

Adventures in learning, created  
by Canadian dietitians



*Students explore how healthy eating and physical activity impacts body systems and the function of the digestive system.*

## Learning Expectations:

1. Examine how nutrition and physical activity impact body systems like the digestive system, skeletal system, circulatory system, respiratory system and immune system.
2. Identify the parts of the digestive system and how they function to digest food.

## Subject Links:

Health, Science, Information Technology, Art

## Materials & Resources:

- ★ Books on the human body. Suggested books:  
*Human Body, Grades 4-6 Fun Activities, Experiments, Investigations, And Observations!* by Sue Carothers and Elizabeth Henke and *Head to Toe Science: Over 40 Eye Popping Spine-Tingling, Heart Pounding Activities That Teach Kids About the Human Body* by Jim Wiese
- ★ Web sites and movies on the human body.  
Suggested web site:  
[www.kidshealth.org](http://www.kidshealth.org) and  
[www.kidshealth.org/kid/closet/movies/how\\_the\\_body\\_works\\_interim.html](http://www.kidshealth.org/kid/closet/movies/how_the_body_works_interim.html)

**See the Teacher Notes at the back of this resource (on pages 23-26) for more information on this mission.**

## Class Discussion:

Eating well and being active promotes healthy body systems. The following questions help students explore how our bodies make use of food; that fibre, water and regular physical activity help keep food moving through the digestive system smoothly; and that a variety of foods provide nutrients needed by different body systems:

- ★ What is digestion? (See definition in the *Teaching Tip* below.)
- ★ What 3 things help food move through the digestive system smoothly?
- ★ Why is it important to eat a variety of foods from all four food groups?

## Teaching Tip:

The word digestion comes from a word that means to divide. It is the breaking down of food into smaller particles and eventually nutrients that can be absorbed and used by the body. Although humans cannot digest fibre, it is important for good health. Like a broom, fibre helps to sweep any leftover food waste out of our body. Students can time how long it takes for food to travel through their digestive system when

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MISSION PLANS FOR GRADES 4-5  
**MISSION 4**  
EXPLORING BODY SYSTEMS



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they eat corn. The fibre in corn cannot be digested, so it will pass right through the digestive tract and come out the other end! They can expect it to take about 24 hours.

**Activities:**

1. Students know that food goes in one end and the unusable parts come out the other end. Ask students what they think happens in between. Then allow time in the library and computer lab for students to research how the digestive system works to make use of the food we eat. Have them complete the *Where does your food go?* activity sheet (see *Student Mission 4*) to record what they learn.
2. The *MISSION NUTRITION\** Team wants to know how the food we eat affects the human body. Use the *MISSION NUTRITION\** poster to review how key essential nutrients impact major body systems. Divide the class into groups and assign a different body system to each group including the skeletal system, central nervous system, circulatory system, respiratory system and digestive system. Ask students to work together in their groups to research information on that system using the Internet and library books. Have each group develop a slogan and design a poster that shows how eating well, drinking plenty of fluids and being active helps keep the body systems in good working order. Each group can present their poster and then display it in the classroom.

**Student Mission 4:**

**Where Does Your Food Go?** On the *Where Does Your Food Go?* activity sheet, students explore the journey that food takes through the digestive system. Have students research each part of the digestive system to learn how the body makes use of the food we eat.

**Home Connection:**

Fibre rich foods are important for healthy eating. Exploring fibre choices at home helps students and parents identify whether fibre rich foods are readily available.

**In Class:** Create a list with the class of fibre rich foods - these include grain products like high fibre breads and cereals and some whole grain products, fruit, vegetables, nuts, dried peas, beans and lentils. Note that fibre is found only in plant foods. See *Materials and Resources* for more information on fibre.

**At Home:** Send students on a "fibre find" search with a copy of the list you created in class. Their Mission is to make their own list of foods they can find with fibre at home, at the school cafeteria or at their local food store. Ask them to check the nutrition information on the labels found on packaged products and record the amount of fibre in a serving if it is listed.

**In Class:** In small groups, students can discuss the types of foods they found on their "fibre find" search. Then ask each student to think of three ways to add more fibre to their daily eating patterns. (For example: choose more fresh or dried fruits, eat whole grain and high fibre cereals for breakfast, make sandwiches with whole grain breads, add a vegetable to dinner meals, make a trail mix with cereal, seeds and nuts, or cook up some chilli with beans.)



