

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 and
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



Continued

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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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