TAKE YOUR HEALTH INTO YOUR OWN HANDS

NUTRITION EDUCATION UNITS
FOR SECONDARY LEVEL

BC DAIRY FOUNDATION
INTRODUCTION

The units in this program can be taught at any secondary grade level. They have also been designed to fit the Planning 10 curriculum. At the end of each unit, students can begin planning for their Graduation Portfolio as the assessment activities suggested can be collected as evidence to meet Portfolio requirements. A list of Portfolio organizers and aspects addressed is provided at the beginning of each unit. More specific aspects and organizers are also provided for each assessment activity.

CONTENT

<table>
<thead>
<tr>
<th>Unit 1: Do you think you're healthy?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson plan</td>
<td>3</td>
</tr>
<tr>
<td>Assessment activities</td>
<td>5</td>
</tr>
<tr>
<td>Case Studies Master for Learning activity 1</td>
<td>6</td>
</tr>
<tr>
<td>Case studies Discussion Key for learning activity 1</td>
<td>8</td>
</tr>
<tr>
<td>Teacher Backgrounder “Factors affecting health”</td>
<td>10</td>
</tr>
<tr>
<td>Teacher Backgrounder “Determinants of Healthy Eating in Youth”</td>
<td>11</td>
</tr>
<tr>
<td>Case study worksheet for learning activity 1</td>
<td>12</td>
</tr>
<tr>
<td>Student Master for learning activity 1</td>
<td>13</td>
</tr>
<tr>
<td>Student Master for learning activity 2</td>
<td>14</td>
</tr>
<tr>
<td>Super Size Me discussion guide</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit 2: How well do you think you eat?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson plan</td>
<td>19</td>
</tr>
<tr>
<td>Assessment activities</td>
<td>22</td>
</tr>
<tr>
<td>Teacher Backgrounder “Canada’s Food Guide to Healthy Eating”</td>
<td>26</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit 3: Thirst for Nutrition- Add Value to Your Choices</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Plan</td>
<td>28</td>
</tr>
<tr>
<td>Assessment Activities</td>
<td>30</td>
</tr>
<tr>
<td>Teacher Backgrounder “Health Impacts of Teen Beverage Choices”</td>
<td>31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit 4: Teen Years- A once in a lifetime chance to build bones</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson plan</td>
<td>32</td>
</tr>
<tr>
<td>Assessment activities</td>
<td>34</td>
</tr>
<tr>
<td>Recipes for calcium-rich snacks</td>
<td>36</td>
</tr>
</tbody>
</table>
UNIT 1: DO YOU THINK YOU’RE HEALTHY?

OVERVIEW

This lesson defines health and identifies factors affecting health, including nutrition. It also reviews factors influencing adolescents’ food choices.

Estimated time: 30-40 minutes.

LEARNING OUTCOMES

At the end of this unit, students will be able to:

1. Analyze factors that influence health (such as physical activity, nutrition, stress management, healthy sexual decision making…).
2. Evaluate the short-term and long-term effects of their health-related decisions on self, family, and community.
3. Develop a preliminary plan for how they will meet the Graduation Portfolio requirements.

Evidence may be used towards the Personal Health organizer of the Graduation Portfolio. This unit covers the following specific Portfolio aspects: 6.3, 6.4, and 6.5.

KEY CONCEPTS

- The World Health Organization (WHO) defines health as a state of complete physical, social and mental well-being and not merely the absence of diseases.
- Several factors affect our health. Some of these factors are the lifestyle choices we make, the environment we live in, our physical activity level and our food choices.
- Some of the factors influencing food choices are taste, availability, cost, family, religion, emotions, society, and media (articles, advertisements)... 

MATERIALS

- Case Studies Master (Who is Healthy? p.6-7) and Worksheet (p.12)
- Case Studies Discussion Key for Teachers (p.8-9)
- Teacher Backgrounder: “Factors Affecting Health” (p.10)
- Teacher Backgrounder: “Determinants of Healthy Eating in youth” (p.11)

PROCEDURE

LEARNING ACTIVITY 1: What affects health?

a. Begin by asking the class: Do you worry about your health? Why or why not?

b. Divide the class into six groups. Give each group a case study worksheet; assign a case study to each group. Based on the guidelines provided in the worksheet, ask each group to discuss the case. Let them present the case to the rest of the class by either reading it or role-playing it and assess whether the person described in the case study is healthy and why.

This activity allows the students to share their different opinions about health with their classmates. *(Please refer to Case Studies Master and Discussion Key).*
UNIT 1: DO YOU THINK YOU’RE HEALTHY?

c. Use the answers to the case studies to make a list of factors affecting health on the student master provided (p.13). Ask students to add to the list. Refer to the Teacher Backgrounder on “Factors Affecting Health” for a more extensive list of factors. Emphasize nutrition as one important factor for achieving and maintaining health.

d. Summarize the activity by reading the WHO definition of health (refer to Key Concepts section).

LEARNING ACTIVITY 2: What influences your food choices?

a. Ask students to think about what they eat and drink at home, at school, or when they go out. Then ask them about the factors that influenced their food choices.

b. List these factors in the student master provided (P.14).

The purpose of this activity is to help students become aware of all these factors in order to make realistic plans for change in their food choices. Refer to the Teacher Backgrounder on “Determinants of Healthy Eating in Youth” for additional factors.

ASSESSMENT ACTIVITIES
Distribute the assessment activities sheet to your students and have them select one or more assignment or project. A discussion guide with discussion questions and research ideas is provided for the “Super Size Me” activity (p.15-18).
UNIT 1: DO YOU THINK YOU’RE HEALTHY?

ASSESSMENT ACTIVITIES

- Prepare a written Report or a presentation on one of the following topics or on a health topic of your choice:
  - Is healthy food more expensive? Research the cost of foods at school cafeteria, farmers’ market, grocery stores or convenience stores.
  - Healthy foods don’t taste good. Do you agree or disagree and why? Give specific examples supporting your opinion.
  - Use personal experience to support the WHO definition of health.
  - Survey/map your community’s access to food. How easy is it for people to get the foods they need to meet their daily needs?

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<thead>
<tr>
<th>Portfolio Organizers addressed</th>
<th>Portfolio aspects addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Health</td>
<td>6.3, 6.4, 6.5</td>
</tr>
<tr>
<td>Community Involvement &amp; Responsibility</td>
<td>2.2</td>
</tr>
<tr>
<td>Employability Skills</td>
<td>4.4</td>
</tr>
<tr>
<td>Information Technology</td>
<td>5.1, 5.2, 5.3, 5.4</td>
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- Select a food or beverage advertising from TV, or a magazine. Prepare a critical analysis of the ad.