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*Students explore their own food choices by recording and comparing their food selections to Canada's Food Guide.*

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### Learning Expectations:

1. Analyse their own food selections over a period of time, and compare personal habits with *Canada's Food Guide*.
2. Classify foods into food groups in *Canada's Food Guide*.
3. Demonstrate an understanding of food groups, serving sizes and serving numbers that support good health.

### Subject Links:

Health, Language, Math, Information Technology

### Materials & Resources:

☆ *Canada's Food Guide*.

Visit [www.healthcanada.gc.ca/foodguide](http://www.healthcanada.gc.ca/foodguide) or call 1-8000 CANADA for copies.

**See the Teacher Notes at the back of this resource (on pages 23-26) for more information on this mission.**

### Class Discussion:

The *MISSION NUTRITION\** Team wants to know about food choices that make for healthy eating. Healthy eating patterns can vary according to individual preferences and needs. *Canada's Food Guide* can accommodate cultural preferences, vegetarian eating, food allergies and medically imposed special diets. Review and discuss with students the key messages from *Canada's Food Guide* as outlined in the *Teacher Notes* including:

- ☆ The Food Guide Servings recommended for each food group.
- ☆ How to make each Food Guide Serving count
- ☆ Examples of Food Guide Serving sizes.
- ☆ Limiting less healthy food choices that are higher in calories, fat, sugar and salt (sodium).
- ☆ The importance of water and fluids for hydration.

### Teaching Tip:

Part of healthy eating involves being able to visualise a serving of food and understand how this relates to the number of Food Guide Servings recommended by *Canada's Food Guide*. The Food Guide provides examples of servings sizes for each food group.

### Activities:

1. Provide students with a copy of the *My Food Choices* activity sheet (see *Student Mission 4*) to keep track of what they eat for a whole day. This is easier to do if students record their food intake throughout the day, as they eat, rather than trying to remember what they ate later in the day. Note that this Activity Sheet shows the recommended number of Food Guide Servings for girls and boys ages 9 to 13 years. Ask them to list everything they eat and drink for one whole day including all meals and snacks. Have them note the amounts of the foods and drinks they consume using common measures such as 1 bowl of cereal, 1/2 banana, 1 glass of milk. Note that chocolate milk counts as milk, but most fruit drinks, punches or beverages are not part of the four food groups.
2. Once students have completed their daily food record on their *My Food Choices* activity sheets,

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MISSION PLANS FOR GRADES 4-5  
**MISSION 5**  
EXPLORING FOOD CHOICES

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have them compare their choices to *Canada's Food Guide*. First have students tally up the number of servings they ate from each food group using the serving size examples in *Canada's Food Guide*. Next allow computer lab time for students to explore *Canada's Food Guide* and create and print out their own personalized Food Guide using the My Food Guide feature at [www.healthcanada.gc.ca/foodguide](http://www.healthcanada.gc.ca/foodguide) online. Then ask them to note if the number of servings they ate from each food group was in line with the number of servings recommended for their age and gender by the Food Guide.

3. Based on their nutrition analysis, ask each student to set a personal healthy eating goal and record an action plan to achieve this goal. Note that students should not be required to share their personal results with other students and should not be judged based on what they recorded. Sensitivity to factors that may affect food choices such as allergies, family income, culture, religion or medical conditions are important to keep in mind when assessing this activity. Students should be assessed on how well they completed their tally and the goal and action plan that they developed based on their personal analysis. They should not be assessed on their daily food intake.

### Student Mission 5: My Food Choices

The *My Food Choices* activity sheet provides a framework for students to analyze what they eat over the course of a day. Ask them to record everything they eat and drink, and then tally up their choices from each food group.

#### Home Connection:

A healthy eating questionnaire is an interactive way for students to assess family eating habits

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while sharing their healthy eating knowledge with family members. Sensitivity to factors outlined in *Activity 3* is important in conducting this survey.

In Class: Develop a questionnaire with students for them to use at home to survey family eating habits. Students can share their healthy eating knowledge about the four food groups and recommended Food Guide Servings with their families to help them answer the questions. Some sample survey questions follow. In a day,

- ☆ How many food groups do you include in breakfast?  
(0, 1, 2, 3 or 4)
- ☆ How many food groups do you include in lunch?  
(0, 1, 2, 3 or 4)
- ☆ How many food groups do you include in dinner?  
(0, 1, 2, 3 or 4)
- ☆ Do you drink fluids such as water, milk and juice each day?
- ☆ Do you snack mostly on nutritious foods from the four food groups?
- ☆ Do you limit foods that are higher in calories, fat, sugar and salt?

Provide each student with a copy of the survey questions and a template to tally their results from the survey. For example, the template could list questions down the left column on a page and the numbers of food groups across the top.

