



Part II

Classroom Lessons for Fifth Graders

Part II includes the fifth-grade classroom lessons. Using the same multidisciplinary approach used in part I, these lessons expand on the key ideas presented in the fourth-grade lessons while emphasizing skill building and putting knowledge into practice. With activities such as choosing healthy snacks, monitoring food choices, and limiting television and screen time, the fifth-grade lessons provide ample opportunities for students to begin living by the themes of *Eat Well & Keep Moving*. Like the fourth-grade lessons, the fifth-grade lessons and their key messages can be bolstered by the many supporting activities of *Eat Well & Keep Moving* described in parts III through VII and the web resource.

Focusing on the same broad messages taught in the fourth-grade lessons, these fifth-grade lessons teach students to do the following:

- Make the switch from sugary drinks to water.
- Choose colorful fruits and vegetables instead of junk food.
- Choose whole-grain foods and limit foods with added sugar.
- Choose foods with healthy fat, limit foods high in saturated fat, and avoid foods with trans fat.
- Eat a nutritious breakfast every morning.
- Be physically active every day for at least an hour.
- Limit television and other recreational screen time to two hours or less per day.
- Get enough sleep to give the brain and body the rest they need.

LESSON 15



Healthy Living, Healthy Eating

Background

Healthy Living

Healthy living involves making lifestyle choices that maximize our physical and mental well-being. Healthy living encompasses more than just eating a balanced diet. It also involves getting the exercise and rest our bodies need, staying away from harmful substances (such as tobacco and drugs), and engaging in activities that we enjoy and that enhance our mental well-being.

It is important to recognize that our physical health and our mental health are inter-related. For example, eating a nutritious and balanced diet and exercising not only help maintain good physical health but also boost mental health by increasing energy levels and improving the ability to cope with stress. Spending time with friends can provide support for life's many challenges as well as companions for physical activity. The key to healthy living is a balance of all aspects of life—physical, intellectual, social, and emotional.

Again, eating a balanced diet and staying active are the cornerstones of a healthy lifestyle. Eating the right foods provides the energy and nutrients our bodies need to stay healthy and helps us fight and prevent many infections and diseases. Similarly, regular physical activity helps prevent heart disease, obesity, diabetes, osteoporosis, and a host of other diseases. What we eat and how much activity we get affect not only how our bodies perform and feel right now but also our health for the next 10, 20, and 30 years and beyond.

Healthy living means being aware of, and making an effort to enhance, those aspects of our lives that keep us healthy, make us feel good, and help us lead active, full lives.

Building a Healthy Foundation

The following guidelines can help you eat well and can keep you moving toward a lifetime of healthy living.

Principles of Healthy Living



- **Make the switch from sugary drinks to water.** Water is essential to human survival, optimal functioning, and health, which is why it should be the go-to choice when deciding what to drink. Sugary beverages such as soda, sports drinks, energy drinks, and fruit drinks are filled with empty calories, meaning that they provide many calories but almost none of the nutrients the body needs to stay healthy and grow strong. Research shows that children who have too much sugar are at risk for unhealthy weight gain and type 2 diabetes. For more on the benefits of water over sugary drinks, refer to lessons 19 and 20.



- **Choose colorful fruits and vegetables instead of junk food.** Fruits and vegetables are packed with vitamins, minerals, antioxidants, and fiber, and they also provide healthy carbohydrate that gives us energy. A good goal is eating five servings each day—and more is always better—so fill half your plate with fruits and vegetables at every meal, and eat them as snacks instead of junk food such as chips, candy, and other sweets. Choose fruits and vegetables in a rainbow of colors (especially dark-green and orange vegetables). For more on fruits and vegetables, refer to lessons 11, 12, and 25 and to the schoolwide promotion Get 3 At School and 5+ A Day (lesson 30).



