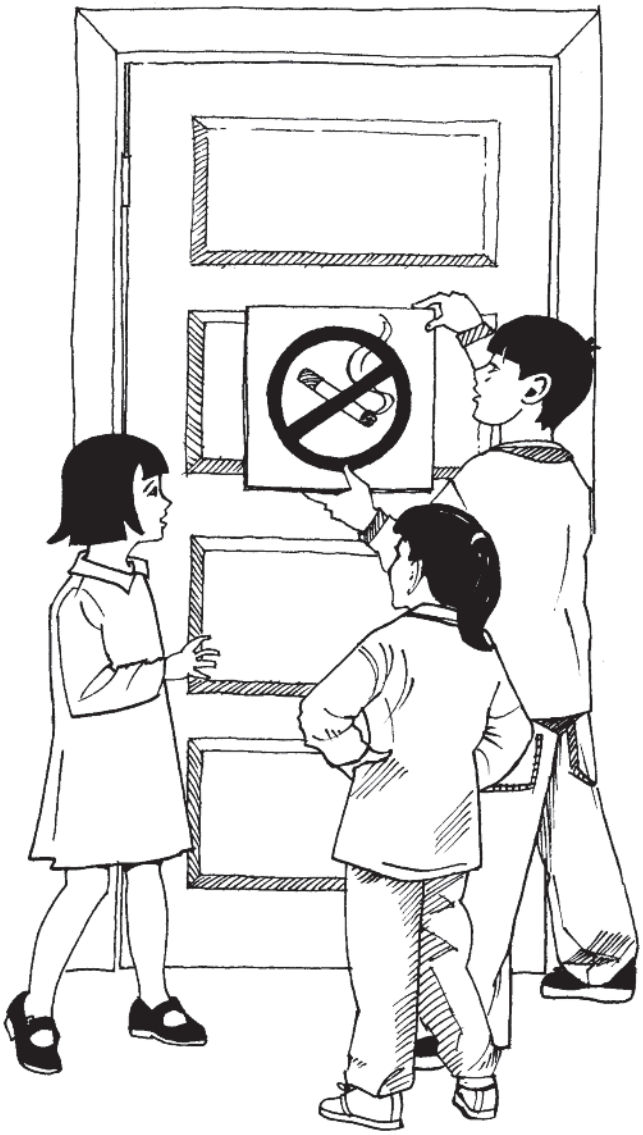
HANDOUT 3.1

SMOKING

First Nations people in Canada use tobacco, and other herbs such as sweet grass, in traditional ceremonies. They burn the leaves. They do not inhale the smoke, but use it in a ceremony called a smudge.

But people do breathe in smoke when they smoke cigarettes. Chemicals and tobacco in cigarettes causes serious harm. The smoke carries harmful chemicals into the body and air.

- When cigarette smoke enters the lungs, it spreads poison through the body.
- It carries nicotine, tar and other chemicals into the lungs. Many of these chemicals can cause cancer.
- Nicotine makes the heart beat faster. It can damage the veins and arteries.
- Smoking cigarettes can lead to diabetes, a serious health disorder.



Breathing smoke into the lungs means you cannot breathe in clean air. Your heart and lungs have to work harder to get enough oxygen.

Cigarette smoke also goes into the air. Then other people breathe the chemicals. You can harm your friends and family if they breathe your smoke. If others smoke around you, you can ask them to go outside or into another room.

Most people do not smoke. And most smokers want to quit. But quitting cigarettes is very hard. Smokers can become addicted to the nicotine in tobacco. They need a lot of help to quit. Community programs can help smokers quit,

Part 4. What I Do / My Body

Overview

The class discusses the ideas of balance and variety in nutrition and uses pictures and food guides to practice selecting a variety of foods from the choices that are available to them. The class uses handouts to research the role of fat, sugar and salt in the diet, and uses local advertising to make food choices within a given budget. The class explores different ways that animals move and observes the effect of different kinds of movements on their heart and breathing. The class discusses and reads about active living, and demonstrates active games from various cultures.

The Big Idea

An individual's physical health will be improved by making the best nutrition choices from among those available within the recommendations of Canada's Food Guide to Healthy Eating, and by enjoying active games as a part of an active life.

Curriculum Areas

Personal Planning, English Language Arts, Social Studies, Physical Education, Home Economics, Math

Outcomes

Following this activity, students will be able to:

- Demonstrate the ability to make a varied and balanced selection of foods in general and within a given budget;
- Demonstrate the ability to choose food servings following Canada's Food Guide for Healthy Eating;
- Explain healthy guidelines for fat, sugar and salt in their diet;
- Demonstrate a variety of physical movements;
- Compare their pulse rate following different levels of exertion;
- Describe physical benefits that result from active play;
- Describe and demonstrate a variety of active games.

Key Words

alternatives, balance, budget, dance, flavour, food groups, fruit, grain products, label, margarine, milk products, movement, nutrient, package, pretzel, pulse, serving, sodium, tournament, traditional, vegetables

4 What I Do / My Body

Materials:
- a small, flat plastic plate
- a pop bottle
- slices of various foods, such as bread, apples, cheese, beans
- writing and drawing supplies

Time required:
one lesson

Level of difficulty:
simple

Suggested Approach

Choose activities from these suggestions that are appropriate for your class.

FOOD AND NUTRITION

1. BALANCE AND VARIETY

a) **Preparation**: Balance a plate on the mouth of a pop bottle. Practice balancing small slices of food on the plate so that you can demonstrate the balance of foods on the plate without tipping it in step f.

b) Discuss how students care for pets at home or school, and what the pets need (e.g.: food, water, shelter, exercise, etc.). Lead a class discussion about what animals need to have a healthy body, and create a class web of student responses. If necessary, prompt students with questions such as the following:

- What happens if animals can't find enough to eat or drink? (They become sick and die.)
- What happens if animals can't find the type of food they are able to eat? (They may try to eat foods they don't usually eat and become sick.)

c) Point out that most animals need water, the right kinds of food, and physical activity to have a healthy body.

d) Ask students to name a variety of foods that they like to eat and discuss how students feel after eating them. If necessary, prompt them with questions such as the following:
- What foods give you more energy?
- What foods make you feel happy?
- What foods make you feel full?
- What foods make you feel tired?
- What foods make you feel like eating more?
- What foods make you feel thirsty?

e) Explain that, like animals, people need certain types of food and drink to have a healthy body. People need a variety of foods, not too little or too much of any one type. By eating a balanced variety of foods, people can help reduce serious health problems like diabetes, stroke and heart disease.

f) Balance a plate on the mouth of a pop bottle, and carefully balance a variety of foods such as slices of bread, apple and cheese to illustrate that balance is achieved with a variety of each. Demonstrate how the plate loses balance if too much of one food is placed on it. Invite students to add a variety of foods to the plate while keeping it in balance.

g) Ask how students know how much to eat, and explain that the body can give important messages about eating and drinking. E.g.:
- Hunger means the body needs more food.
- Thirst means it needs more water.
- Fullness means it has had enough.

h) Ask if students think they can always rely on their feelings about food and drink to decide when and how much to eat. Ask for examples of times when bodily feelings are not a reliable guide. E.g.:
- Sometimes people have a desire for more food, especially food they like, when they are not hungry.
- Sometimes people need to drink more water before they actually feel thirsty, especially when playing active games in the heat.
- Sometimes people eat so quickly that they eat too much before they feel full.

i) Point out that ignoring or misreading the signals from the body can lead to unbalanced eating, and to health problems, including diabetes, stroke and heart disease. E.g.:
- Eating too much or too little can make you feel ill.
- Eating all one type of food without variety can make you ill.
- Eating without balance and variety can make you feel like you need something else, and lead to over-eating or substance abuse.

j) Point out that guidelines about eating are very open – they help people to make the best choices from the foods that are available in the home or community. They can include both traditional foods and processed foods. The important ideas are balance and variety.

k) Have students draw a plate showing a balanced variety of foods they would enjoy eating. Have them write a caption explaining why the selection on the plate is healthy.

Materials:
- for each group of students:
  - pictures of a variety of foods
  - chart paper and markers
  - 15 small clean stones or markers
- copies of Canada's Food Guide to Healthy Eating for each student
- copies of Canada's Food Guide, First Nations, Inuit, and Métis for each student
- writing and drawing supplies

Time required:
three or four lessons

Level of difficulty:
simple to moderate

2. FOOD GUIDES

a) **Preparation**: Bring to class magazines and flyers with pictures of a variety of foods, and have students cut out food pictures or bring some from home. Alternatively, gather a selection of photographs from books or other sources.

b) Have students brainstorm a variety of groups that foods could be part of, and list their suggestions on the chalkboard (E.g.: Wild, processed, fast foods, everyday foods, special foods, fruits, meats, vegetables, etc.). Divide the class into groups and give each a variety of pictures. Have students in groups sort a variety of food pictures into the groups that they think the foods fit into and report to the class which groups they placed foods into.

c) Give students a copy of Canada's Food Guide to Healthy Eating and have them compare the groups they devised with those in the Guide. Have the groups sort their food pictures into the Food Guide groups and report to the class which groups they placed foods into.

d) Have students compare the Food Guide serving recommendations using the following procedure:
   i) Give the groups a piece of chart paper and have them lay it on the floor. On the chalkboard, make a large circle, divide it into thirds and divide one of the thirds into halves. (This will produce two large sections and two small sections.) Have the groups copy the circle on their charts.
   ii) Have the groups label the sections as follows:
      - One large section: Grain Products - 6 servings
      - One large section: Vegetables and Fruits - 6 servings
      - One small section: Milk and Alternatives - 3-4 servings
      - One small section: Meat and Alternatives - 1-2 servings
   iii) Have the groups place small stones or markers in the sections representing the number of recommended servings in each food group. Explain that Canada's Food Guide recommends these numbers as the minimum number of servings per day for young people. Explain that "minimum number of servings" means that everyone should eat at least the number given, but some people should eat more, especially if they are very active.
   iv) Have the groups refer to the examples of servings on the back of Canada's Food Guide and use the examples to make or draw pictures of a variety of equations showing how to make up the recommended number of servings in each group. E.g.:
      - 1/2 cup of berries + 1 apple + 1 medium potato + 1/2 cup of frozen vegetables + 2 cups of salad = six servings of Vegetables and Fruits

e) Give students a copy of Canada's Food Guide, First Nations, Inuit, and Métis. Have them compare the foods and groups in Canada's Food Guide, First Nations, Inuit, and Métis with those in Canada's Guide. If necessary, prompt them with questions such as the following:

- What similarities are there between the guides? (E.g.: Both have four similar groups, both give many choices for balanced eating.)
- What differences are there? (E.g.: Specific foods are different, names of the groups are different, the traditional guides use foods that can be found in B.C.)
- Why are there differences? (E.g.: Many of the foods in Canada's Guide were not traditionally available to Aboriginal people.)
- Why are both guides to healthy eating? (E.g. Both suggest a balance from the various groups with an emphasis on Fruits and Vegetables and Bread and Cereals.)
- What foods do students like to eat from each guide?

f) Have students use Canada's Food Guide, First Nations, Inuit, and Métis to label stones with the names of wild or traditional foods from their community and place them in the sections of the Canada's Food Guide circle according to food groups. Have students make equations as in step d) using wild or traditional foods.