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- After watching as a class group “Super Size Me”, discuss critically the documentary with your teacher.

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- Prepare a survey of local foods available in your grocery store. Explore the BC Agriculture in the Classroom website: [http://www.aitc.ca/bc](http://www.aitc.ca/bc) and refer to Grow BC (available from AITC) as a resource.
UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Case Studies Master
Learning activity 1

WHO IS HEALTHY?

Case Study #1
Josh is very popular since he has been elected most handsome guy of the year. All the girls would die to go out with him. He goes out with a new girlfriend every week. Josh works out a lot to maintain his look. He spends 2 hours at the gym everyday and does a lot of weight lifting. To maintain his muscles, he eats a lot of high protein foods such as milk, eggs, fish, chicken and meat. He also drinks a lot of water. Josh goes 3 times a week to a sun-tanning salon. During weekends, he hangs out with his friends in nightclubs and pubs and drinks a lot. They spend all night dancing and drinking. They also occasionally smoke pot. On Sundays, Josh goes hiking or biking very early in the morning, having only slept a few hours. Then another week starts all over again!

Case Study #2
Ian is a 15-year-old boy who suffered injuries from a motor vehicle accident one year ago. Since then, he has been paralyzed and needs a wheelchair. Although this accident has been very traumatizing, Ian has been able to adapt with the help and support of his family and friends. His parents have redesigned the house to make it wheelchair accessible. He went to physical rehabilitation sessions and has learned to rely on himself for his everyday tasks. Ian is very happy he is still alive and enjoys each day of his life.

Case Study #3
Sarah has always been an overweight child. After so many failed diets, she finally stopped focusing on an ideal weight. All she wants is to feel good about herself and enjoy eating. She tries to eat a balanced diet every day but indulges in her favourite dessert, a chocolate sundae, from time to time. She knows that this is a relatively high calorie choice but since she only has it occasionally, she does not feel guilty about it. Sarah attends yoga classes twice a week, and goes roller-blading in the neighbourhood everyday after school. She also goes to the swimming pool on weekends. Ever since she has been happy about her body shape, she has been able to be more outgoing and has met a lot of new friends.

Case Study #4
Pamela is so afraid of gaining weight that she weighs herself every morning. If she has gained a few ounces, she starts a diet to lose the “extra” weight. Pamela also runs six miles every day after supper to burn “extra” calories. Lately, Pamela has become so careful about her food intake that she has stopped eating out with her friends on weekends. She does not need the extra fat and calories! So she stays home and listens to music instead. Recently, she has started smoking. It makes her feel less hungry and at least this is something she can still do with her friends.
Case Study #5
Sean is a very good grade 10 student. He manages to organize his time in order to both study and enjoy different activities with his friends. He and four other boys play basketball every day in his backyard. On Saturdays, they all go skateboarding. On Sundays, he goes hiking or biking with his family. Sean knows that keeping in good shape requires good nutrition. So he makes sure he eats a healthy balanced diet. Lately, Sean has started thinking about his future and about what he wants to be. His father is a very successful lawyer. He wants him to go to law school. Sean is not sure about that. He has other plans in mind but does not feel he can discuss them with his parents. This has been affecting his morale and he has not been able to sleep very well lately.

Case Study #6
Bob is a very successful businessman. He now owns three multi-million dollar companies. Since he doesn’t trust anyone, he has to manage all three by himself. He wakes up every day at 5 am to get his physical workout in his personal gym. Then he takes a shower, grabs a cup of coffee and heads to his first company by 7 am. He spends the whole morning there, and then has a quick lunch in a near-by restaurant on his way to the second company. He spends another 5 to 6 hours there and then heads to the third company in the late afternoon. By that time, Bob is having his sixth cup of coffee to keep awake during the evening, which he spends reviewing documents with his personal assistant. He also schedules board meetings every Monday that go very late at night.
When he gets back home, it is already 11 pm. His kids have gone to bed. His wife is still out at a dinner or another social event. Bob goes directly to bed at midnight to get ready for the next day.
Bob only spends time with his family on weekends, if he’s not gone on a business trip. Bob’s wife is feeling very alone and unhappy. Although she knows Bob works really hard to make more money and provide for the family’s needs, she cannot take it anymore and is considering divorce.
UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Case Studies Discussion Key
Learning Activity 1

WHO IS HEALTHY?

The case studies are designed to trigger discussions on several aspects of health such as balanced life, body image, lifestyle and social support. Answers to the case studies are by no means comprehensive and are only the beginning of a long list that can be expanded on in the classroom. Answers may vary, depending on each one’s point of view.

Case study #1
- **Protective factors**: being popular and good looking (improves self-esteem and confidence), physical activity, drinks a lot of water.
- **Risk factors**: Lots of sexual partners, excessive exposure to UV rays, drinking alcohol, substance abuse, lack of sleep on weekends.
- **Conclusion**: Despite a very active lifestyle and a high self-esteem, Josh has a lot of unhealthy behaviours and would not be considered a healthy person.

Case study #2
- **Protective factors**: strong family and friends’ support, independent for activities of daily life, safe physical environment, happy and thankful for being alive.
- **Risk factors**: physical disability that is not directly affecting his health.
- **Conclusion**: Ian is a very happy person who managed to adapt to a very traumatic experience, thanks to the help of his friends and his family. He can be considered healthy, despite his physical disability.

Case study #3
- **Protective factors**: satisfied with her body shape, doing stress management, fit, very active, lots of friends, nutritional balance.
- **Risk factors**: overweight?
- **Conclusion**: Although she is overweight, Sarah is happy about her weight and is very fit. So she might be considered a healthy person. Ideal weight is not always a good indicator of health. Some people might be thin but unfit compared to overweight persons.

Case study #4
- **Protective factors**: ideal weight?
- **Risk Factors**: excessive exercise, focus on body weight, social isolation, and smoking to decrease hunger feeling.
- **Conclusion**: Pamela has an extremely distorted perception of health, with too much focus on weight and food choices. The key is balance. Too much of something is as bad as too little. There are other components affecting her well being such as decreased socialization, and lack of satisfaction with her body size. This is definitely not a healthy person.
UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Case Studies Discussion Key
Learning Activity 1

WHO IS HEALTHY?