- **Choose whole-grain foods and limit foods with added sugar.** Minimally processed whole grains are a better choice than refined grains. Whole grains contain fiber, vitamins, and minerals, whereas the refining process strips away many of these beneficial nutrients. Even though some refined grains are fortified with vitamins and minerals, fortification does not replace all of the lost nutrients. In addition, refined grains get absorbed by the body very quickly, which can cause blood sugar levels to spike. In response, the body

quickly takes up sugar from the blood to bring sugar levels down to normal. Working so quickly may cause the body to overshoot things, however, making blood sugar levels a bit lower than they should be. This can cause feelings of false hunger even after a big meal, as well as tiredness. Choose whole grains (such as steel-cut oats and 100% whole-wheat bread) whenever possible, making sure to check the nutrition facts label and ingredients list for added sugar. For more on whole grains and healthy carbohydrate, refer to lessons 2 and 13.

- **Choose foods with healthy fat, limit foods high in saturated fat, and avoid foods with trans fat.** Plant-based foods, including plant oils (such as olive, canola, soybean, corn, sunflower, and peanut oils), nuts, and seeds, are natural sources of healthy fat, as are fish and shellfish. Healthy fat can help lower the risk of heart disease and stroke. Unhealthy fat—including saturated fat—increases the risk of heart disease and stroke. Most foods that are high in saturated fat come from animals, including dairy fat, the fat in meat, and lard. However, even a few healthy plant-based foods and fish contain small amounts of saturated fat, so we can't completely eliminate it from our diets. As a general rule, keep your intake of saturated fat as low as possible, opting for healthy foods such as salmon, almonds, and avocados, instead of hamburgers and cheesy pizza. The worst type of unhealthy fat is trans fat, which raises the risk of heart disease, stroke, and possibly diabetes. Trans fat is formed when healthy vegetable oils are partially hydrogenated (a process that makes the oil solid or semisolid, which makes the fat more stable for use in packaged foods).* Foods with trans fat and partially hydrogenated oils should be avoided. For more on choosing foods with healthy fat, refer to lessons 5, 6, and 18.

**At the time of publication, the FDA banned the use of partially hydrogenated oils in food products, giving manufacturers three years to comply with the decision. This edition's messaging on avoiding trans fat from partially hydrogenated oils remains important guidance during the transitional period.*



- **Eat a nutritious breakfast every morning.** Breakfast is a critical meal because it gives the body the energy it needs to perform at school, work, or home. Studies have shown that breakfast can improve learning, and it helps boost overall nutrition. Many common breakfast foods can be rich in whole grains, and it's a great meal in which to incorporate colorful fruits and vegetables. For more on eating breakfast, refer to lesson 26.



- **Be physically active every day for at least an hour.** Regular physical activity not only improves our physical health (by helping to prevent unhealthy weight gain, obesity, and several chronic diseases) but also benefits our emotional well-being. Children should get at least 60 minutes of physical activity every day, which can be broken up into multiple sessions throughout the day. This can include active free play, as well as structured activities that are age appropriate and enjoyable and that offer variety. Any episode of moderate- or vigorous-intensity physical activity, however brief, counts toward the daily goal. For more on physical activity, refer to lessons 17 and 28, as well as the physical education lessons and microunits in parts IV through VII.



- **Limit TV and other screen time to two hours or less per day.** The more television you watch, the less time you have to engage in physical activity or other healthy pursuits; the same goes for spending time online on your computer or smartphone for fun, text messaging, and playing video games. Watching more television means seeing more ads for unhealthy foods, and research suggests that this leads to consuming more calories. Such sedentary behavior combined with a poor diet can lead to unhealthy weight gain. Children should limit total recreational screen time to no more than two hours each day, whether it be a TV, computer, smartphone, or other handheld device—anything with a screen counts. For more on reducing TV viewing and screen time, refer to lesson 23 and the schoolwide promotion Freeze My TV (lesson 29).