Materials:

- copies of the following handouts for the students in each group
  - Handout 4.1, "Fat"
  - Handout 4.2, "Sugar"
  - Handout 4.3, "Salt"
- approximately 40 mini-tubs of margarine (from a supermarket or restaurant)
- approximately 40 envelopes of salt (from a supermarket or restaurant)
- approximately 40 envelopes of sugar or sugar cubes (from a supermarket or restaurant)
- writing and presentation supplies

Time required:
two lessons plus time for independent work

Level of difficulty:
moderate

3. FAT, SUGAR AND SALT

a) Divide the class into small groups and give each group one of the handouts on fat, sugar or salt. (Handout 4.1, "Fat;" Handout 4.2, "Sugar;" and Handout 4.3, "Salt.")

b) Have the groups read the handouts they received and follow the instructions in the handout to make a display comparing fat, salt and sugar in traditional and modern foods.

c) Have the groups make a presentation to the class using their displays on the effects of fat, sugar and salt on the body, and comparing traditional and modern foods. If appropriate, invite students' families to attend the presentation, and have students prepare snacks that are low in fat, sugar and salt.

4. FOODS AND PRICES

a) **Preparation**: Have students bring advertising flyers with pictures of various foods and current local food prices to class, including pictures of fun foods.

b) Have students work in groups with a collection of flyers. Give the groups a copy of Handout 4.4, "Food and Prices," and a budget (e.g., $25). Have them use the flyers to calculate how much of their favourite foods the budget allows them to buy. Have the groups report their results and explain their calculations. Have the groups repeat the activity with different favourite foods and budgets.

c) Give the groups a budget, and have them use the flyers and Canada's Food Guide to select a balanced variety of healthy foods that they could buy within the budget. Have them report their choices to the class, and explain their calculations and why they chose the foods they did.

d) Have students work individually to choose a balanced variety of foods within a given budget and report their calculations and reasons in writing.

e) Have students use the information sheets from Activity 3 to calculate the fat, sugar and salt in the items they chose. Ask if students would change any of their choices after thinking about their calculations.

Materials:

- advertising flyers with pictures and prices of foods
- copies of Handout 4.4, "Food and Prices," for each student
- writing and presentation supplies

Time required:
one lesson

Level of difficulty:
moderate

What I Do / My Body

Materials:
- none

Time required:
one lesson

Level of difficulty:
simple

ACTIVE LIVING

5. ANIMAL MOVES

a) Lead a class discussion about how different animals move, and create a class web of student responses. If necessary, prompt students with questions such as the following:

- What different movements do animals make with their bodies? (E.g.: Birds flap their wings, snakes slide on the ground, turtles stretch their necks, fish move from side to side, etc.)
- Why do animals make different movements? (E.g.: Because their bodies are formed in different ways, because they need to do different things, etc.)
- Do animals always make the same kind of moves? How do they differ? (E.g.: Bears walk on all fours, stand upright, swim, move their heads from side to side, etc.)

b) Have students demonstrate different ways that a variety of animals move their bodies.

) Point out that animals need to keep all of their muscles active and strong in order to have a healthy body. This is also true of people, and even people with physical disabilities stay healthy by moving as much as they are able.

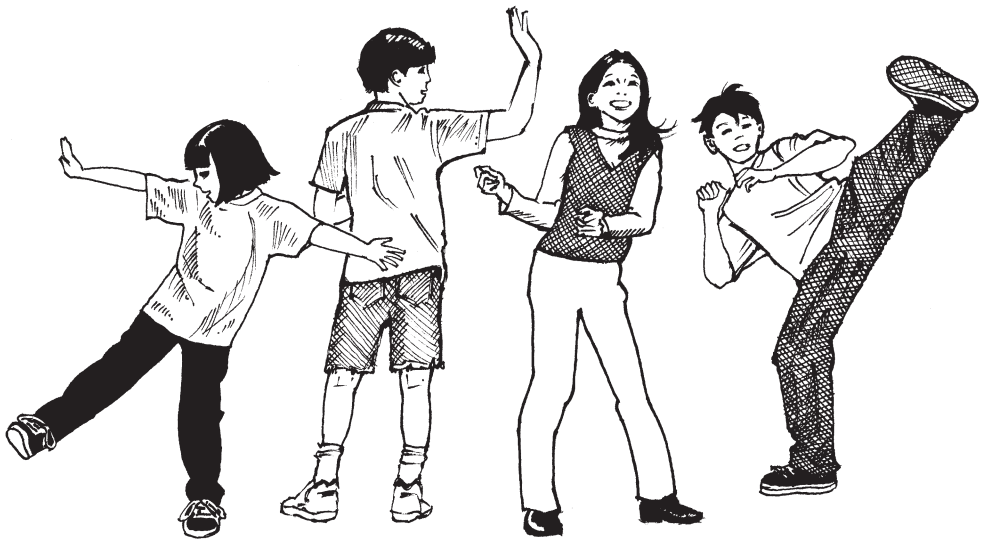
6. HEART DANCE

a) Invite a student or someone from the community who is a dancer to show the class a variety of fast and slow drum dances, and explain their meaning. Ask the dancer to teach a dance to the class.

b) As students learn the dances, ask them to be aware of what happens to their heart and their breathing. Have students record and graph their pulses after fast, medium and slow dances using the following procedure:

i) Give students in pairs a copy of Handout 4.5, "Heart Dance."
ii) Have students use two middle fingers to find the pulse in their wrist or neck. Time 15 seconds and have them count the number of pulses in the time. Have them record the number on Handout 4.5, and multiply the number by four to find the number of pulses per minute.
iii) Have students perform a slow dance for three minutes. Time 15 seconds and have them count the number of pulses in the time. Have them record the number on Handout 4.5, and multiply the number by four to find the number of pulses per minute.
iv) Repeat step iii) with a moderate and a fast dance.
v) OPTION: Have students calculate average pulse rates for the class, and make a class average graph on the chalkboard or on chart paper.
vi) Have students compare their heart rates after the dances, and describe how their body feels. Discuss what conclusions students can draw from their observations, and have students write their conclusions on Handout 4.5.

c) OPTION: Have students beat a drum at fast, slow and medium rates and use the same procedure to compare the amount of energy each takes.



Materials:
- drum
- copies of Handout 4.5, "Heart Dance," for each student
- writing supplies

Time required:
two lessons

Level of difficulty:
moderate

What I Do / My Body

Materials:
• copies of Handout 4.6, "Active Health," for each student
• writing and drawing supplies

Time required:
one lesson

Level of difficulty:
simple

7. ACTIVE HEALTH

a) OPTION: Before a recess break or physical education class, ask students to observe how their muscles feel as they play, and any changes in their breathing or heart beat.

b) Lead a class discussion about how different kinds of activity make the body feel, and write student ideas on the chalkboard. If necessary, prompt students with questions such as the following:
• How does your body feel after you have been moving vigorously, as in a basketball game?
• How do your muscles feel?
• Are you thirsty?
• How fast is your breathing?
• How fast does your heart beat?
• How does your body feel after you have been sitting in class?
• How does your body feel after you have been resting?
• How does your body feel after you have been walking outside?
• What conclusions can you draw about physical activity and health?

c) Give students in groups a copy of Handout 4.6, "Active Health," have them read it in groups and note the most important ideas. Have the groups report to the class which ideas they felt were most important.

d) Have students draw a human body, label the parts that are affected by physical activity, and describe what the effects of physical activity are.

8. WORLD GAMES

a) Ask students to name any activities they like to do to stay active and list them on the chalkboard. Ask if students know where or how any of the games originated, and list their ideas.

b) Have students use library or on-line resources to research active games from world cultures.

c) Have students report to the class on the games they researched, describing how the game works and giving a demonstration.

d) OPTION: Have students develop variations on the games they researched that they would enjoy playing in their own community.

e) Have students organize a class mini-tournament of games. Have the students explain how physical activity helps prevent heart disease and diabetes.

Materials:
- library or on-line research materials on sports
- writing and presentation supplies

Time required:
one lesson plus time for independent research and presentations

Level of difficulty:
moderate

Closing the Circle

- Give students a copy of Handout A, "Drum Face" (see Appendices), or have them draw a circle to represent the blank face of a drum. Have them draw a design for the face of a drum that illustrates how they enjoy active living or healthy eating. Have them save their design, along with any notes or other materials from the lesson, in their portfolio.

- Have students discuss their design with their families and invite students' families to add to their portfolio any images or stories about how the family takes part in active living and healthy eating.

- Have students use Handout C, "Goal-setting" (see Appendices), to set a personal goal related to active living or healthy eating and monitor its achievement over a period of time.

Extension and Integration

- Invite students' families to come to the school for a shared meal or potluck. Have the students give a report about their learning on foods or about the food choices in the feast. Have them discuss how they can make people feel welcome if they have diabetes or restricted food choices.

- Have students roleplay respectful ways to ask for healthy, balanced food choices at home and at school.

- Have students play guessing games to identify healthy foods by giving each other clues about a food's description and the food group it belongs to. (E.g.: I am thinking of a healthy food from the vegetables and fruits group that is orange. What is it?)

- Have students conduct a survey of community athletic teams, games, clubs, etc. and compile a comprehensive report of options available for active games.

- Have students interview a local athlete or other role model about active living, and how young people can enjoy an active life.