Case study #5
- **Protective factors**: good time management, lots of friends, active lifestyle, balanced nutrition, good school achievement.
- **Risk factors**: lack of communication with his parents, stress regarding future education & career choices.
- **Conclusion**: Sean is a healthy teenage boy who knows how to balance things. However, unless he confronts his parents regarding his personal interests, he might start feeling mentally stressed.

Case study #6
- **Protective factors**: successful businessman, physically active, wealthy.
- **Risk factors**: lack of sleep, skipping breakfast and supper, lots of coffee, very high stress level, very little family time.
- **Conclusion**: Despite being successful in his professional life and keeping physically active, Bob is not a very healthy person. He is doing much more than his body and mind can handle. He is missing quality time with his family, which he will never be able to make up for. Bob definitely lives a very stressful and unhealthy life.
# UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Teacher Backgrounder for Learning Activity 1

## FACTORS AFFECTING HEALTH

### PROTECTIVE FACTORS

(associated with quality of life, wellbeing)

<table>
<thead>
<tr>
<th>A. Healthy conditions and environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Safe physical environment</td>
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<td>b. Steady income</td>
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<tr>
<td>c. Regular supply of nutritious food and water</td>
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<td>d. Restricted access to tobacco and drugs</td>
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<td>e. Provision of affordable housing</td>
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<tr>
<th>B. Psychosocial factors</th>
</tr>
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<tbody>
<tr>
<td>a. Volunteering</td>
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<tr>
<td>b. Friends</td>
</tr>
<tr>
<td>c. Feeling of trust</td>
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<td>d. Supportive family structure</td>
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<td>e. Positive self-esteem</td>
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<td>f. Positive mental health</td>
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</tbody>
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<th>C. Effective community services</th>
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<tbody>
<tr>
<td>a. Access to health services</td>
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<td>b. Strong social services</td>
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<th>D. Healthy lifestyles</th>
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<tr>
<td>a. Decreased use of tobacco and drugs</td>
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<td>b. Regular physical activity</td>
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<tr>
<td>c. Balanced eating</td>
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<td>d. Safe sexual activity</td>
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</tbody>
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### RISK FACTORS

(associated with increased mortality, morbidity, disability)

<table>
<thead>
<tr>
<th>A. Unhealthy conditions and environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Poverty</td>
</tr>
<tr>
<td>b. Polluted environment</td>
</tr>
<tr>
<td>c. Discrimination (age, sex, race, disability)</td>
</tr>
<tr>
<td>d. Natural resource depletion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Psychosocial risk factors</th>
</tr>
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<tbody>
<tr>
<td>a. Isolation</td>
</tr>
<tr>
<td>b. Lack of family support</td>
</tr>
<tr>
<td>c. Low self-esteem</td>
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<tr>
<td>d. High self-blame</td>
</tr>
<tr>
<td>e. Loss of meaning or purpose</td>
</tr>
<tr>
<td>f. Abuse</td>
</tr>
</tbody>
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<thead>
<tr>
<th>C. Lifestyle risk factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Smoking</td>
</tr>
<tr>
<td>b. Drinking</td>
</tr>
<tr>
<td>c. Poor eating habits</td>
</tr>
<tr>
<td>d. Physical inactivity</td>
</tr>
<tr>
<td>e. Substance abuse</td>
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<td>f. Poor hygiene</td>
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<td>g. Unsafe sexual activity</td>
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</tbody>
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<th>D. Physiological risk factors</th>
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<tbody>
<tr>
<td>a. Genetic risk factors</td>
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<tr>
<td>b. Release of stress hormone</td>
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</tbody>
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UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Teacher Backgrounder for Learning Activity 2

DETERMINANTS OF HEALTHY EATING IN YOUTH

A. Environmental factors
   - Family:
     o Parental role modelling
     o Food exposure
     o Food availability
     o Meal structures
     o Family meals
   - Income/ Food Cost
   - Culture
   - Social events
   - School environment:
     o Food availability in vending machines and cafeterias
     o Nutrition policy
     o Teacher role modelling
     o Peer influence
   - Food supply
   - Packaging of food products
   - Portion sizes
   - Media, marketing and advertising
     o Positive influences: educational messages and awareness campaigns
     o Negative influences: TV commercials of foods with low nutritional value

B. Individual (personal) factors
   - Taste and food preferences
   - Religion
   - Appeal of food
   - Body image

C. Physiological and Biological factors
   - Hunger and food cravings
   - Age and sex
   - Specific conditions (lactose intolerance, food allergies)

D. Lifestyle factors
   - Time constraints of adolescent and working parents and reliance on convenience foods
   - Stress

E. Knowledge, Attitudes, and Beliefs
   - Nutrition knowledge and attitudes about health and food
   - Health concern about fat intake and body weight
   - Belief that “healthy foods don’t taste as good” or that “healthy foods taste good”
   - Vegetarian beliefs

F. Psychological factor
   - Mood (happy, sad)
Case study #___

Discuss with your group about the health practices of the character featured in your case study. Assign a person to report on the answers to the following questions:

What are the factors that affect your character’s health?

Protective factors | Risk factors
--------------------|-----------------------
__________________ | ____________________
__________________ | ____________________
__________________ | ____________________
__________________ | ____________________
__________________ | ____________________
__________________ | ____________________
__________________ | ____________________
__________________ | ____________________

Is your character healthy?

What are the physical, social, mental, and/or financial implications of your character’s health-related decisions on self, family, and community?

What would you advise your character to do to improve his/her health?
Unit 1: Do you think you're healthy?  
Student Master for Learning Activity 1

FACTORS AFFECTING HEALTH

**Physiological**
- Risk factors
- Protective factors

**Lifestyles**
- Risk factors
- Protective factors

**Environmental**
- Risk factors
- Protective factors

**Psycho-social**
- Risk factors
- Protective factors

**HEALTH**
- (-) Mortality, morbidity, disability
- (+) Quality of life, Well Being

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Unit 1: Do you think you’re healthy?
Student Master for Learning Activity 2

FACTORS INFLUENCING MY FOOD CHOICES

ENVIRONMENT

LIFESTYLE

INDIVIDUAL

PHYSIOLOGICAL

KNOWLEDGE/ ATTITUDES/ BELIEFS

PSYCHOLOGICAL
UNIT 1: DO YOU THINK YOU'RE HEALTHY?
Super Size Me Discussion Guide

INTRODUCING SUPER SIZE ME

Super Size Me is a documentary that raises a lot of issues related to nutrition and environmental influences on individuals' choices.