- **Get enough sleep to give the brain and body the rest they need.** It takes a lot of energy to work hard in school, eat well, and stay active, which is why it's important to get enough rest to recharge for the next day. Children who don't get enough sleep have a harder time paying attention in school, and lack of sleep is linked to unhealthy weight gain. Children ages 6 to 12 should be getting at least 10 hours of sleep each day, so it's important to set up a regular bedtime routine and provide a bedroom without a TV, and with smartphones and other screens turned off. For more on sleep, refer to lesson 23.

Food Groups and the Kid's Healthy Eating Plate

Eating a variety of foods keeps our meals interesting and flavorful. It's also the key to a healthy and balanced diet because each food has a unique mix of nutrients—both macronutrients (carbohydrate, protein, and fat) and micronutrients (vitamins and minerals). Vegetables, fruits, grains, protein, and dairy make up the five basic food groups, but not all options within these groups are equally beneficial or healthy, and some foods—especially those from plants—are needed in greater proportion than others (see table 15.1). The Kid's Healthy Eating Plate (see figure 15.1) provides a blueprint for building a balanced meal with the best choices from each group.

Along with filling half of our plates with colorful *vegetables* and *fruits*, we should split the other half between *whole grains* and *healthy protein*. Minimally processed whole grains make better choices than refined grains, especially when we look out for added sugars. Healthy protein includes mostly plant-based options such as nuts, seeds, and beans, but poultry and fish are also excellent choices. Foods from the *dairy* group are needed in lower proportions than foods from the other groups, but milk and other dairy foods are common sources of calcium and vitamin D, so choose unflavored milk, plain yogurt, or other unsweetened dairy foods.

DAIRY RESEARCH

Milk and dairy foods are a convenient source of calcium, vitamin D, and other nutrients for many people, but the optimal intake of dairy products has yet to be determined and the research is still developing. To review the most up-to-date evidence on dairy consumption, visit the Kid's Healthy Eating Plate on The Nutrition Source: www.hsph.harvard.edu/nutritionsource/kids-healthy-eating-plate.

The Kid's Healthy Eating Plate also includes elements that are not part of the five food groups but are important for maintaining a healthy diet and lifestyle.

- *Healthy oils* (plant-based oils such as olive and canola oil) are a great source of healthy fat and should be used when cooking or dressing salads.
- *Water* should be the drink of choice at every meal and snack, as well as when we are active.
- Note that the Kid's Healthy Eating Plate does not contain sugary drinks, sweets, and other junk foods. These are not everyday foods and should be eaten only rarely, if ever.
- Finally, just like choosing the right foods, incorporating physical activity into our day by *staying active* is part of the recipe for keeping healthy.

