Follow-up Activities

- Encourage students to make a list in a journal of the kinds of food they eat over a three-day period. Have students use the lists to compare the number of fruits and vegetables eaten daily by various members of the class. Challenge students to suggest ways in which they can design a better-balanced daily diet.
- Students can maintain an exercise record over a few days, describing both the activities they have engaged in and an approximate number of minutes spent doing each type of activity. Have students comment on whether or not they feel they are getting enough exercise to offset their food intake. Make references available that show the number of calories burned by different forms of physical and mental activity.
- Divide the class into five groups (carbohydrates, fats, proteins, vitamins and minerals) and ask them to make list of foods that are associated with each type of nutrient. Display this information.

Suggested Internet Resources

Periodically, Internet Resources are updated on our web site at www.LibraryVideo.com

- **www.smallstep.gov/kids/html/index.html**
  This web site from the U.S. Department of Health & Human Services has a quiz and other activities to help kids learn about the importance of healthy eating and exercise.
- **exhibits.pacsci.org/nutrition/**
  The Pacific Science Center developed this web site that invites kids to enter the "Have a Bite Café" to build a meal and learn about its nutritional value.
- **www.nal.usda.gov/fnic/Fpyr/pyramid.html**
  These pages from a site developed by the USDA give students a chance to download their own Food Guide Pyramid.

Suggested Print Resources

- Haduch, Bill. *Food Rules : The Stuff You Munch, Its Crunch, Its Punch, and Why You Sometimes Lose Your Lunch.* Dutton Publishing, East Rutherford, NJ; March 2001.
- Royston, Angela. *Eat Well. (Safe and Sound).* Heinemann Library, Des Plaines, IL; 2000.
- Sears, William, et al. *The Healthiest Kid in the Neighborhood: Dr. Sears's Nine Ways to Get Your Family on the Right Nutritional Track*. Little, Brown & Company, New York, NY; 2006.

TEACHER'S GUIDE

TEACHER'S GUIDE CONSULTANT

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TITLES

- ALL ABOUT BLOOD & THE HEART
- ALL ABOUT BONES & MUSCLES
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TEACHER'S GUIDE

All About Nutrition & Exercise

Grades K–4

This guide is a supplement, designed for educators to use when presenting this program in an instructional setting.

Before Viewing: Research in learning suggests that it is important for the teacher to discover what the students know — or think they know — about a topic, at the start of a new unit, so that their accurate conceptions can be validated and reinforced, and their misconceptions identified and corrected. Therefore, after reviewing the pre-viewing discussion questions provided for your class, create an "Everything We Know About…" list. Preview key vocabulary words and have students raise additional questions they hope will be answered by this program. Most importantly, students should be told that as "science detectives" they must listen closely, so that after viewing the program, they will be able to tell whether or not the facts/beliefs they put on their list were scientifically accurate.

After Viewing: After a brief discussion about the program, challenge your "science detectives" to prove or disprove the accuracy of the facts they put on their "Everything We Know About…" list. Discuss what else they learned and use the follow-up questions and activities to inspire further discussion. Encourage students to research the topic further with the Internet and reading resources provided.

SCHLESSINGER SCIENCE LIBRARY

Program Summary

Proper nutrition and exercise are both important to keep the human body healthy. Our bodies need many different foods in the proper quantities, and exercise is also necessary to keep the body healthy and balanced. The foods we eat contain important nutrients including carbohydrates, fats, proteins, vitamins, minerals and water.

Carbohydrates are the body's main source of energy. There are two types of carbohydrates: simple sugars, which give our bodies quick bursts of energy, and starches, which take longer for the body to digest and provide the body with long-lasting energy.

Fats are usually found in foods like meats, cheese, butter, ice cream, nuts and oils from plants. Fats are called the body's energy bank, because stored fats are a valuable energy source. Fat under the skin helps keep the body warm, and can also protect the body's internal organs.

Proteins are the important basic building blocks of the body and come in foods such as meats, fish, beans, nuts, eggs, milk and cheese. Some proteins carry oxygen in the blood and others control body growth, fight infections and rebuild the body's cells.

Vitamins are very important nutrients because they help the body to use all other types of nutrients. Vitamin A is important for healthy skin; B keeps your blood healthy; C helps your body fight off colds and heal wounds; D gives you strong bones and teeth, and helps keep your heart beating. Vitamins are naturally a part of many different types of food; however, many people take daily vitamin pills to make sure that they have the right amounts of each vitamin.