This documentary follows Morgan Spurlock as he eats at McDonald’s for an entire month with three simple rules:

1) No options: he could only eat what was available over the counter (water included!)
2) No super sizing unless offered to super size
3) No excuses: he had to eat every item on the menu at least once

Spurlock took up this challenge following the unsuccessful lawsuit against McDonald’s in which it was ruled that eating at McDonald’s did not cause the plaintiffs’ obesity.

During this “McAttack”, Spurlock also put his own body on the line. He gained 24.5 lbs in 30 days and 7% body fat. He developed high cholesterol levels, high uric acid levels, and high blood pressure. He suffered headaches, mood swings, chest pain, loss of libido, Mc'stomach aches, depression, and ended up with a sick liver.

Another factor that also contributed to his weight gain was decreased physical activity level. It is important to reinforce the importance of exercise for achieving and maintaining a healthy weight.

The documentary also explores school lunch programs, and declining health and physical education classes in schools.

Time: 1h 36 m
UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Super Size Me Discussion Guide

After showing Super Size Me to your students, discuss or research some of the following:

DISCUSSION IDEAS

1. Why do people eat at fast food restaurants?

2. One of the reasons for eating at/ from fast food restaurants is lack of time for cooking dinner and eating together in our fast paced world. How can these challenges be overcome?

3. How would you describe your mealtimes at home? Take a few minutes to do this test.

Mealtime Matters……..

Circle the number of times last week that you ate dinner with all of the members of your household:

0 1 2 3 4 5 6 7

Check the obstacles that make it difficult for your family to gather for dinner:

___ We’re too busy
___ Parent’s work schedule
___ Parent’s schedule for meetings, exercise, other activities
___ Kids’ sports and activity schedule
___ No time to shop
___ No time to cook
___ Don’t know how to cook very well
___ Family members don’t like the same foods, so we eat apart
___ Shared mealtime is unpleasant, so we avoid it

How can you promote positive mealtimes in your family?
UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Super Size Me Discussion Guide

4. Is it fair to point the finger at McDonald’s? Where does corporate responsibility stop and personal responsibility begin?

Tip: Explore the role of corporations and the role of individuals in our society. Here are a few ideas for discussion:

Role of Corporations

- Corporations only want to increase the number of consumers and profit. Clerk at counter offers super size option to Spurlock 9 times in 30 days: bigger super size portions of fries and sodas for little extra money.

- Globalization phenomenon: McDonald’s is all over the world and everybody knows what/who McDonald’s is. First graders in an Illinois school fail to recognize a picture of Jesus or George Washington but all identified Ronald the Clown.

- Some of the methods corporations use to lure consumers, mainly children and teens, are:
  - Play places
  - Birthday parties
  - Advertisements to teens (I’m loving it logo and jingle)
  - Advertisements to kids (Clowns, happy meals, cartoons, toys)

Role of Individuals

- Consumers think in terms of money and not in terms of their health. Why do they super size? Are they really adding value for their money?
- People have less time to cook at home with their busy lifestyle.
- Parents take their kids to McDonald’s play places instead of going to parks, especially in neighbourhoods that lack parks.

5. Do you think the lawsuit against McDonald’s was frivolous? Why or why not?

6. Is healthy eating just a matter of good education? What are the factors that influence your food choices?

Some areas to explore could be:
- Availability at school cafeterias
- Ads
- Cost

7. Do you think your school cafeteria should offer French fries? Why or why not?

8. Are there changes in food and beverage choices you would like to make at your own schools? What are they?
UNIT 1: DO YOU THINK YOU’RE HEALTHY?
Super Size Me Discussion Guide

9. Is it fair to confront fat people for how they eat? What about thin people like Don Gorske who are “super heavy users” of fast food? Is it the shape you are that makes you healthy or unhealthy? Or is it what you do (how you eat and how much activity you get) that matters?

http://www.cswd.org/discfaqs.html

10. How much influence do you think the media has on the way you think you should look? How much influence do the media have on the food choices you make?

11. Can fast food be nutritious? Examine the nutrition information for your favourite fast food meal. How can you improve this meal?

12. How will this documentary influence your future food choices and perception of health?

RESEARCH IDEAS

1. The documentary presented obesity data for the US. What is the situation in Canada?

2. What are the trends in Canada with regard to eating out? Eating out at fast food restaurants?

3. Review commercials on TV for an evening. What percentage are food commercials? Categorize the products advertised into food groups or convenience foods vs. fresh whole foods.

4. What are the health consequences of over-eating and under exercising? Tip: Research type 2 diabetes, hypertension, cardiovascular disease…

5. Can you be fit and fat?

6. Note how much easier it was for Spurlock to gain weight vs. lose weight. What is the success rate for weight loss diets? Is Jared Fogle’s (the Subway spokesman) experience typical?

7. Family mealtimes provide an opportunity for families to eat together and have beneficial effects on children and teens. What are these benefits?
UNIT 2: HOW WELL DO YOU THINK YOU EAT?

PRE-LESSON ACTIVITY

Have students record everything they ate and drank for one day (*step 1 in FoodTrack*). Here are some guidelines for recording:

- Specify the type of food (drink, juice)
- Specify the amount consumed (glass, cup, helpings…).
- List the components for mixed dishes:
  - Cheeseburger: 1 meat patty, 1 bun, 1 slice of cheese, relish, mayonnaise
  - Pizza: crust, cheese, green peppers and onions
- Include beverages you had each time you ate food.
- Don’t forget the extras: jam or butter on toasts, mayonnaise in salad…
- Ask yourself the following questions: Did I eat / drink anything between meals?

Here are examples of correct and incorrect ways to record your meals and snacks:

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<tr>
<th>Correct</th>
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<tbody>
<tr>
<td>Milk, 1 glass</td>
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<tr>
<td>Toast, 1 slice with 1 tsp butter</td>
<td>toast</td>
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<tr>
<td>Pizza, 1 slice</td>
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OVERVIEW

*FoodTrack: Check on Balance* teaches students how to assess their current food intake, compare it to the minimum number of servings recommended for their age group in Canada's Food Guide to Healthy Eating, and plan for realistic changes that improve their eating habits.

Estimated time: 30 - 40 minutes for learning activities 1 to 3. Additional time (10-15 minutes) will be needed for the optional learning activity 4.

LEARNING OUTCOMES

At the end of this unit, students will be able to:

1. Analyze factors that influence health
2. Analyze health information for validity and personal relevance
3. Evaluate the potential effects of their health-related decisions on self, family and community.
4. Develop a preliminary plan for how they will meet the Graduation Portfolio requirements.