TABLE 15.1 Best-Choice Foods in Each Food Group

Food group	How to choose	Examples of best-choice* foods
Grains	<ul style="list-style-type: none"> • Whole grains—Choose whole grains or foods made with minimally processed whole grains. • Choose foods that list a whole grain as the first ingredient. • Watch out for added sugar on the nutrition facts label and ingredients list. Remember that there are many names for added sugar, including corn syrup, sucrose, honey, and molasses. 	Whole grains (barley, brown rice, buckwheat, bulgur, millet, quinoa, wheat), breads (100% whole-wheat or -rye bread, 100% whole-grain rolls, stone-ground corn or 100% whole-wheat tortillas, 100% whole-wheat pitas), cereals (steel-cut oatmeal, seven-grain hot cereal, ready-to-eat cereals made with whole oats, whole wheat, or other whole grains), pasta (100% whole-wheat noodles, soba noodles), crackers (100% whole-wheat crackers, whole-rye crispbread), pancakes (100% whole wheat or buckwheat)
Vegetables	<ul style="list-style-type: none"> • Choose a rainbow of colors, especially dark green and orange. • Potatoes don't count as vegetables. 	Collard greens, mustard greens, spinach, kale, chard, bok choy, green cabbage, red cabbage, winter squash, summer squash, zucchini, sweet potatoes, broccoli, carrots, tomatoes, turnips, string beans, lettuce, onions, okra, beets, cauliflower, brussels sprouts, beans and peas (kidney beans, black beans, soybeans, chickpeas, lentils, black-eyed peas)
Fruits	<ul style="list-style-type: none"> • Choose a rainbow of colors. • Choose whole fruits or sliced fruits (rather than fruit juices; limit fruit juice to no more than 4-6 oz, or 120-170 ml, per day). 	Peaches, nectarines, cantaloupe, watermelon, grapefruit, raisins, apples, pears, oranges, strawberries, tangerines, grapes, pineapple, mangoes, blueberries, cherries, figs, kiwi fruits, avocados
Protein	<ul style="list-style-type: none"> • Choose beans and peas,** nuts, seeds, and other plant-based healthy protein options, as well as fish and poultry. • Limit red meat (beef, pork, lamb) and avoid processed meats (bacon, deli meats, hot dogs, sausages). 	Beans and peas (kidney beans, black beans, soybeans, chickpeas, lentils, black-eyed peas), nuts (almonds, hazelnuts, walnuts), nut butters (peanut butter, almond butter), seeds (sunflower, pumpkin), tofu and other high-protein vegetarian alternatives (tempeh, falafel, veggie burgers), fish (salmon, trout, cod, shrimp, crab, scallops, light tuna, sardines), eggs, poultry (chicken, turkey)
Dairy	<ul style="list-style-type: none"> • Choose unflavored milk, plain yogurt, small amounts of cheese, and other unsweetened dairy foods.*** • Dairy foods are needed in lower proportions than foods from the other groups. 	Unflavored milk, plain yogurt, string cheese (mozzarella cheese sticks), cottage cheese, cheddar cheese

*Best-choice foods contain the most nutrients and contribute to overall health.

**Beans and peas can be considered part of the vegetable group as well as the healthy protein group.

***Plain yogurt and other unsweetened dairy foods can also be a good source of protein. Students who cannot consume dairy can choose lactose-free milk or calcium-fortified nondairy alternatives such as unflavored and unsweetened rice milk or soy milk.

Energy Nutrients: Carbohydrate, Protein, and Fat

The foods we eat contain many kinds of nutrients. Nutrients are the chemical substances in food that the body uses to keep healthy. Macronutrients (carbohydrate, fat, and protein) are the major food components. Micronutrients (vitamins and minerals) are the nutrients needed in very small amounts. Both groups of nutrients are important for a healthy body.

All foods contain one, two, or all three of the macronutrients, although some have more of one macronutrient than others. *Protein* provides the building blocks for making and

Kid's Healthy Eating Plate



Figure 15.1 The Kid's Healthy Eating Plate helps you build a balanced meal with best-choice foods.

Copyright © 2015, Harvard T.H. Chan School of Public Health. For more information about The Kid's Healthy Eating Plate, please see The Nutrition Source, Department of Nutrition, Harvard T.H. Chan School of Public Health, www.hsph.harvard.edu/nutritionsource/kids-healthy-eating-plate

repairing tissue (such as muscle and skin). Healthy sources of protein include nuts, seeds, beans, or legumes, as well as fish, poultry, eggs, and unflavored and unsweetened dairy foods. *Fat* helps the body transport certain vitamins and is a rich source of energy. Healthy unsaturated fat is mainly found in plant-based foods such as vegetables and vegetable oils (olive, canola, and soybean oils), nuts, seeds, and whole grains. Fish is also a good source of healthy fat. *Carbohydrate* (starches and sugars) provides energy more quickly than the other macronutrients do; energy from carbohydrate is readily used by every cell in the body. Carbohydrate is found in all five food groups,* but not all types of carbohydrate are healthy choices. Some are better than others.

When people think about “carbs,” foods from the grain group often come to mind. In the grain group, the healthiest carbohydrate choices are whole grains (such as brown rice and 100% whole-wheat bread and pasta), which are high in fiber, vitamins, and minerals. Whole grains are a much better carbohydrate choice than refined grains (such as white rice, white bread, and white pasta), because the refining process breaks down the intact

grain and strips away many beneficial nutrients. Refined grains also are digested and absorbed by the body very quickly, which can cause feelings of false hunger and tiredness after blood sugar levels spike and fall below normal levels.