- Have students research and report to the class on the North American Indigenous Games, the All Native Basketball Tournament, the Arctic Winter Games or other Aboriginal sports tournaments. (For references, see Native Web's sports and athletics database [www.nativeweb.org/resources/sports_athletics].

- Have students read a traditional story about active living and healthy eating. (E.g., *Neekna and Chemai*; "Native Foods" (*Our Tellings*, page 148); "Canoe Pulling" (*Tales from the Longhouse*, page 22).

Evidence for Assessment

- Monitor classroom discussion and review student's drawings of plates to ensure students can make a varied and balanced selection of foods.

- Monitor students' charts and stones to ensure they can choose food servings following Canada's Food Guide for Healthy Eating.

- Review students' displays and presentations to ensure they can explain healthy guidelines for fat, sugar and salt in their diet.

- Review student's budget worksheets to ensure they can choose a balanced variety of foods within a given budget.

- Monitor student discussion and demonstrations to ensure they can demonstrate a variety of movements.

- Review student handouts and monitor their discussion to ensure they can compare their pulse rate following a variety of dances.

- Monitor students' handout summaries and review their drawings to ensure they can describe physical benefits that result from active play.

- Review student reports and monitor their demonstrations to ensure they can describe and demonstrate a variety of active games.

Home Connections

Have students take home the letter on the following page and read it to their families or others in the community. Ask them to describe to their families or others in the community how to make balanced food choices and live an active life.

Dear Parents, Guardians and Family,

Our class has learned some ways that our community can help us live a healthy life. We learned how active living and healthy eating can help people have fun and avoid diabetes, stroke and heart disease.

Since health involves home as well as school, you can help your child's health and learning by doing these activities with your child:

- Ask your child to describe some healthy food choices from the foods in your home and explain how they help create a healthy, balanced diet.
- Ask your child to describe some active games that the family can play together.
- Ask your child to read the page called Active Health or one of the pages on Fat, Sugar and Salt.
- Tell your child a story about a time you or a member of your family enjoyed active games in the community.

Your child is collecting information about active living and healthy food choices in a portfolio at school. If you would like to add family stories or pictures to your child's portfolio, we would be honoured to include them.

Your notes about your child's learning:

Handout 4.1

FAT

Name: _____ Date: _____

Margarine, oil and butter are fats. They make foods taste good. Fats give energy and important nutrients.

But too much fat can lead to health problems. Canada's Food Guide says it's a good idea to choose low-fat foods when you can.

Many foods have hidden fats. For example, chips and candy bars are almost always made with fats.

You can look at the label on many food packages to find out how much fat they contain. Choose the food with the lowest number for "Total Fats."

Assignment:

1. With your group, read this handout. Question each other to be sure everyone understands it.

2. On a separate piece of paper, write down the most important facts.

3. Together with your group, make a poster of the important facts. Draw or cut out pictures to illustrate the poster.

4. Research and choose three or more un-processed natural foods and three or more processed or fast foods. Make a display showing how much fat the foods you chose contain. Use pictures and mini-tubs of margarine to illustrate the display. (One mini-tub of margarine equals about one teaspoon, or 4 grams, of fat.)

5. Make a catchy jingle to encourage people to eat less fat.

6. Prepare a short presentation to the class to explain your poster and display.

HANDOUT 4.2

SUGAR

Name: _____ Date: _____

Cookies, candies and other sweets are a treat to eat. They contain sugar. That's what gives them the sweet taste. Sugar also gives you energy, so you can play without getting tired.

Some people can't eat much sugar. For someone who is diabetic, even a little sugar can be trouble. For most people, it's best to eat sugar when it is part of one of the food groups in Canada's Food Guide.

Save pop and candies for special times. Instead, choose treats like fruits, carrot sticks or yogurt. They have sugar, but not too much. Or choose whole grain bread or low fat cheese for a sugar-free treat.

It's hard to tell the amount of sugar in many foods. Many food packages have a label that shows the number of calories. A high number of calories often means high sugar, so choose the food with the lowest number.

Assignment:

1. With your group, read this handout. Question each other to be sure everyone understands it.

2. On a separate piece of paper, write down the most important facts.

3. Together with your group, make a poster of the important facts. Draw or cut out pictures to illustrate the poster.

4. Research and choose three or more un-processed natural foods and three or more processed or fast foods. Make a display showing how much sugar the foods you chose contain. Use pictures and packets of sugar to illustrate the display. (One packet equals about one tablespoon, or 15 grams, of sugar. For the display, use 1 packet for each 100 calories.)

5. Make a catchy jingle to encourage people to eat less sugar.

6. Prepare a short presentation to the class to explain your poster and display.

HANDOUT 4.3

SALT

Name: _____ Date: _____

Salty snacks taste super, sometimes. Snacks like pretzels, chips and party mix will give your tongue a tingle. Salt gives foods more flavour.

But too much salt makes your arteries and veins stiffen up. A little shake of salt won't hurt but you'll get what you need if you eat from all the groups in Canada's Food Guide.

Many snack foods have more salt than you need. Save salty foods for special times. Instead, choose treats like fruit or milk for a low-salt treat. Or look for snacks that say "low-salt" or "low-sodium" on the bag.

You can look at the label on many food packages to find out how much salt they contain. Look for the word "sodium" and choose the bag with the lowest number.

Assignment:

1. With your group, read this handout. Question each other to be sure everyone understands it.

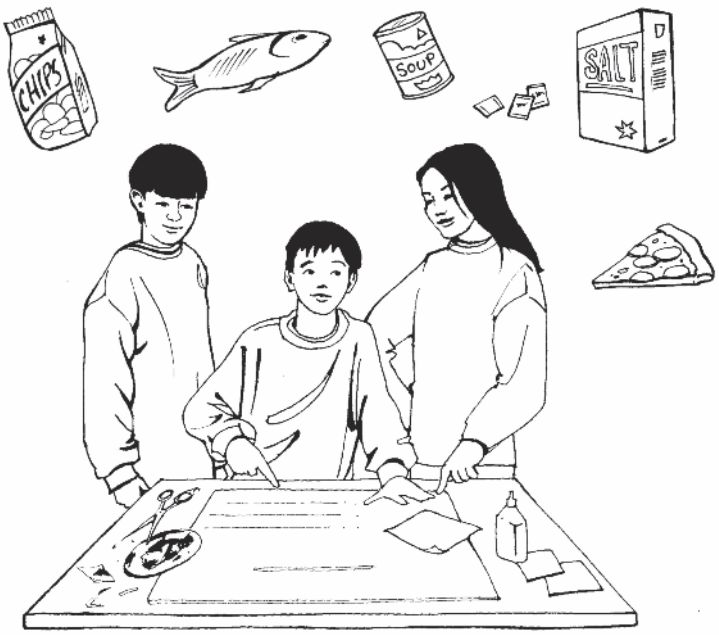
2. On a separate piece of paper, write down the most important facts.

3. Together with your group, make a poster of the important facts. Draw or cut out pictures to illustrate the poster.

4. Research and choose three or more un-processed natural foods and three or more processed or fast foods. Make a display showing how much salt the foods you chose contain. (One packet equals about one teaspoon of salt, or 2400 milligrams of sodium. For the display, use one packet for each 100 milligrams.)

5. Make a catchy jingle to encourage people to eat less salt.

6. Prepare a short presentation to the class to explain your poster and display.



HANDOUT 4.4

FOODS AND PRICES

A budget helps you know what you can afford to buy. To work out a budget, subtract the cost of what you want to buy from the amount you have to spend.

You can't spend more than you have. If what you would like to buy adds up to more than you have, you have to drop some items.

Use this worksheet to calculate your budget.

The amount I have to spend is:	$		
I would like to buy:		The cost per item is:	
			$
			$
			$
			$
			$
		Total cost:	$
Write total cost here and subtract it from the amount you have to spend:	$		
Amount left over:	$		

Example

The amount I have to spend is:	$ 10.00		
I would like to buy:		The cost per item is:	
Chips			$ 0.89
Apples			$ 2.25
Carrots			$ 1.50
			$
			$
		Total cost:	$ 4.64
Write total cost here and subtract it from the amount you have to spend:	$ 4.64		
Amount left over:	$ 5.36		

HANDOUT 4.5

HEART DANCE

Name: _____ Date: _____

Your pulse is a pathway to your heart. By counting the number of pulses, you can tell how fast your heart is beating. You can tell if your pulse is steady or uneven.

Find the pulse in your wrist or neck. Count the number of pulses in 15 seconds.

Pulse at start:
Number of pulses in 15 seconds: _____
Multiply by four to find the number of pulses in one minute: _____

Pulse after slow dance:
Number of pulses in 15 seconds: _____
Multiply by four to find the number of pulses in one minute: _____

Pulse after medium dance:
Number of pulses in 15 seconds: _____
Multiply by four to find the number of pulses in one minute: _____

Pulse after fast dance:
Number of pulses in 15 seconds: _____
Multiply by four to find the number of pulses in one minute: _____

Use the number of pulses in a minute to make a bar graph in the space below of your pulse after dancing.

Start	Slow	Moderate	Fast

What conclusions can you draw about dancing and your heart?

_____

HANDOUT 4.6

ACTIVE HEALTH

Active health means active play. Get active play every day.

Active play makes your heart beat faster, and it makes you breathe deeper. Your heart and lungs bring fresh air to your muscles to give you energy. Active play makes you stronger.

Active play means doing things that are fun and that get your whole body moving. Move your arms, legs, back and stomach. Play different games, so you will use different groups of muscles.

Play games that make you feel warmer and breathe harder. Get active play for at least 15 minutes at a time. Play for at least 60 minutes a day. Here are some active games that are fun to play:

- Stealing sticks
- Basketball
- Floor hockey
- Paddling/canoeing
- Swimming
- Trampoline jumping
- Hopscotch
- Rope jumping
- Kickball
- Snowshoeing
- Cross-country skiing
- Running
- Roller skating
- Volleyball
- Ice hockey
- Ice skating
- Lacrosse
- Soccer
- Walking a dog
- Bike riding
- Dancing
- Hiking
- Ringette
- Field hockey

Active living means your body will need rest. Be sure to get 8 to 10 hours of sleep every night. Enjoy quiet times throughout the day. Take time to stretch your muscles a few times during the day.

Active living helps prevent diabetes, stroke and heart disease.