Evidence may be used towards the Personal Health organizer of the Graduation Portfolio. This unit covers the following specific Portfolio aspects: 6.3, 6.4, and 6.5.
UNIT 2: HOW WELL DO YOU THINK YOU EAT?

KEY CONCEPTS

- Good nutrition (through appropriate food and beverage choices) provides teens with all essential nutrients their body needs for adequate growth and academic performance.
- Maintaining variety and meeting the minimum number of servings recommended in Canada’s Food Guide to Healthy Eating helps maintain good nutrition and balance.
- FoodTrack: Check on Balance is a tool that you can use any day to check for food group balance.

MATERIALS

- Class set of “FoodTrack: Check on Balance”*
- “Sizing Up Servings” poster*
- Canada’s Food Guide to Healthy Eating (available from local Health Unit)
- Teacher Backgrounder “Canada’s Food Guide to Healthy Eating” (p.26-27)
- FoodTrack transparencies*
- Class set of FoodTrack Follow-up Boards*
- Overhead projector

* Available from the BC Dairy Foundation

PROCEDURE

LEARNING ACTIVITY 1: How well do you think you eat?

a. Begin by asking students: Do you think you eat well? How do you know?
   b. List all the answers on the board.

LEARNING ACTIVITY 2: Canada’s Food Guide to Healthy Eating

   b. Refer to the Teacher Backgrounder on Canada’s Food Guide to Healthy Eating for more details.

LEARNING ACTIVITY 3: FoodTrack: Check on Balance

a. Have the students assess their food intake.
   o Ask students to refer to their 24-hour food record (pre-lesson activity).
   o Demonstrate how to estimate foods and quantities eaten, using the “Sizing Up Servings” poster. Give one example for a mixed dish. Examples are provided in the guidelines for the pre-lesson activity (p.19).
   o Have them estimate their food servings (Step 2 in FoodTrack).
   o Let them compare their servings total to the minimum number of servings they need every day (Step 3 in FoodTrack).
   b. Ask students to plan for changes for one particular food group they need to improve. For example, all the students who have to improve their intake of Vegetables & Fruit can work together to come up with solutions. Students then choose a solution that really works for them. For example: “I will make a Smoothie for breakfast.”(Step 4 in FoodTrack).
   c. Make sure plans are realistic (Step 5 in FoodTrack). Remind them that small steps are important. Goals that are too ambitious are often not met.
UNIT 2: HOW WELL DO YOU THINK YOU EAT?

LEARNING ACTIVITY 4: Are You On Track? (Optional)
This follow-up allows students to practice their plan, evaluate its adequacy and share problem-solving ideas.

a. Have students write their plans in the space provided on the Follow-Up Board and evaluate achievement of their plan’s goals.

b. Ask them about the factors that prevented them from implementing their plans.

c. Ask your students how they think those barriers can be overcome. Provide them or encourage them to share tips for overcoming those barriers.

d. Have them revise their plan accordingly.

e. Encourage repeating FoodTrack several times. Stress the fact that planning and practicing help to make changes happen.

ASSESSMENT ACTIVITIES
Distribute the list of assessment activities to your students and have them select one or more.
ASSESSMENT ACTIVITIES

- Form a group of five and analyze one of the current popular diets (e.g., Atkins, South Beach, Zone, Pritikin, Dean Ornish, Eat Right for your blood type…) by comparing it to Canada’s Food Guide to Healthy Eating. Is the diet varied and balanced, as recommended in Canada’s Food Guide to Healthy Eating? Provide a summary report to your class.

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- Organize a multicultural day lunch (in the classroom, on a picnic) with a focus on balance (having at least 3 out of 4 food groups) and variety. This is a great opportunity to taste new foods. Tape the event or take pictures to collect as evidence for the Graduation Portfolio.

**Tip:** Use the *Ethnic Foods List* (available from BC Dairy Foundation) for classifying ethnic foods into the four food groups.

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- Adapt Canada’s Food Guide to Healthy Eating for different ethnic groups (Chinese, South Asian, First Nations, Mexican, Canadian, and Mediterranean). Look for recipes in cookbooks to identify most commonly used ingredients in each ethnic group. You may also interview parents of classmates on common foods for a specific ethnic group. Another resource to use is the *Ethnic Foods List* (available from BC Dairy Foundation).

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- Use the information provided in this unit and/or in episode # 4 (Balancing Act) of the Kid Zone series (available from the BC Dairy Foundation) to create a video that you will present to your class or school on the topic of Balance and Health.

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UNIT 2: HOW WELL DO YOU THINK YOU EAT?

ASSESSMENT ACTIVITIES (CONTINUED)

- Create a recipe book to help you meet your FoodTrack goals.

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- Help organize an Elementary School Milk Program (ESMP) or become an ESMP lunch coordinator or a lunch monitor at a neighbouring elementary school.

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- Join the nutrition committee at your school and advocate for better food and beverage choices in cafeterias, vending machines and at fundraising events.

**Tip:** Visit “Making it Happen- Healthy Eating at school” (www.knowledgenetwork.ca/makingithappen) for ideas on how to do so.

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- Form a group and select a specific food group (e.g. Grain Products, Vegetables & Fruit, Milk Products, Meat & Alternatives) or the “Other Foods” category. Tour your grocery store and make a price comparison between different brands and types of foods that belong to your food group. Then present the results of your survey to the rest of the class.

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- Survey food ads on TV. How many are for food groups? How many are for “Other Foods”?

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UNIT 2: HOW WELL DO YOU THINK YOU EAT?

ASSESSMENT ACTIVITIES (CONTINUED)

- Keep track of your physical and emotional well-being in a journal while making changes to improve your eating habits.

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- Participate in a cooking club or a community kitchen.

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- Attend a community cooking course, such as Cooking for Life.

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- Plan a restaurant menu—see reverse side for instructions

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WORLDLY RESTAURANTS

MATERIALS

- Ethnic Foods List (available from BC Dairy Foundation)
- Sample restaurant menus
- Cookbooks featuring various ethnic groups

PROCEDURE FOR PLANNING A RESTAURANT MENU

a. Form small groups of 5 or 6.
b. Select a cultural group, for which you will be planning a restaurant menu.
c. Ask your teacher to display some of her/his own sample restaurant menus or cookbooks in your classroom resource centre.
d. You are encouraged to do some research into the eating habits of the cultural group you have selected. You can also consult the Ethnic Foods List (available from the BC Dairy Foundation), collect menus from ethnic restaurants, consult with resource people (including classmates) or study ethnic cookbooks in the library.
e. Plan a restaurant menu based on the cultural group you have selected. Categorize the menu items into the four food groups. Can someone coming to your restaurant get a balanced meal (i.e. a meal with at least 3 food groups)?
f. Expand the activity by investigating other aspects of the culture you have chosen. For example, how will your restaurant be decorated? What dishes and utensils will be needed?
g. Present your menu to the rest of the class.
h. If possible, prepare one of your menu items so that classmates can sample foods prepared in various ethnic styles.
UNIT 2: HOW WELL DO YOU THINK YOU EAT?
Teacher Backgrounder

CANADA’S FOOD GUIDE TO HEALTHY EATING

FOOD GROUPS

There are four major food groups in Canada’s Food Guide to Healthy Eating:
- Grain Products
- Vegetables & Fruit
- Milk Products
- Meat and Alternatives

To achieve nutrition balance, choose foods from 3-4 food groups at each meal.