Foods and drinks with added sugar (such as cookies, cakes, pastries, candy, soda, energy drinks, and punches) also provide carbohydrate, but they are not healthy sources. These foods typically have sugar as one of their main ingredients (they may also contain unhealthy fat), and these drinks are made with mostly sugar and water. Foods and beverages with added sugar contain very few micronutrients (vitamins and minerals) and are not the best choices—they should be eaten rarely, if ever.

In summary, the amount of carbohydrate in the diet—high or low—is less important than the type of carbohydrate in the diet, because some sources are healthier than others.

Vitamins and Minerals

Vitamins and minerals are nutrients (micronutrients, specifically) needed to keep the body healthy. There are many vitamins and minerals in the foods we eat, some of which are listed in table 15.2. It is important to eat a variety of food every day so that we get all the vitamins and minerals we need.

***Where can you find carbohydrate in other food groups on the Kid's Healthy Eating Plate?**

- **Fruits:** Naturally sweet, fruits are healthy sources of carbohydrate, because they contain fiber, vitamins, and minerals. Choose whole fruits instead of fruit juice.
- **Vegetables:** Brightly colored vegetables are also healthy sources of carbohydrate. Go for color and variety. Potatoes don't count as a vegetable; they are rich in carbohydrate but should be eaten only in small quantities, if at all, because they are digested and absorbed quickly (similar to refined grains).
- **Healthy protein:** Beans provide healthy, slowly digested carbohydrate and are rich in fiber and protein.
- **Dairy:** Unflavored milk and plain yogurt naturally contain "milk sugar" (lactose). Flavored milk and yogurt typically have a lot of added sugar, so it's best to choose plain, unflavored, and unsweetened dairy products.

TABLE 15.2 Selected Vitamins and Minerals

What's the nutrient?	Where can I get it?	What does it do for me?
VITAMINS		
Vitamin A	Dark-green, yellow, and orange vegetables and fruits such as kale, spinach, broccoli, romaine lettuce, carrots, sweet potatoes, cantaloupe, apricots, papayas, mangoes	Helps with night vision, bone growth, and tissue maintenance.
Vitamin C	Oranges, grapefruit, tangerines, cantaloupe, mangoes, papaya, strawberries, broccoli, tomatoes, bell peppers, sweet potatoes	Keeps skin and tissue healthy.
Vitamin E	Almonds, sunflower seeds, sunflower oil, safflower oil, peanut butter, corn oil, soybean oil, canola oil, spinach, broccoli, dandelion greens, tomato sauce	Helps protect cells from damage (antioxidant).
MINERALS		
Calcium	Unflavored milk, cheese, plain yogurt, cottage cheese, fortified nondairy milks,** kale, broccoli, greens, calcium-set tofu (bean curd), black-eyed peas, baked beans, bok choy	Helps keep bones and teeth strong.
Potassium	Sweet potatoes, tomatoes, winter squash, peaches, apricots, cantaloupe, bananas, greens, avocados, spinach, dried beans (white beans, lentils, kidney beans), bran, peanuts, unflavored milk, plain yogurt, poultry, seafood, lean red meat*	Helps the body maintain fluid balance, electrolyte balance, and acid-base balance. Also helps our nerves function and our muscles, especially the heart, work properly.

*Limit red meat; avoid bacon, cold cuts, and other processed meats.

**Best choices do not have caffeine or sugar.

Estimated Teaching Time and Related Subject Area

Estimated teaching time: 1 hour, 45 minutes

Related subject area: science

Objectives

- Understand the concepts of wellness and a balanced lifestyle, as well as the role of carbohydrate in the diet.
- Gain a further understanding of the food groups and the healthy eating guidelines.
- Learn the roles of selected vitamins and minerals in the diet.