Part 5. What I Know / My Learning

Overview

The class listens to human heart sounds, and does an experiment to see the volume of blood a heart pumps. A demonstration illustrates how insulin helps regulate blood sugar. Students review factsheets on diabetes, stroke and heart disease in a jig-saw activity, compare the incidence of these diseases in Aboriginal communities and discuss ways the community can act to reduce the incidence.

The Big Idea

Knowledge about health and disease helps people live a healthy balanced life by giving them the tools to make the best choices from the options that are available in the home and in the community. This unit gives students basic facts about diabetes, stroke and heart disease so that they can understand what the best options are.

Curriculum Areas

Personal Planning, English Language Arts, Social Studies, Science, Math

Outcomes

Following this activity, students will be able to:

- Simulate the sound of a heartbeat on a drum;
- Show the location of the heart and calculate how much blood it pumps;
- Compare and contrast the crystallization of sugar in a solution with the effect of diabetes;
- Explain and compare key facts about diabetes, stroke and heart disease;
- Describe the prevalence of diabetes, stroke and heart disease in Aboriginal communities and strategies to reduce it.

Key Words

Aboriginal, arteries, capillaries, carbon dioxide, crystal, diabetes, digest, digestion, dissolve, heart attack, heart, insulin, lung, needle, overload, oxygen, pancreas, stroke, veins, volume

5 What I Know / My Learning

Materials:
- a drum
- a computer with Internet search access and sound playback
- OPTIONAL: recording of human heart sounds and playback equipment

Time required:
one lesson

Level of difficulty:
simple

Suggested Approach

Choose activities from these suggestions that are appropriate for your class.

NOTE: Some students may have cardiovascular disease or diabetes personally or in their families. Refer to the Teacher's Introduction for suggestions on ensuring that all students are able to discuss the subject comfortably.

1. HEART SOUNDS

a) Ask if any students can make a sound on a drum like the sound of a human heart. Have them demonstrate and invite other students to describe the sounds in words.

b) Have students research on the Internet for the sounds of a human heart or the hearts of other animals. (Students can also use Google.com to search for "normal heart sound.") Alternatively, record human heart sounds from the Internet and play the recording for the class.

c) Discuss with the class whether the recorded sound is similar to or different from what they expected, and whether it is similar to or different from the sounds they made on the drum.

d) Ask students to suggest reasons why the recording might differ from what they were expecting. (E.g.: They may not have heard a heart before; recordings are louder or more detailed than they have heard before; other recordings may not be as accurate; etc.)

e) Have students use a drum to make sounds like the recorded heart sounds.

2. BUCKETS OF BLOOD

a) Give students a tennis ball and ask them to see how many times they can squeeze it in a minute with one hand. (Younger students may need to use two hands.) Beat a drum approximately once per second, and ask students to see if they can squeeze in time to the beat.

b) Ask students to describe how much effort the squeezing takes, and explain that the effort is similar to that of the heart in pumping blood, but the heart pumps without stopping, 24 hours a day.

c) Have students squeeze the ball at faster and slower rates and compare the amount of energy each takes.

d) Demonstrate the volume of blood the heart pumps using the following procedure, either as a teacher-led demonstration or with student volunteers.

   i) Use the measuring spoons to measure about 80 ml of water into a calibrated cylinder or measuring cup. Explain that 80 ml is approximately how much blood an average adult heart pumps in each beat.

   ii) Use the syringe to measure a similar amount into a bucket 72 times. Explain that the volume is approximately how much blood the heart pumps by beating 72 times a minute, the average adult heart rate. (It's about 85 beats per minute for a 12-year-old.)

   iii) Measure the resulting volume of water. (It should total approximately 5.76 litres.) Have students suggest reasons why the volume is more or less than 5.76 litres. (E.g.: The amounts of water pumped were inaccurate because the measurements were approximate, the syringe is hard to measure with, the counting could be mistaken, etc.)

e) Give students copies of Handout 5.1, "Buckets of Blood," and have them work out the calculations of the amount of blood the heart pumps. Discuss the conclusions students draw from their calculations.

Answer Key for Handout 5.1: 1: 80 ml; 2: 72 times; 3: 80 ml X 72 beats = 5,760 ml or 5.76 litres; 4: 5.76 litres X 60 minutes = 345.6 litres; 5: 345.6 litres X 24 hours = 8,294.4 litres; 6: 8,294.4 ÷ 375 litres = 22.1 tubs.

Materials:
- tennis balls, one per student if possible
- a drum
- OPTIONAL: recording of human heart sounds and playback equipment
- syringe or turkey baster
- measuring spoons
- 100 ml or larger calibrated cylinder or measuring cup
- 10 litres of water (coloured red with food colouring if possible)
- empty 10-litre or larger bucket
- copies of Handout 5.1, "Buckets of Blood," for each student

Time required:
one lesson

Level of difficulty:
simple

Materials:
- a clear container holding approximately one litre of water (coloured red with food colouring if possible)
- 125 ml of sugar
- stirring stick
- threads tied to stick
- copies of Handout 5.2, "Sugar Overload," for each student

Time required:
two lessons

Level of difficulty:
simple

For a detailed explanation of how the pancreas regulates blood sugar, see the Teacher's Introduction.

3. SUGAR OVERLOAD

a) Give students a copy of Handout 5.2, "Sugar Overload", and have them use it to record their observations. Show students a clear container with approximately one litre of water (or water coloured red with food colouring). Ask students to predict what will happen when sugar is added to the water. (The sugar will dissolve.)

b) Add approximately 125 ml of sugar and stir it into the water until it dissolves. Ask students what bodily process this is like. (Digestion of food in the stomach, and absorption of nutrients into the blood.)

c) Suspend several threads in the container from a stick and ask students to predict what will happen. (The sugar will form crystals on the thread.) Have students describe the steps, draw the set-up on Handout 5.2, and write their prediction about what will happen. Leave the container in an open, warm area for several days until crystals form.

d) Have students describe the changes they can observe after several days. Compare the results with the students' predictions. Remove the crystals from the container.

e) Ask students what bodily process the demonstration is like. Explain that, while different in important ways, the process has some similarities to the way the pancreas works in the body. The pancreas does not form crystals or remove sugar from the blood, but it does allow the body to use sugar that is carried by the blood. It helps maintain a steady amount of sugar for cells in the body to use. Without its work, the amount of sugar rises and falls uncontrollably. When the pancreas cannot control the right level of sugar in the body, the result is a disease known as diabetes.

f) Have students describe or draw the results of the demonstration, and write on the handout one way that the string in the demonstration is similar to, and one way it is different from, the pancreas.

4. JIGSAW READING

a) Divide the class into groups of three, and give the students in each group a copy of either Handout 5.3, "Heart health," or Handout 5.4, "Diabetes."

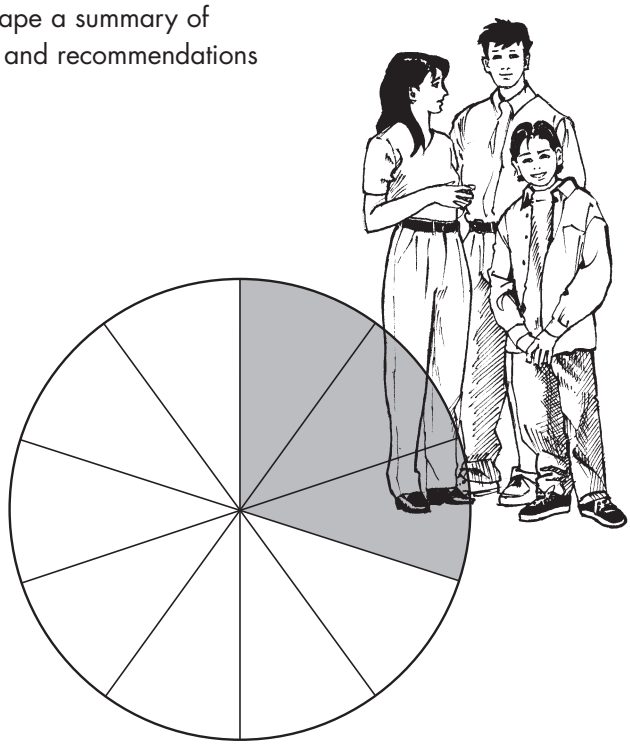
b) Have the students in each group read the first paragraph of the handout. Have them check with each other and explain to each other any part that one member of the group does not understand. Have a member of each group ask two quiz questions to the others and explain anything that is not clear.

c) Have each student of each group read one of the next three sections of the handout, note several key facts, and in turn explain the key facts to the other members of the group. Have them ask two quiz questions to the others and explain anything that is not clear.

d) Have each group note at least five key facts from their handout, and present them in a report to the class. Have different groups that read the same handout compare their reports with the others, and add any missing facts.

e) After the class has heard about both handouts, have the class list things that were similar and things that were different in the two handouts and summarize them in a Venn diagram. Have the class make recommendations for healthy living based on the handouts, and add any additional details they can.

f) Have students write, draw or audiotape a summary of facts on heart disease and diabetes and recommendations to prevent them.



Materials:
- copies of Handout 5.3, "Heart health," for each student
- copies of Handout 5.4, "Diabetes," for each student
- writing supplies

Time required:
one to two lessons

Level of difficulty:
moderate to advanced

What I Know / My Learning

Materials:
- copies of Handout 5.5, "Diabetes, Stroke and Heart Disease in Aboriginal Communities," for each student
- a drum

Time required:
one to two lessons

Level of difficulty:
moderate to advanced

5. COMMUNITY

NOTE: This activity may be particularly sensitive for students who have cardiovascular disease or diabetes personally or in their families. Refer to the Teacher's Introduction for suggestions on ensuring that all students are able to discuss the subject comfortably.

a) OPTIONAL: Have students talk to family or community members to ask if they know anyone with heart disease and diabetes in the community, how the disease has affected them, and if the student may talk about the illness at school.

b) Invite any students who are willing to describe someone they know who has had a heart attack or stroke, and how the disease has affected them.

c) Invite any students who are willing to describe someone they know who has diabetes, and how the disease has affected them.

d) Ask the class to name some ways that balance is a factor (among others) in controlling heart disease and diabetes. If necessary, prompt them with questions such as the following:
- How did balance in the past help keep people more healthy? (E.g.: High energy foods were balanced with high energy activity.)
- How does balance help explain diabetes, stroke and heart disease in some Aboriginal and non-Aboriginal communities today? (E.g.: High energy foods and low energy activities are imbalanced, and create a risk for diseases.)
- How does balance help to understand diabetes? (E.g.: One form of diabetes results when sugar in food eaten is not in balance with sugar used in physical activity.)
- How can balance help people reduce diabetes, stroke and heart disease? (E.g.: People can help keep in balance by choosing to live a healthy life with healthy eating, active living and avoidance of substance abuse.)
- How does the balance needed to make a good drum help people stay healthy? (E.g.: When people hear the clear sound of a balanced drum, it reminds them of the need for balance in their life.)

e) Have a group discussion with the students about how they can engage their communities in reducing chronic diseases like heart disease and diabetes.