There is another category called the “Other Foods”. It includes beverages (such as pop, water, coffee), spices and condiments (such as ketchup, mustard, pepper), fats and oils (such as butter, canola oil, olive oil), sweets (such as chocolate, jam, jell-o) and snack foods (such as potato chips). Use these foods in moderation because they are often higher in fat, sugar or calories.

SERVING SIZES

GRAIN PRODUCTS
- Common one-serving portions are 1 slice of bread or a bowl of cereal.
- We need a minimum of 5 servings of grains every day.
- Five servings every day sounds like a lot but often the foods we choose to eat are more than 1 serving. A large muffin, a bowl of rice, or a plate of pasta are often 2 or more servings.

VEGETABLES & FRUIT
- One medium size vegetable or fruit, a small bowl of cut-up vegetable or fruit, and a small glass of juice are each examples of 1 serving. Garden salad is an exception; a large bowl of salad is 1 serving (air)
- We need a minimum of 5 servings from this group.
- Like grain products, we often eat more than one serving of vegetables and fruit at a time. Examples of a two-serving portion are a glass of juice and a baked potato. Other examples of 2 serving of Vegetables & Fruit are a large banana, a whole grapefruit, and a small bowl of dried fruit.

MILK PRODUCTS
- Common 1 serving portions include a glass of milk, a few slices from a block of cheese, or a container of yogurt.
- In this food group, it is important to have a minimum of 2 servings every day (at least 3 servings for youth 10-16 years).
- We often eat 1/2 servings in this food group. Examples of a ½ serving portion are ¾ cup of ice cream or 1 cup of cottage cheese or ½ cup of pudding or custard made with milk.
UNIT 2: HOW WELL DO YOU THINK YOU EAT?
Teacher Backgrounder

CANADA’S FOOD GUIDE TO HEALTHY EATING

MEAT & ALTERNATIVES
- The serving sizes in this group are very broad. A thin piece of fish, a medium size hamburger patty, 1 OR 2 eggs are all one serving.
- We all need at least 2 servings per day from the meat & alternatives group.
- Most common meat and alternative portions fit into the range of 1 serving.

To get the most nutrients possible:
- Choose whole grain and enriched products more often.
- Choose dark green and orange vegetables more often.
- Choose lower-fat milk products more often.
- Choose leaner meats, poultry and fish. Also choose dried peas, bean, and lentils more often.

SETTING GOALS AND PROBLEM-SOLVING

Goals should be set as an action to be taken, hardly ever for a negative or non-action. To help your students set realistic goals, ask the following questions:
- Which of the foods you eat most days do you wish to continue eating?
- Which of the foods that you eat now would you be willing to eat more/less of to improve your nutrition?
- Where will you be?
- Is this food available?
- Can you afford it?
- Will you have enough time to prepare or eat this food?
- Do you need to make another choice?

Guide your students in selecting specific foods they can eat at specific times corresponding to the food group they need to improve.

Example: I will eat an apple everyday at lunch.

Goals should include both content (hamburger, fruit…) and time (lunch, dinner…) to be effective.

Example: I will replace my glass of tea at breakfast with a glass of milk.

Goals should be prioritized. Encourage your students to begin with just one food group.
UNIT 3: THIRST FOR NUTRITION
ADD VALUE TO YOUR CHOICES

OVERVIEW

This lesson focuses on common beverages consumed by teenagers and compares their nutrient values. The tool “Thirst for Nutrition – Add Value to Your Choices” illustrates and compares the nutritional composition of various beverages. It teaches students how to assess their own fluid intake and compare it to the recommended daily beverage intake fluid intake for their age group. It also teaches them how to set personal goals for improving their fluid intake and developing strategies for overcoming the barriers to consuming optimal fluid intake.

Estimated time: 30-40 minutes

LEARNING OUTCOMES

At the end of this unit, students will be able to:
1. Analyze factors that influence health
2. Analyze health information for validity, personal relevance, accuracy and bias
3. Evaluate the potential effects of their health-related decisions on self, family and community.
4. Develop a preliminary plan for how they will meet the Graduation Portfolio requirements.

Evidence may be used towards the Personal Health organizer of the Graduation Portfolio. This unit covers the following specific Portfolio aspects: 6.3, 6.4, and 6.5.

KEY CONCEPTS

- Students who drink more pop and sweetened fruit beverages have lower intakes of many nutrients, such as calcium, folate, and iron.
- On the other hand, the consumption of dairy products and flavoured dairy products such as chocolate milk is positively associated with calcium intakes of adolescents.
- Teens need to drink 8 to 11 cups (1.8 to 2.6 litres) of fluids a day, according to the most recent recommendations.
- These needs can be met by a variety of beverages including milk, juices, and water.

MATERIALS

- One or two large trays
- Small cups
- Various beverages (all refrigerated before class)
- Class set of “Thirst for Nutrition – Add Value to Your Choices” (available from the BC Dairy Foundation)
- Teacher Backgrounder: “Health Impacts of Teen Beverage Choices”
UNIT 3: THIRST FOR NUTRITION
ADD VALUE TO YOUR CHOICES

PROCEDURE

LEARNING ACTIVITY 1: Which beverage would you choose?
   a. Prepare a tray with small cups filled with different beverages: pop, 100% juice, milk, flavoured milk, fruit punch, sport drink, and water.
   b. Circulate the tray in the class and ask each student to take a cup. Analyze the popularity of each beverage and graph the results.
   c. Ask what made them choose a certain beverage (i.e. taste, health reason, nutritional content, appearance, peer pressure, media influences...)
   d. Ask students which beverages are nutritious. Refer to the inside of the “Thirst for Nutrition” tool for comparing the nutrient value of the beverage they chose with other beverages. You can also refer to your teacher backgrounder “Health Impacts of Teen Beverage Choices”

LEARNING ACTIVITY 2: What did you drink yesterday?
   a. Ask your students: Do you think you are getting enough fluids? How do you know?
   b. Distribute the “Thirst for Nutrition” tool.
   c. Using the back of the tool, have students check how much they drank the day before and compare it to their recommended daily intake.
   d. If students need to improve their fluid intake, have them make a plan to drink enough fluids. If they are already meeting their fluid needs, have them make a plan to choose more nutritious beverages.
   e. Discuss any barriers (personal, social, and environmental) which might prevent them from meeting their plans.