At Home: Have students use the questionnaire to survey members of their family.

In Class: Tally the survey results as a class on chart paper, using headings such as food groups eaten at breakfast, lunch, dinner and snacks. Students can then work in groups to create graphs that show survey results for various family eating habits.

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### **Learning Expectations:**

1. Analyse their own food selections over a period of time, and compare personal habits with *Canada's Food Guide*.
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### **Subject Links:**

Health, Language, Math, Information Technology

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### **Teaching Tip:**

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### **Activities:**

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*Students explore how eating well, being active and feeling good about yourself contribute to healthy living.*

### **Learning Expectations:**

1. Identify factors that promote good health (eating well, being active and feeling good about yourself).
2. Identify ways to promote healthy living.

**Subject Links:** Health, Language, Art, Information Technology, Physical Education

### **Materials & Resources:**

- ☆ Poster paper
- ☆ Art supplies
- ☆ *Canada's Physical Activity Guide for Children*, available at [www.healthcanada.ca/paguide](http://www.healthcanada.ca/paguide)
- ☆ *Canada's Food Guide*  
Visit [www.healthcanada.gc.ca/foodguide](http://www.healthcanada.gc.ca/foodguide) or call 1-800 O CANADA

### **Class Discussion:**

Eating well, being active and feeling good about yourself go hand in hand to promote healthy living. Feeling good about yourself means accepting who you are and believing in yourself. Ask students to think of a friend, relative or family member and share what they like or appreciate the most about them. Then the following questions can help students identify personal attributes, interests and characteristics that contribute to positive self-esteem:

- ☆ What are some of the favourite things you enjoy?
- ☆ What is something that you are good at?
- ☆ What is special and unique about you?

### **Teaching Tip:**

A healthy attitude towards your body is an important part of feeling good about yourself. Helping students identify and celebrate their own special attributes, interests and characteristics can contribute to their sense of self-esteem and positive body image.

### **Activities:**

1. The *MISSION NUTRITION\** Team wants to know what's special and unique about each student in your class. Provide each student with a sheet of poster paper and art supplies. Ask them to paint or draw a montage that illustrates some of the things that are special about themselves. Their pictures can highlight things they enjoy, special interests and hobbies, things they are good at, things that make them happy, family and friends that make them feel good.
2. Have students individually or in groups develop a phrase, slogan or rap to promote healthy eating,

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being active and positive self-esteem. These could be shared on the P.A. system each morning. Announcements could include messages about healthy living, starting the day with breakfast, novel lunch menus with foods from the four food groups, healthy snack ideas, fun with fitness and ways to feel good about yourself.

3. The *MISSION NUTRITION*<sup>®</sup> Team wants to know what activities kids enjoy. Allow computer lab time for students to explore *Canada's Physical Activity Guide* for children at <http://www.phac-aspc.gc.ca/pau-uap/paguide/>. Then brainstorm a list of students' favourite physical activities. Relate these to school based activity programs such as *Quality Daily Fitness*, *Sports Day*, *Jump Rope for Heart* and *ParticipACTION*. Some students who are highly motivated may want to plan activities for younger students or their class to promote active recess.

### **Student Mission 6:** **Healthy Living Calendar**

Have students record something they can do individually or with their family to be healthy each day for a month. Some students may want extra copies of this template to track their healthy lifestyles for additional months or throughout the year.

### **Home Connection:**

Tracking activities that promote good health on a monthly calendar can motivate students and their families to eat well, be active and feel good about themselves.

In Class: Provide each student with a copy of the *Student Mission 6* calendar. Ask students to suggest examples of actions they can take on their own and with their families to eat well, be active and feel good about themselves. For example:

To eat well - try a new food from the four food groups, plan a nutritious breakfast, pack an interesting lunch, write a healthy dinner menu that they could start to prepare after school or a grocery list of snacks from all four food groups, plant a vegetable garden or go on a family fruit picking excursion.

To be active - play a ball game, get involved in a team sport, plan a swimming or skating party or go for a family adventure - on foot, bikes or blades.

To feel good about yourself - share a story about how a friend or family member did something that made you feel good, celebrate something you did well or spend some time enjoying a favourite hobby.

At Home: During the next month, ask students to record on their calendar something they did to eat well, be active or feel good about themselves each day. Encourage students to include healthy activities that they do on their own as well as those they do as a family. They can include tips and use their calendars for goal setting also.

In Class: Allow time in class once a week for small group sharing of students' healthy activities and monitoring of their tracking calendars.

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