- What could the community do to provide more balanced foods at community gatherings? (E.g.: Include a variety of low-fat, low-sugar and low-salt foods; include foods from all four food groups.)
- What could the community do to support people with heart disease or diabetes? (E.g.: Offer a choice of low-fat, low-sugar and low-salt foods; join them and help them have fun when they do physical activities.)
- What could the community do to help people live an active life? (E.g.: Organize a variety of physical activities throughout the year; promote walking.)
- What could the community do to avoid cigarette smoke and use of other substances that harm the body? (E.g.: Offer help to people who want to stop using cigarettes or other substances; hold stop-smoking programs; have smoke-free areas in all buildings; help people take part in healthy activities.)
- Have students organize a class project to contact a community organization and discuss ways that the community can promote healthy activities.

Closing the Circle

- Give students a copy of Handout A, "Drum Face" (see Appendices), or have them draw a circle to represent the blank face of a drum. Have them draw a design for the face of a drum that illustrates what they know about diabetes, stroke and heart disease. Have them save their design, along with any notes or other materials from the lesson, in their portfolio.

- Have students discuss their design with their families and invite students' families to add to their portfolio any images or stories about how stroke and heart disease have affected the family.

- Have students use Handout C, "Goal-setting" (see Appendices), to set a personal goal related to avoiding diabetes, stroke and heart disease and monitor its achievement over a period of time.

Extension and Integration

- Have students use a search engine to search for graphics of the heart and pancreas on the Internet.

- Have a local medical practitioner visit the class to describe heart disease and diabetes, their causes and strategies to reduce them.

- Have students record questions and answers or draw cartoons with speech bubbles demonstrating ways to offer healthy food choices in a respectful way to people with heart disease and diabetes.

- Point out that the health guidelines apply equally to people with disabilities, and that everyone can live a healthy life by following the guidelines as much as possible. Have students discuss how they and the community can help people with disabilities keep a healthy mind and body.

5 What I Know / My Learning

- To assess student learning of factual information, have them prepare summary reports from the factsheets and other research. Identify any areas that need teaching reinforcement.

- Have students report to their families on heart disease and diabetes in the community and ways to prevent it. Have their parents evaluate or comment on their presentations with a home checklist.

Evidence for Assessment

- Monitor class discussion to ensure students can describe the sound of a heartbeat and simulate it on a drum.

- Monitor the tennis ball activity to ensure students can locate the heart. Monitor class discussion and review student handouts to ensure they can describe and calculate the volume it pumps.

- Monitor class discussion and review student handouts to ensure they can state how the crystallization demonstration is like and unlike the effect of diabetes.

- Monitor class presentations and review student summaries to ensure they can explain key facts about diabetes, stroke and heart disease, and recognize that similar strategies can reduce each disease.

- Monitor class discussion to ensure that they can describe the prevalence of diabetes, stroke and heart disease in Aboriginal communities, and suggest strategies communities can take to reduce it.

What I Know / My Learning

5

Home Connections

Have students take home the letter on the following page and read it to their families or others in the community. Ask them to describe to their families or others in the community what they learned about diabetes, stroke and heart disease.

Dear Parents, Guardians and Family,

Our class has learned some important information about diabetes, stroke and heart disease. We learned that we can reduce these serious diseases in our community by living a healthy, balanced life.

Since health involves home as well as school, you can help your child's health and learning by doing these activities with your child:

- Ask your child to tell you three ways that people can reduce diabetes, stroke and heart disease in the community. The three best ways are:
  - Eat a variety of healthy foods.
  - Live an active life.
  - Avoid cigarette smoke and other harmful substances.
- Ask your child to read some important facts from the handouts on diabetes, stroke and heart disease.
- Tell your child a story about a time you or a member of your family used traditional or scientific knowledge to protect your health.

Your child is collecting information about diabetes, stroke and heart disease in a portfolio at school. If you would like to add family stories or pictures to your child's portfolio, we would be honoured to include them.

Your notes about your child's learning:

HANDOUT 5.1

BUCKETS OF BLOOD

Name: _____ Date: _____

A human heart really sticks to the beat. The heart of an average adult beats 72 times per minute. Each heart beat helps pump blood to every part of the body. Each beat pumps about 80 millilitres of blood.

1. For an average adult, one heartbeat pumps _____ millilitres (ml) of blood.

2. On average, a heart beats _____ times in one minute.

3. How much blood will an average heart pump in one minute?
   _____ ml X _____ beats per minute = _____ ml per minute
   or _____ litres per minute
   (Hint: divide ml per minute by 1000 to get litres per minute.)

4. How much blood would an average heart pump in an hour?
   _____ litres per minute X _____ minutes per hour = _____ litres per hour

5. How much blood would an average heart pump in a day?
   _____ litres per hour X _____ hours per day = _____ litres per day

6. A bathtub holds about 375 litres. How many bathtubs full of blood would an average heart fill in a day?
   _____ litres per day ÷ _____ litres in a tub = _____ tubs per day

7. What conclusions can you draw from your observations about your heart?

_____

_____

HANDOUT 5.2

SUGAR OVERLOAD

Name: _____ Date: _____

The pancreas is an organ of the body. It helps control the amount of sugar in the blood. It does not remove sugar from the blood. It lets the body use the sugar when the body needs it. In some people, the pancreas does not work well. They cannot control the amount of sugar in the blood. They have a disease called diabetes.

Describe or draw the materials for the sugar demonstration.

What do you predict will happen to the sugar dissolved in the water?

_____

_____

_____

_____

Describe or draw what you observe at the end of the demonstration.

One way the string in this demonstration is similar to a pancreas is:

One way the string in this demonstration is different from a pancreas is:

HANDOUT 5.3

HEART HEALTH

Name: _____ Date: _____

Your heart is like a drum beating a rhythm in your chest. It is also like a pump moving blood through your whole body. And, like a pump, you have to look after it to keep it working smoothly.

The heart

Make a fist with one hand, and wrap the other hand around it. That's about the size of your heart. If you hold the fist around the centre of your chest, you can see where the heart is located. Sometimes, when your heart is beating hard, you can feel it there.

The heart is like a hollow ball with four parts. When the heart muscles squeeze, the blood inside squirts out. The blood runs through arteries, like water running through a hose. The arteries branch off to every part of the body. The branches become smaller and smaller. The smallest ones, called capillaries, connect to veins. Veins are the tubes that return the blood to the heart.

Blood picks up nutrients from the food you eat. When the blood flows through the lungs, it picks up oxygen from the air you breathe. It carries the oxygen and nutrients around the body. Your body uses them for energy. The blood then picks up wastes like carbon dioxide. In the lungs, it exchanges the carbon dioxide for oxygen, and you breathe out the carbon dioxide.

Heart attack and stroke

If an artery gets injured or blocked, it cannot deliver oxygen and nutrients. The part of the body it goes to can die. This is what happens in a heart attack or stroke. In a heart attack, an artery that brings blood to feed the heart muscle gets blocked. Part of the heart then becomes weak or dies. A stroke is similar. An artery that feeds the brain gets blocked, and part of the brain dies.

In Canada, more Aboriginal people get heart disease and stroke than other Canadians. But scientists now know that there are ways to avoid heart disease and stroke.

To avoid heart disease and stroke

- Live an active life. Get active play for at least 60 minutes a day. Play until you are breathing fast and using all your muscles.
- Eat healthy meals. Choose a variety and balance of foods. Follow the guidelines in Canada's Food Guide to Healthy Eating or the Native Food Guides.
- Live smoke-free. Avoid cigarette smoke and other harmful substances.

Young people can avoid heart disease and stroke later in life by following the guidelines now. If you do, you will help your community and yourself live a healthy, balanced life.

HANDOUT 5.4

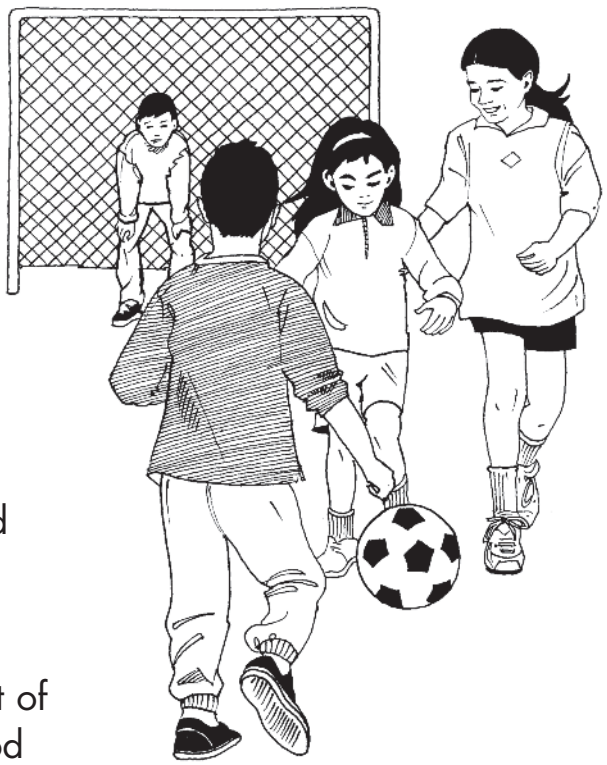
DIABETES

Name: _____ Date: _____

Why do people eat? One important reason is to get energy. When people eat, they digest food. The food changes into types of sugar that dissolve in the blood. The blood carries the sugar through the body, so the parts of the body can use it for energy. That's how your hands get energy to play, your feet get energy to run, and your heart gets energy to beat.