ASSESSMENT ACTIVITIES
Distribute the list of assessment activities to your students and have them select one or more.
UNIT 3: THIRST FOR NUTRITION
ADD VALUE TO YOUR CHOICES

ASSESSMENT ACTIVITIES

- Tour the beverage section of a grocery store and record the various beverages available in the store. What are the factors that influence your choices? (e.g., in-store display, price, peers, and nutrition knowledge). Take this opportunity to explore nutrition labels (www.healthcanada.ca/nutritionlabelling).

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- Organize a group of five students. Choose a nutrition pamphlet, handout, website, video tape (see below for suggestions) or select a topic that interests you. Examine critically the information given and analyze it for personal relevance, reliability, and possible biases. Report your findings to the class.

**Tip:** Check the following BC Health File:
Evaluating Health Information on the Internet
www.bchealthguide.org/hfile84.stm.

Some suggested materials:

- BC Dairy Foundation resources:
  - *Sport Nutrition* – Tips on food intake and fluid replacement for athletes and active individuals
  - *Top 10 Reasons to Drink Milk*
- Canada’s Food Guide to Healthy Eating (available from local health unit or downloadable from Health Canada’s website www.hc-sc.gc.ca)

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- Search for and bring back a print advertisement or a TV or radio commercial clip of a beverage. Discuss strategies that the food industry and the media use to promote their products and how these advertising strategies influence their choices.

**Example:** How do soft drink companies influence your choice of beverages?
Perform a web quest for articles on food industry/media and food choices or for beverage companies such as Coca-Cola, Pepsi, and Gatorade.

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UNIT 3: THIRST FOR NUTRITION
ADD VALUE TO YOUR CHOICES
Teacher Backgrounder

HEALTH IMPACTS OF TEEN BEVERAGE CHOICES

Research shows that children and teens who drink more soft drinks and sweetened fruit beverages have lower intakes of many nutrients, such as calcium, folate, and iron. These sweetened beverages also often displace the intake of dairy products.

A Harvard study shows that girls in grade 9 and 10 who drink soft drinks regularly have three times the risk of bone fractures compared with those who do not drink pop. On the other hand, the consumption of dairy products and sweetened dairy products such as chocolate milk is positively associated with calcium intakes of adolescents.

Sport drinks are also very popular beverages among teenagers, especially during sport events. But plain, cool water is the fluid of choice in most situations. Foods and fluids consumed after practice are excellent sources of carbohydrates and electrolytes (such as sodium and potassium) and replenish the body. Sport drinks are needed to replace energy and electrolytes only when workouts last more than 60 to 90 minutes or when several games occur in a short period of time. An easy recipe for making a homemade sport drink is to dilute equal parts of 100% fruit juice and water. It is as good as commercial sport drinks and much less expensive!

According to the latest recommendations, teenagers need to drink daily between 8 and 11 cups (1.8 to 2.6 litres) of fluids. Those recommendations can be met by drinking a variety of beverages, including milk, juice and water.

Website Resources
- BC Dairy Foundation  www.bcdairyfoundation.ca
- Why Milk  www.whymilk.com
- Canadian Health Network  www.canadian-health-network.ca
- Dial-A-Dietitian  www.dialadietitian.org/nutrition
- Dietitians of Canada  www.dietitians.ca

Community Resources
- Dial-a-Dietitian
  Greater Vancouver: 604-732-9191
  Toll Free in B.C.: 1-800-667-3438
- Local Health Unit (Check the phone book).

UNIT 4: TEEN YEARS
A ONCE IN A LIFETIME CHANCE TO BUILD BONE

OVERVIEW

In this lesson, students learn about the importance of adequate calcium intake for bone development during adolescence (short-term health implications) and for the prevention of osteoporosis later in life (long-term health implications). They also learn how to assess their calcium intake, and compare it to the recommended calcium intake for their age group. Finally, they set a personal goal to improve their calcium intake to meet the recommended amount of calcium.

Estimated time: 45-60 minutes.

LEARNING OUTCOMES

At the end of this unit, students will be able to:

1. Analyze factors that influence health
2. Analyze health information for validity, personal relevance, accuracy and bias
3. Evaluate the potential effects of their health-related decisions on self, family and community.
4. Develop a preliminary plan for how they will meet the Graduation Portfolio requirements.

Evidence may be used towards the Personal Health organizer of the Graduation Portfolio. This unit covers the following specific Portfolio aspects: 6.3, 6.4, and 6.5.

KEY CONCEPTS

- Bone health is a major issue facing adolescents. Recent evidence shows that the food and activity choices teens make can have immediate consequences—a higher bone fracture rate in youth is associated with low calcium intake.
- Though we are accustomed to thinking of bone health as a disease of old age, in reality the pre-teen and teen years are the most critical years for building healthy bone.
- Calcium-rich diets and weight-bearing activities are necessary for building healthy bone.

MATERIALS

- Class set of Calcium Calculator brochures or Calcium Calculator CD-ROM or online access to Calcium Calculator (at www.bcdairyfoundation.ca)
- Computer, Internet connection, Projector, Screen for the Power Point presentation

  If preparing calcium rich snacks: (optional learning activity 4)
  - Ingredients for smoothies (milk, yogurt, fruit) or muesli (grains, fruit/nuts/seeds, yogurt, milk)
  - Small cups for tasting, spoons (for eating muesli)
  - Blender
UNIT 4: TEEN YEARS
A ONCE IN A LIFETIME CHANCE TO BUILD BONE

PROCEDURE

LEARNING ACTIVITY 1: Are you getting enough calcium?
   a. Ask students to write down on a piece of paper what they ate and drank the day before.
   b. Have them assess their calcium intake using the Calcium Calculator brochure, CD-ROM or online resource and compare it to the value recommended for their age group.

LEARNING ACTIVITY 2: Learn about Calcium and Bone Health
   a. Show the Power Point presentation on calcium and bone health and risk factors associated with osteoporosis (downloadable from www.bcdairyfoundation.ca).
   b. Use the slide notes provided to elaborate on the slides and answer student questions.