Minerals are also necessary in a healthy diet. Minerals are the basic ingredients that make up rocks and soil. Over time, as rocks are broken down, minerals are absorbed by the roots of plants and stored in their roots, stems, leaves and fruits. When animals eat the plants, minerals are taken in and used by their bodies for specific health functions. We get the mineral zinc from eating meats, seafood, eggs and green vegetables. We get calcium, which builds strong bones and teeth, from eating eggs and drinking milk. Iron, which gives us healthy blood, comes from meats, nuts and raisins.

Water is also vital to good health and nutrition. Our bodies, as well as plants and other animals, are made mostly of water. Water is essential because it dissolves nutrients and carries them all around our body in order to provide those nutrients to all of our cells. In fact, we could live much longer without food than we could without water.

No single food can supply all the nutrients in the amounts you need to stay healthy and strong. The food guide pyramid shows us what a daily balanced diet of nutrients looks like and gives us a good idea of the amounts and types of foods we should be eating.

The amount of regular exercise we get will also help us keep our body in balance. Exercise helps us to burn the energy contained in foods and improve the health of our body and mind. If we don't exercise enough, we can become overweight, but too much exercise can be harmful as well. Finding the right balance is really important!

Vocabulary

The following words are included for teacher reference or for use with students. They are listed in the order in which they appear in the video.

nutrients — Fuel for the human body obtained from different foods to help people live, grow and stay healthy.

exercise — Planned activity that works your muscles, heart and lungs to help you burn up extra calories, and keeps your mind and body healthy.

carbohydrates — A nutrient found in sugars and starches that provides your body with its main source of energy.

starches — A type of carbohydrate that provides the body with a long-lasting energy source, which can be obtained from foods like pasta and potatoes.

fats — Nutrients found in foods like meat, cheese, butter, oils, nuts and in some vegetables. Fats serve as stored energy for future needs, keep the body warm and protect vital organs.

proteins — Nutrients found in foods like meat and dairy products that are the building blocks for most of the body. They also carry oxygen in your blood, control your growth and fight infection.

vitamins — Nutrients that have special jobs to help keep the body strong and healthy, such as Vitamin A, which works to maintain the health of our skin and eyes. While vitamins are found naturally in many foods, some people take vitamin pills to ensure they are getting the right amounts of each vitamin.

minerals — Nutrients essentially derived from rocks that are obtained from various food sources and ensure the health of our body and mind. Examples include zinc, calcium and iron.

food guide pyramid — A model that shows the amounts of the basic food groups we need to eat each day (grain products; vegetables; fruits; milk and milk products; protein-rich plant foods like beans and nuts; and protein-rich animal foods).

Pre-viewing Discussion

Before students generate their list of "Everything We Know About…" this topic, stimulate and focus their thinking by raising these questions so that their list will better reflect the key ideas in this show:

- How do our bodies get energy?
- What do we need to do to help our bodies stay healthy and strong?

After the class has completed their "Everything We Know About…" list, ask them what other questions they have that they hope will be answered during this program. Have students listen closely to learn if everything on their class list is accurate and to hear if any of their own questions are answered.

Focus Questions

1. What do our bodies need to live and grow?
2. Where do our bodies get fuel?
3. Name some different types of nutrients.
4. What are carbohydrates?
5. Is sugar good or bad for us? Explain.
6. From what kinds of food do we get carbohydrates?
7. From what kinds of food do we get fats?
8. What important jobs do fats have in the body? When are fats harmful?
9. What are some important jobs that proteins have in the body?
10. From what kinds of food do we get proteins?
11. What are vitamins and minerals? Why do we need them?
12. Where do minerals come from?
13. Why do you think that it is important to have a lot of different foods in your diet?
14. Why is water such an important nutrient?
15. What is the purpose of the food pyramid?
16. Using the food guide pyramid, how would you compare the amount of carbohydrates our bodies need each day to the amount of fats, oils and sweets?
17. How would you explain what a balanced daily diet should contain?
18. What is fiber?
19. What good things does regular exercise do for our body?
20. Why is resting important for our bodies?

Follow-up Discussion

The most important part of this segment is to examine both the facts and beliefs generated by the class in their "Everything We Know About…" list. Research indicates that students will retain their previous misconceptions — in preference to the new information — until they actively recognize and correct their own errors. Because of this, it is important to lead students to the correct ideas while identifying and correcting any misconceptions from the class list. After reviewing the list, encourage students to share the answers they got to the questions raised, before viewing the program.

Raising a thought-provoking question is a good way to assess the overall depth of student understanding. A couple of suggestions are listed below:

- How is food like the fuel we put in our cars?
- Based on what you've learned about nutrition, why is it better to drink milk than soda?