The pancreas

The pancreas is an organ near the stomach. You can use your thumb to see where it is. Place your left thumb below your ribcage and toward the left side of your body. Your pancreas is in the same place. It's about the same size and shape as your thumb.



The pancreas makes a substance called insulin. Insulin helps your body use the sugar in the blood. It also helps the body store sugar if the body does not need it right away.

Sometimes the pancreas stops working properly. It does not make the right amount of insulin. Then, the body cannot use the blood sugar for energy. The sugar remains in the blood. This can make people feel very sick. They can become very tired and thirsty. They may have to go to the bathroom a lot. They have a disease called diabetes.

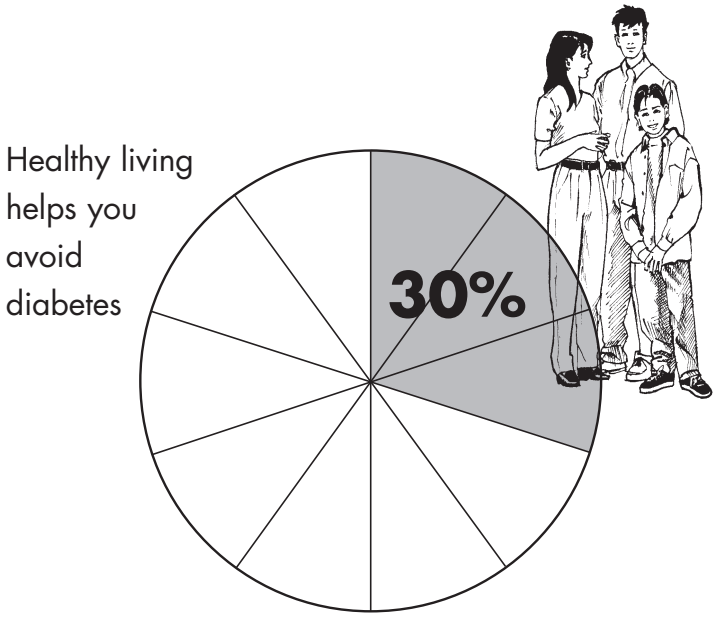
Two types of diabetes

Some people with diabetes cannot make any insulin. They must take insulin with a needle. If they are very careful what they eat, the insulin they take works better.

Other people can make a little insulin. They still have diabetes, but they may not need to take insulin with a needle. They must be very careful what they eat, and they must get exercise through the day. This helps them control their weight and their blood sugar.

About 20 to 30 per cent of Aboriginal people get the second type of diabetes as they grow older. Diabetes is more common among Aboriginal people than among other Canadians. No-one knows why.

But scientists know now that people can often avoid diabetes. If young Aboriginal people keep a healthy body weight, they can often avoid diabetes.



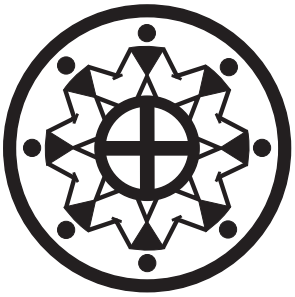
To avoid diabetes

- Live an active life. Get active play for at least 60 minutes a day. Play until you are breathing fast and using all your muscles.
- Eat healthy meals. Choose a variety and balance of foods. Follow the guidelines in Canada's Food Guide to Healthy Eating or the Native Food Guides.
- Live smoke-free. Avoid cigarette smoke and other forms of substance abuse.

Young people can avoid diabetes later in life by following the guidelines now. If you do, you will help your community and yourself live a healthy, balanced life.

Part 6. Culminating Activity: My Drum

Overview



The class reviews the Know-Wonder-Learn charts from Unit One and summarizes new learning. Students review their knowledge and state how it relates to their spiritual, emotional, physical and mental lives.

The Big Idea

By reviewing their activities, students can discover what they have learned, make it relevant to their own lives and use it to change future behaviours.

Curriculum Areas

Personal Planning, English Language Arts, Social Studies

Outcomes

Following this activity, students will be able to:

- Summarize what they have learned about diabetes, stroke and heart health;
- List ways that healthy living is relevant to different aspects of their lives.

6 Culminating Activity: My Drum

Materials:
- Know-Wonder-Learn charts from Unit One
- writing supplies

Time required:
one lesson

Level of difficulty:
simple

Suggested Approach

Choose activities from these suggestions that are appropriate for your class.

1. KNOW-WONDER-LEARN REVIEW

a) Have students re-read the Know-Wonder-Learn charts from Unit One. With the class discuss whether the lessons on diabetes, stroke and heart health have shown any of the information they listed initially to be correct or incorrect. Have students correct any incorrect information.

b) Review the items that students said they wanted to know about drums and healthy living. Ensure that any questions that can be answered from the handouts are answered. Assign students to research answers to any questions they still have, and report their answers back to the class.

c) Ask students to state what they have learned about drums and how the drum can help people to live a healthy life. Have them write what they have learned on sheets of paper they can add to their portfolio. If necessary, prompt students with questions such as the following:
- Why is balance important in making a drum? (E.g.: All the parts must be in balance for the drum to sound right; the drum-maker must feel in balance to keep the drum in balance.)
- Why is balance important in a healthy life? (E.g.: Food choices must be in balance; physical activity is part of a balanced life; people, especially those with diabetes, must balance the amount of food eaten with the level of physical activity; etc.)
- How can a drum help people stay healthy? (E.g.: The clear sound of a balanced drum can remind people of the need for balance in life.)

Culminating Activity: My Drum

2. MY HEALTHY LIFE

a) Draw a large circle on the chalkboard, with a smaller one inside it and four smaller ones at the four directions (as in Handout 6.1, "My Healthy Life"). Write "My Self" in the centre circle and explain that the diagram will summarize the learning from the diabetes, stroke and heart health lessons.

b) In the "East" circle, write "My World" and have students list ways that they can learn about healthy living from animals, from nature and from their communities.

c) In the "South" circle, write "My Feelings" and have students list ways that feelings of calmness and stress affect their life.

d) In the "West" circle, write "My Body" and have students list ways that active living and balanced nutrition help keep their bodies healthy.

e) In the "North" circle, write "My Learning" and have students list ways that they can use their knowledge about diabetes, stroke and heart disease to keep themselves and their community healthy.

f) Have students identify ways that the items they listed are linked to each other, and draw lines on the diagram linking related items.

g) Give students a copy of Handout 6.1, "My Healthy Life." Have them write their own name in the circle at the centre, and fill in the connections relating healthy living to their own spiritual, emotional, physical and mental life, and any other factors they think of.

Materials:
- copies of Handout 6.1, "My Healthy Life," for each student
- writing supplies

Time required:
one lesson

Level of difficulty:
moderate

6 Culminating Activity: My Drum

Closing the Circle

- Have students review the portfolios of their drum face designs, goals and other materials.
- Have students design a final drum face to represent what is most important to them about healthy living. Have them paint their design on large sheets of paper. In a conference, have students compare the designs from earlier lessons with the final design and explain orally or in writing what their design means and what differences they made from the earlier designs.
- Have the class plan a presentation to parents and others in the community, showing their drums and dances, demonstrating games they enjoy, and offering a display and selection of healthy foods.

Evidence for Assessment

- Monitor class discussion and review student summaries to ensure students can state a variety of facts about living a healthy life and avoiding diabetes, stroke and heart disease.
- Monitor class discussion and review student handouts to ensure students can list a variety of ways that healthy living is relevant to their spiritual, emotional, physical and mental lives.
- In a student conference, have students identify new learning about healthy living and explain how their drum face design reflects their learning.

Home Connections

Have students take home the letter on the following page and read it to their families or others in the community. Ask them to describe to their families or others in the community things they learned about healthy living. If your class will have a presentation to parents showing their drums and designs, add an invitation giving details to parents.

DEAR PARENTS, GUARDIANS AND FAMILY,

Our class has finished our lessons about healthy living and avoiding diabetes, stroke and heart disease. We learned that healthy living is a balance of many different things in the home, in the community and in a student's personal life.

Since health involves home as well as school, you can help your child's health and learning by doing these activities with your child:

- Ask your child to tell you some things that we learned in class.
- Ask your child to explain the page called "My Healthy Life."

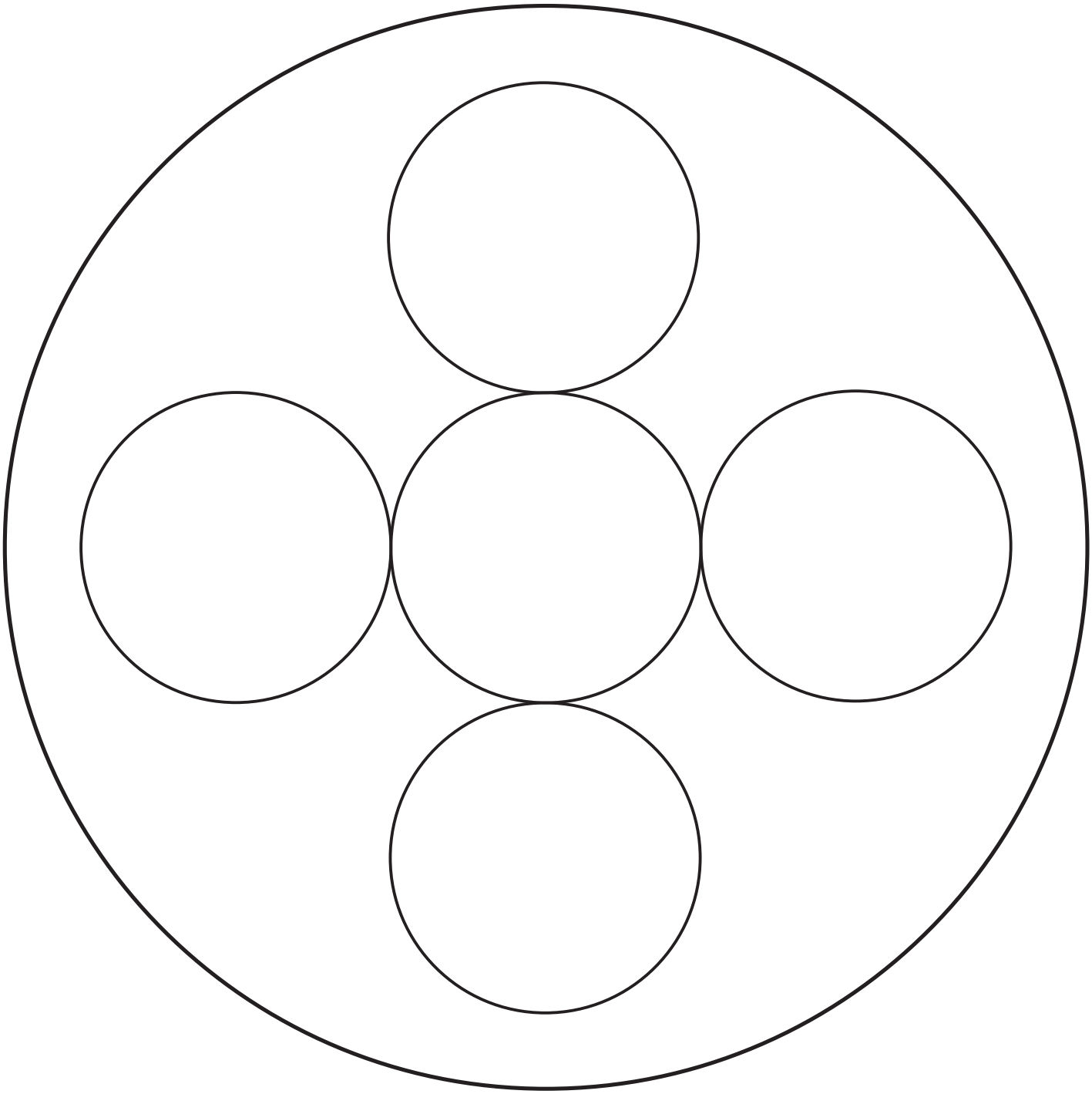
Your child has been collecting information about the community and health in a portfolio at school. If you would like to see your child's portfolio and talk about it, we would be honoured to have you visit our class one day after school.