LEARNING ACTIVITY 3: Get dense!
   a. Brainstorm with your students a list of barriers in getting enough calcium (e.g. time, friends, family, don’t like calcium rich foods, don’t know how to prepare calcium rich snacks, lack of appropriate choices available).
   b. Challenge students to discover solutions to these barriers by discussing or role-playing the following scenarios:
      o You wake up late and don’t have time to eat breakfast. How can you get a calcium rich meal in the morning?
      o You’re eating out with your friends at the mall. Everyone is ordering pop but you are considering a milkshake.
      o The list of calcium-rich foods in the Calcium Calculator doesn’t appeal to you. How can you get inspired? (e.g. look for some recipes and stage a cooking show for your classmates)
   c. Ask them to develop a plan of action for increasing calcium consumption.

LEARNING ACTIVITY 4: Prepare High Calcium Snacks (optional)
   ▪ Bring or assign students to bring various high calcium foods: milk, flavoured milk, yoghurt, cheese, ice cream, skim milk powder, calcium-fortified beverages, almonds, pudding, oranges, broccoli, etc.
   ▪ Students will help set up “HIGH CALCIUM” food stations in the classroom.
   ▪ Students will then visit each food station to taste the different snacks and record their comments and ideas (taste, appearance, smell, texture, ways to incorporate food in diet). Stations can include details of food products, recipes, meal/snack ideas.
   ▪ One or two simple food demonstrations can be done. Examples: fruit milkshakes, cheese and crackers, muesli.
UNIT 4: TEEN YEARS
A ONCE IN A LIFETIME CHANCE TO BUILD BONE

ASSESSMENT ACTIVITIES

- Visit the dairy section of a grocery store. Besides milk products, search for other calcium-rich foods (almonds, tofu, calcium-fortified beverages, etc.) sold in the store. Learn to read nutrition labels and record the calcium (expressed as % daily value) content of different products. Consider incorporating some of these calcium-rich products in their diet.

| Portfolio Organizers addressed | Portfolio aspects addressed |
|--------------------------------|
| Personal Health                | 6.3, 6.4, 6.5 |
| Information Technology         | 5.1, 5.2 |

- Form a group and perform a research in the school/public library or on the internet on specific bone health topics. You can also interview the community nutritionist at your local health unit. You may write a paper on the topic, or present your research findings to the class.

Suggested topics:
- How does osteoporosis develop?
- How do you meet the 1300 mg calcium recommendation if you do not consume any milk products? Develop and share a sample meal plan and tips for boosting calcium intake.
- Is the calcium from certain foods better absorbed than from other foods? What factors affect calcium absorption? What about calcium supplements?
- What is lactose intolerance? How can a person with lactose intolerance meet his/her calcium needs?

| Portfolio Organizers addressed | Portfolio aspects addressed |
|--------------------------------|
| Personal Health                | 6.3, 6.4, 6.5 |
| Community Involvement & Responsibility | 2.2 |
| Employability Skills           | 4.4 |
| Information Technology         | 5.1, 5.2, 5.3, 5.4 |

- Form a student “Super Calcium” cookbook committee; assign responsibilities for PR, cookbook design/layout, nutritional analysis, financial management, etc. Each student in the class (it can also involve all Planning 10 classes) will contribute a high-calcium recipe. Compile the recipes into a cookbook for sale in the school community as a fund-raising event.

| Portfolio Organizers addressed | Portfolio aspects addressed |
|--------------------------------|
| Personal Health                | 6.5 |
| Arts & Design                  | 1.2 |
| Information Technology         | 5.1, 5.2 |
UNIT 4: TEEN YEARS
A ONCE IN A LIFETIME CHANCE TO BUILD BONE

ASSESSMENT ACTIVITIES (continued)

- Use the smoothie recipe provided by your teacher or invent your own to sell smoothies as part of your school fundraising efforts.

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<tr>
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<tbody>
<tr>
<td>Personal Health</td>
<td>6.5</td>
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<tr>
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<td>2.1, 2.2, 2.5</td>
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<td>4.1, 4.3, 4.4</td>
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- Use the *Bone Zone* video (available from the BC Dairy Foundation) and the information provided by your teacher in the Power Point presentation on calcium and bone health to prepare a video on the importance of bone health in teen years.

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- Invent a bone-building exercise (jumping rope, jogging, dancing, weight-lifting, step aerobics) that you will feature in a station in the school gym. This activity can be done as a regular Physical Education class.

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UNIT 4: TEEN YEARS
A ONCE IN A LIFETIME CHANCE TO BUILD BONE

RECIPIES FOR CALCIUM RICH SNACKS

STRAWBERRY SMOOTHIE

Ingredients
- Unsweetened frozen strawberries 10 (about 200g)
- Milk 2 cups
- Sugar or honey to taste

Equipment
- Blender
- Measuring spoons
- Rubber spatula
- Small serving cups
- Cooler or fridge (to store milk and frozen strawberries)

Makes about 1 litre (4 cups) or 20-3 Tbsp servings

1. Combine ingredients in a blender.
2. Blend until smooth. Serve immediately.

Tip:
- Experiment by adding ingredients such as banana or a few scoops of ice cream or yogourt.
- Substitute other frozen fruit such as raspberries, blueberries, blackberries or peaches for the strawberries.
UNIT 4: TEEN YEARS
A ONCE IN A LIFETIME CHANCE TO BUILD BONE

MUESLI

Ingredients*

- Regular rolled oats (not instant) 1 cup
- Barley flakes 1 cup
- Wheat flakes 1 cup
- Raisins ½ cup
- Dried cranberries ½ cup
- Diced dried apricots ½ cup
- Sunflower seeds ½ cup
- Coconut ½ cup
- Chopped nuts ½ cup
- Cinnamon in a shaker
- Sugar for topping
- Milk or yogourt

*These ingredients and quantities are just guidelines. Adjust these to suit your needs in terms of cost, availability of ingredients and food allergies.

Equipment

- Bowls and serving spoons for each ingredient
- Measuring cup
- Individual bowls and spoons for each student

1. Portion each ingredient into individual bowls. Use a tablespoon to serve the grains and a teaspoon to serve the dried fruit, nuts and seeds.
2. Line up the serving bowls in a row.
3. Invite your friends to take a spoonful of each of the ingredients to mix together in their own bowls. They may sprinkle cinnamon and/or sugar on top of the mix.
4. Pour milk or yogourt over muesli. Enjoy!