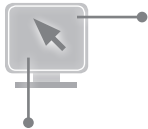
Materials

- Worksheet 15.1, Eat Well & Keep Moving Fortune Teller
- Worksheet 15.2, Help! You're the Doctor
- Worksheet 15.3, Menu Planning
- Food pictures (cut out from magazines or food packages; Healthy Kid's Challenge sells cards for approximately 150 foods and beverages that can be downloaded at www.healthykidschallenge.com/products/food-cards)
- Worksheet 15.2 Solutions
- Worksheet 15.3 Solutions
- Teacher Resource 15.1, Carb Smart
- Teacher Resource 15.2, Carb Smart With Whole Grains
- Overhead 15.1, Principles of Healthy Living
- Overhead 15.2, Kid's Healthy Eating Plate (one per student)

Procedure

1. Distribute Worksheet 15.1, Eat Well & Keep Moving Fortune Teller, to each student for assembly. Use Overhead 15.1 to discuss the details of the eight healthy living messages. Explain how a balanced diet and balanced lifestyle keep people healthy.
2. Discuss the role of carbohydrate and how some carbohydrate foods are healthier than others (see background information and Teacher Resources 15.1 and 15.2).
3. Explain that to stay healthy, our bodies need special nutrients called vitamins and minerals. Small amounts of these nutrients are found in healthy foods from all of the food groups. For example, discuss the roles of vitamin A and calcium in the diet and list foods that are good sources of these nutrients (see table 15.2).
4. Using the food picture cards (or foods cut out of magazines), select several foods that contain carbohydrate, vitamin A, and calcium (see background information for examples of such foods). Place these cards on the board and select students to identify a food and then explain the benefits of eating it. The students should also name a nutrient that is found in that food and describe its role in the body.
5. Distribute Worksheet 15.2, Help! You're the Doctor. Have students read the three cases about people who have health concerns and answer the questions in the spaces provided on the worksheet.

If you like, you may choose other vitamins and minerals for discussion and the activity.



Worksheet 15.1

Eat Well & Keep Moving Fortune Teller

Name _____

Directions

1. Using scissors, cut out the square on the next page by making cuts along the dotted lines. Fold the square according to the following directions:



1. With pictures face down, fold on both diagonals. Unfold.



2. Fold all four corners to center.



3. Turn paper over.



4. Again, fold all corners to center.



5. Fold paper in half and unfold.



6. Repeat fold from step 5 to bottom. Do not unfold.



7. Slide thumbs and forefingers under the squares and move back and forth to pop.

From: WCV, Cheung, H. Diet, S. Kuhn, B. Oke, and L.L. Gortmaker. 2016. Eat Well & Keep Moving. 3rd ed. ©Champaign, IL: Human Kinetics.

Lesson 15—Healthy Living, Healthy Eating 1

Worksheet 15.2

Help! You're the Doctor

Name _____

Directions

Read the following paragraphs and complete the exercises.

1. Members of the Lee family have been told by a doctor that they should eat more foods that contain lots of vitamins and minerals. The family eats a lot of the grain, dairy, and protein food groups. Popular family dinners are Italian bread, and chocolate milk, as well as steak, mashed potatoes, and white rice. The family members need a greater variety of foods in their diet. List some foods that would help the Lee family improve their diet. List at least five foods that would help the Lee family improve their diet. List at least five foods that would help the Lee family improve their diet.

6. Explain to students that healthy living involves a lifestyle that is balanced and varied. It is important to eat a balanced and varied diet and to engage in a variety of activities in all aspects of life—social, intellectual, physical, and emotional. Activities that contribute to personal well-being include spending time with friends, talking with family members, walking, dancing, running, playing sports, and even spending quiet time reading or listening to music.
7. Distribute Worksheet 15.3, Menu Planning. Review the healthy living concepts and the Kid's Healthy Eating Plate (Overhead 15.2).
8. Have students complete Worksheet 15.3 as instructed. Invite them to share and discuss their menu ideas.