Your notes about your child's learning:

HANDOUT 6.1

MY HEALTHY LIFE

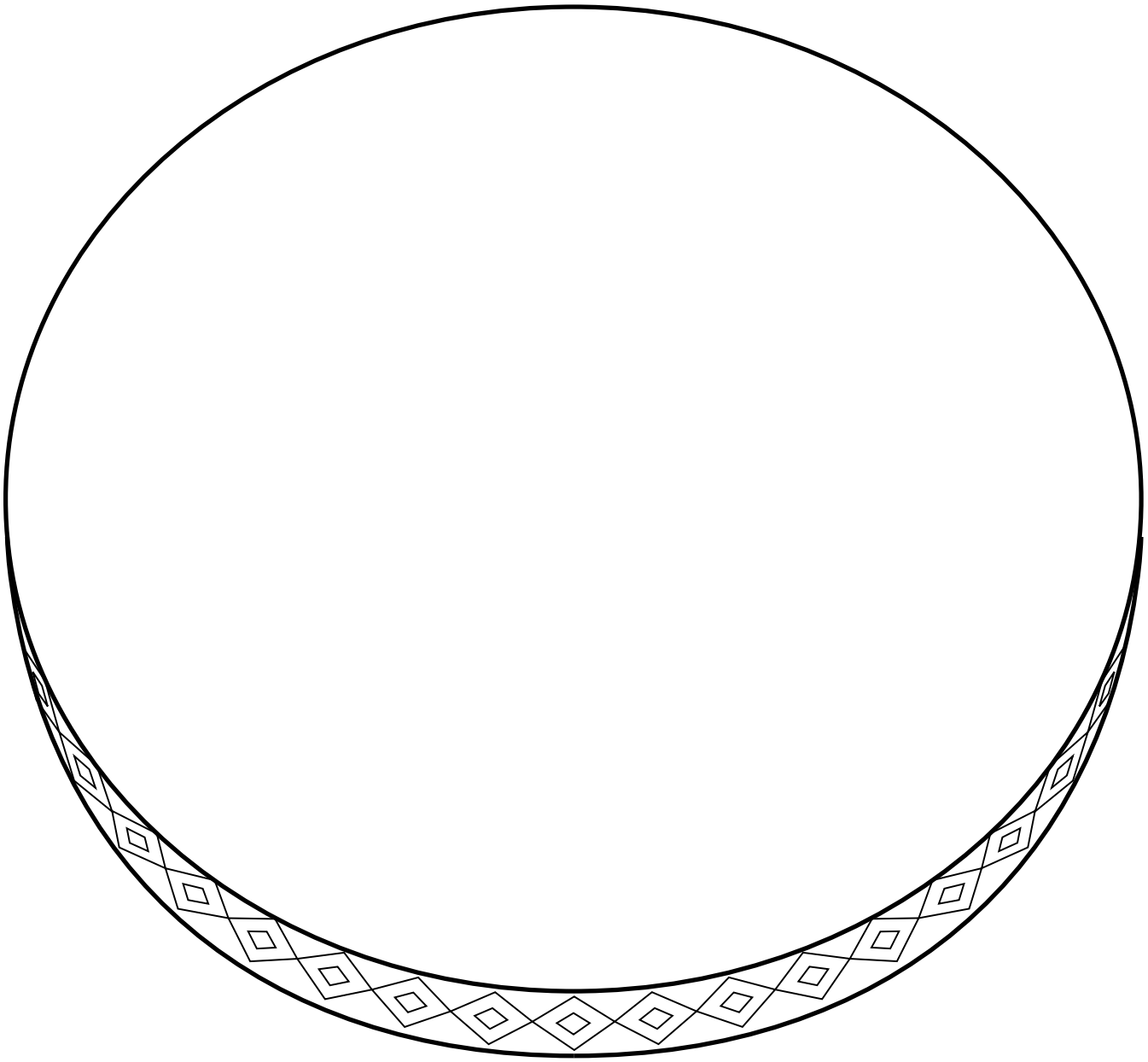
Name: _____ Date: _____



HANDOUT A

DRUM FACE

Name: _____ Date: _____



Appendix B: Traditional Aboriginal Stories from B.C.

Most public and school libraries in B.C. contain several collections of stories from B.C.'s First Nations. Some representative collections are listed below. Teachers can select stories from these or other collections to use in the activities.

- *Children of the Thunderbird.* Edward C. Meyers; illustrated by Matthew Varey. Surrey, B.C.: Hancock House, c1994. ISBN 0888392648.
- *Images of a People: Tlingit Myths and Legends.* Mary Helen Pelton and Jacqueline DiGennaro; illustrated by Jennifer Brady-Morales (Ts'anak). Englewood, CO.: Libraries Unlimited, 1992. ISBN 0872879186.
- *Ktunaxa Legends.* Compiled and translated by Kootenai Culture Committee, Confederated Salish and Kootenai Tribes. Pablo, MT.: Salish Kootenai College Press; Seattle, WA: Distributed by University of Washington Press, c1997. ISBN 0295976608.
- *Kwakiutl Legends as told to Pamela Whitaker.* James Wallas. North Vancouver, B.C.; Blaine, WA.: Hancock House Publishers, c1981. ISBN 0888390947.
- *Kwulasulwut: Stories from the Coast Salish.* Ellen White. Nanaimo, B.C.: Theytus Books, c1981. ISBN 0919441041.
- K*wulasulwut II: More Stories from the Coast Salish.* Ellen White. Penticton, B.C.: Theytus Books, c1997. ISBN 0919441548.
- *Longhouse Legends.* Emerson N. Matson; illustrated by Lorance Bjorklund. Camden, N.J.: T. Nelson, 1968.
- *Neeka and Chemai.* Jeanette C. Armstrong. Penticton, B.C.: Theytus Books, 1991. ISBN 091944157.
- *Our Tellings: Interior Salish stories of the Nlha'kapmx people.* Compiled and edited by Darwin Hanna and Mamie Henry. Vancouver, B.C.: UBC Press, c1995. ISBN 0774805250.
- *Raven Steals the Light.* Drawings by Bill Reid with stories by Bill Reid and Robert Bringhurst. Vancouver, B.C.: Douglas & McIntyre, 1984. ISBN 0888944470.
- *Shuswap Stories: Collected 1971-1975.* Edited by Randy Bouchard and Dorothy I. D. Kennedy. Vancouver, B.C.: CommCept, 1979. ISBN 0888290489.
- *Son of Raven, Son of Deer: Fables of the Tse-shaht People.* George Clutesi; illustrated by the author. Sidney, B.C.: Grays Pub., c1967.
- *We-gyet Wanders On: Legends of the Northwest.* Saanichton, B.C.; Seattle, WA: Hancock House, c1977. ISBN 0919654975.

Appendix C: Goal Setting

Students must practice the fundamentals of goal setting to meet the outcomes of the Personal Planning Curriculum. Health education gives even very young students an opportunity to accomplish these outcomes in meaningful ways, such as making appropriate food choices, choosing active play and avoiding tobacco smoke.

Teachers have developed a variety of methods to teach goal setting and evaluation to primary students. The procedure that follows was developed by a Vancouver teacher with a high ESL Grade One/Two class. It allows students to set personal goals, identify strategies to reach their goals, evaluate their achievement and reflect on the experience. With a little preparation, students have become adept at using the form for a goal-setting activity.

(Adapted with permission from Bruce D. Horn, in *Assessment, Evaluation and Reporting in Personal Planning*, Vancouver School Board, compiled by June Scown, Dorothy Simons and Richard Zerbe.)

1. PREPARATION

- Introduce goal setting by discussing an example showing the steps in forming group goals. E.g.:
  - Identify a focus or problem, such as classroom safety.
  - Discuss with the class ways to make the classroom safer.
  - Have the class brainstorm safety rules and make a safety chart.
  - Use the safety chart to form group goals; e.g.: Students will walk when in the classroom.

- At a class meeting, discuss how to set personal goals by giving examples. E.g.: "I have a problem remembering everyone's name. My goal is to remember your names correctly."

- Have students work in pairs to practice setting individual goals.

- In a class meeting, list the students' goals on chart paper. If necessary, have students continue working in pairs with new partners until all students are able to identify problems and formulate goals.

- Write any new goals on the chart paper and display the chart on the classroom wall. Use the chart for reading and similar activities.

- Use the same procedure to have students identify strategies to meet their goals: model a personal strategy; have students work in pairs to identify strategies; write strategies on chart paper.

2. USING THE GOAL-SETTING FORM

- Give students copies of a goal-setting form such as the one that follows and work through the steps with the class.
- Refer to the suggested goals in the activities. Have students write a goal on the form. Students may copy a goal from the wall chart or make new goals.
- Have students write a strategy to meet the goal, copying from the wall chart if they choose. Have them draw the strategy to reinforce the idea.

3. IMPLEMENTATION AND EVALUATION

- Have the class choose an appropriate time frame for the goal activity. For some kinds of goals, it could be one day, although several days or a week gives students more time to identify progress and achieve success.
- At the beginning of each day, have students focus on their goal by reading and discussing it with a partner.
- At the end of the time period, have students discuss with a partner whether they achieved their goal and fill in their "report card" by colouring one of the five boxes, drawing stars, suns or happy faces, etc.
- Have a short conference with the student to discuss his or her evaluation. Have the student write a sentence reflecting on the experience (or write one at the student's dictation).
- Ask the student to consider if he or she should work on a new goal or the current goal in the next time period

HANDOUT C

SETTING GOALS

Name: _____ Date: _____

My goal is to:

My strategy: _____

What I will do to reach my goal

Write

Draw

My Report Card

1	2	3	4	5

What I think: _____

SETTING GOALS

Name: _____ Date: _____

My goal is to: Stop throwing my coat on the floor

My strategy: _____

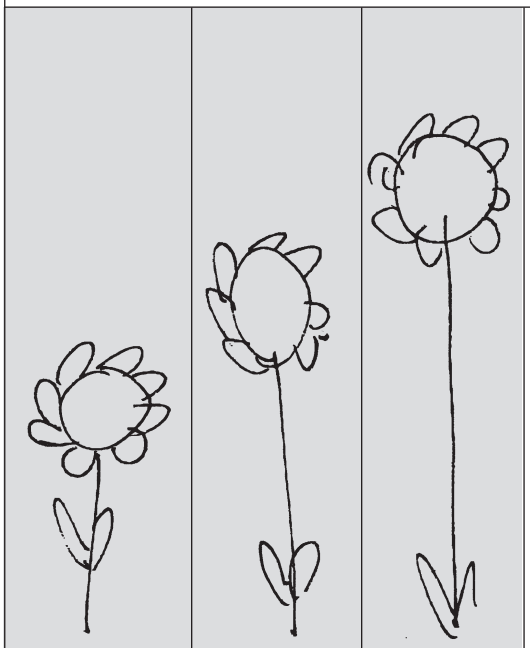
What I will do to reach my goal

Write

Check my coat at 10 o'clock

Draw

My Report Card



1	2	3	4	5

What I think: I didn't throw my coat on the floor

Appendix D: Glossary

Aboriginal – the people who were the first to live in an area; their customs and culture

addicted – dependent on something like tobacco or a drug

agility – ability to move quickly and easily

alternatives – choices between two or more things

animal – a living thing that can move on its own

anxiety – a worried or uneasy feeling

arteries – blood vessels that carry blood from the heart to other parts of the body

balance – to make two things even

bloodstream – the blood flowing in the body

blood sugar – the level of sugar in the blood, used as a test for diabetes

breathe – to draw air into the lungs and push it out

budget – a plan for spending or using money

calmness – peacefulness, not excited

cancer – a disease that grows in the body and destroys healthy parts of the body

capillaries – tiny blood vessels that connect arteries with veins

carbon dioxide – a gas formed when the body uses energy

ceremonies – things done on special occasions such as feasts

chemicals – substances

cigarette – a roll of tobacco for smoking

communication – passing information from one person to another

community – people who live together in one area

companionship – friendliness or living together with another person

connected – joined or linked to something

connection – something that joins or links

cooperation – working together

crystal – a clear substance with hard edges

dance – moving in time to music

determination – firmness in working to meet a goal

diabetes – a disease that prevents the body from using sugar dissolved in the blood

digest – to change food in the stomach so it can be used in the body

digestion – changing food in the stomach so it can be used in the body

disorder – a sickness or disease

dissolve – to break down or turn into a liquid

distracted – confused, to have someone's attention taken away

drum – a musical instrument that makes a sound when it is tapped

drumbeat – a tap on a drum

emotions – feelings such as happiness, sadness, love or anger

energy – strength or the ability to do something

environment – the things that surround something

favourite – something liked more than other things

feelings – sensations like pain, hunger, happiness or sadness

flavour – what something tastes like

food groups – foods that have something in common, like meats or vegetables

fruit – edible parts of a plant that are sweet

gas – something that is not solid or liquid

grain products – foods made of grains, such as flour or bread

healing – making things better

heart – a hollow muscle that pumps blood through the body

heart attack – a disease that weakens or kills the heart muscle

heart health – having a strong heart

heartbeat – one squeeze or thump of the heart

imagination – the power to invent things in the mind

instrument – something for making musical sounds

insulin – a substance that lets the body use sugar for energy

knowledge – what someone knows

label – a piece of paper showing the name of something

lung – the part of the body that breathes in air

margarine – a spread made of oils

milk products – foods made from milk, such as cheese and yogurt

movement – the act of moving

needle – a sharp hollow tube used inject medicines

nicotine – a poisonous substance in tobacco

nutrient – the parts of a food that the body can use

overload – too much of something

oxygen – the gas in air that people need to live

package – a wrapped up bundle of things

pancreas – the part of the body that makes insulin to help control diabetes

percussion – tapping one thing against another to make a sound

philosophy – important ideas about how to live well

physical – material things that people can see and feel

poison – a substance that is harmful or deadly

pretzel – a hard biscuit in the shape of a knot

principle – important rules or ideas

pulse – a beat in the arteries when the heart pushes blood through them

qualities – something about someone or something that makes them special

relax – to loosen up or take a break

relaxation – loosening up or taking a break

self-esteem – self-respect; a good feeling about yourself

serving – a helping of food

shelter – something that covers or protects from danger

simulation – a pretence or model

sinew – a tough cord that joins the muscles to the bones

sleeplessness – inability to get enough sleep

smoke – a cloud of burning gases; to breathe smoke from a cigarette

smudge – a traditional ceremony of burning herbs to show unity with nature

sodium – the substance that forms salt

spiritual – things that are not from the material world

stone – a small piece of rock

strategy – a plan for something

stroke – a brain injury caused when something blocks an artery to the brain

symbol – something that stands for something else

tar – a thick, sticky substance

teachings – knowledge that someone teaches

tenseness – feeling uneasy or unable to relax

tension – a feeling of stress or strain

thoughtfulness – being deep in thought or careful about others

tiredness – being tired or weary

tobacco – a plant with wide, flat leaves that can be dried and burned

tournament – a series of games

traditional – something from older customs or knowledge

vegetables – the edible parts of a plant (except fruit)

veins – blood vessels that carry blood from the body to the heart

vision – the ability to see; what someone sees

volume – the amount of space something takes up

worried – feeling troubled about something

worry – to feel anxious or uneasy

Appendix E: Resources

First Nations Organizations

First Nations Education Steering Committee

Suite 113 - 100 Park Royal South
West Vancouver, BC V7T 1A2
Phone: (604) 925-6087
Fax: (604) 925-6097
Website: www.fnesc.bc.ca
Email: fnesc@fnesc.bc.ca

A collective organization to facilitate First Nations support for one another in the area of education, and to communicate with both the federal and provincial governments to ensure that First Nations concerns are being addressed.

First Nations Schools Association

Suite 113 - 100 Park Royal South
West Vancouver, BC V7T 1A2
Phone: (604) 925-6087
Fax: (604) 925-6097
Website: www.firstnations-schools.bc.ca
Email: fnesc@fnesc.bc.ca

A non-partisan organization committed to promoting First Nations control of education, and to improving and supporting the development of quality and culturally appropriate education for First Nations students.

Assembly of First Nations

AFN HEAD OFFICE
TERRITORY OF AKWESASNE
55 Metcalfe Street, Suite 1600
Ottawa, ON K1P 6L5
Phone: (613) 241-6789
Toll-Free: 1-866-869-6789
Fax: (613) 241-5808
Website: www.afn.ca

BC Ministry of Education

ABORIGINAL EDUCATION BRANCH
Mailing Address: PO Box 9887, Stn Prov Govt,
Victoria, BC V8W 9T6
Physical Address: 5th Fl., 620 Superior St.,
Victoria, BC V8W 9T6
Phone: (250) 356-1891
Fax: (250) 356-1742
Website: www.bced.gov.bc.ca/abed
Email: EDUC.AboriginalEducation@gov.bc.ca
Website: www.bced.gov.bc.ca/abed/

BC Teachers' Federation

100–550 West 6th Avenue
Vancouver, BC V5Z 4P2
Phone: (604) 871-2283
Toll free within BC: (800) 663-9163
Fax: (604) 871-2294
Website: www.bctf.ca

Aboriginal Affairs and Northern Development Canada

AFFAIRES AUTOCHTONES ET DÉVELOPPEMENT DU NORD CANADA
25 Saint Clair Avenue East
Toronto, ON M4T 1M2
Phone: (416) 973-6234
Website: www.aadnc-aandc.gc.ca
E-mail: InfoPubs@inac.gc.ca

National Aboriginal Diabetes Assocaition

B1-90 Garry Street
Winnipeg, Manitoba R3C 4H1
Toll Free: 1-877-232-NADA (6232)
Fax: (204) 927-1222
Website: www.nada.ca
E-mail: diabetes@nada.ca

Seventh Generation Club

Suite 113-100 Park Royal South
West Vancouver, BC V7T 1A2
Phone: (604) 925-6087
Fax: (604) 925-6097
Website: www.seventhgenerationclub.com
Email: seventhgen@fnesc.ca

Appendices

Heart and Stroke Foundation - Area Offices

The staff in the area offices ensure support for all Foundation activities including recruiting and supporting volunteers, providing resource materials and acting as a contact within the community. For more informantion contact the office in your area.

PROVINCIAL OFFICE:

200 - 1212 West Broadway
Vancouver, BC V6H 3V2
Phone: (778) 372-8000
Toll-free Infoline: 1-888-473-4636
Fax: (604) 736-8732
Website: www.heartandstroke.bc.ca

AREA OFFICES:
Please visit our provincial website to get
full contact details for an area office near you.

Coastal Vancouver Area
Vancouver Island Area
Fraser North and East Area
Surrey Area
Kamloops Area
Kelowna Area
Prince George Area