

Healthalicious Cooking

Learning about Food and Physical Activity

Lesson 3 - Make It Crunchy: Go for Whole Grains!

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ACTIVITIES TIMELINE

Activity 1	Physical Activity: Knots	10 minutes	Page 7
Activity 2	Goal Setting	5 minutes	Page 7
Activities 3 + 4	Health Activities: "What Is a Whole Grain?" and "Name That Grain!"	20 minutes	Page 8 Page 10
Activity 5	Cooking and Eating Activity: Scrambled Eggs	60 minutes	Page 15
Activity 6	Cleanup	10 minutes	Page 17
Activity 7	Quick Write	5 minutes	Page 19
Activity 8	Goal Setting	5 minutes	Page 20

Total time = 2 hours

LESSON 3 OBJECTIVES

By the end of this lesson, kids will be able to

- identify how many parts a whole grain contains
- identify foods containing whole grains by looking at the labeling on the package
- explain why it is important to eat whole grains
- work as part of the team to prepare a meal and clean up the area afterwards

Health outcome: Eat more whole grains.

Life skill: Healthy lifestyle choices



BACKGROUND FOR ADULT LEADERS: WHAT YOU NEED TO KNOW

Whole Grains

All grains start life as whole grains. The kernel is made up of three parts: the bran, the germ, and the endosperm.

The bran

The bran is the multi-layered outer skin of the kernel that contains important antioxidants, B vitamins, and fiber.

The germ

The germ is the embryo which, if fertilized by pollen, will sprout into a new plant. It contains many B vitamins, some protein, minerals, and healthy fats.

The endosperm

The endosperm is the largest portion of the kernel. It contains starchy carbohydrates, proteins, and small amounts of vitamins and minerals.

Whole Grains Are Healthier

Whole grains contain all three parts of the kernel. Refining normally removes the bran and the germ, leaving only the endosperm. Without the bran and the germ, about 25 percent of a grain's

protein is lost, along with at least 17 key nutrients. Processors add back some vitamins and minerals to enrich refined grains, so refined products still contain valuable nutrients. Whole grain products are usually more nutritious than highly refined products because they provide more fiber. Most Americans—adults and kids alike—do not get enough fiber.

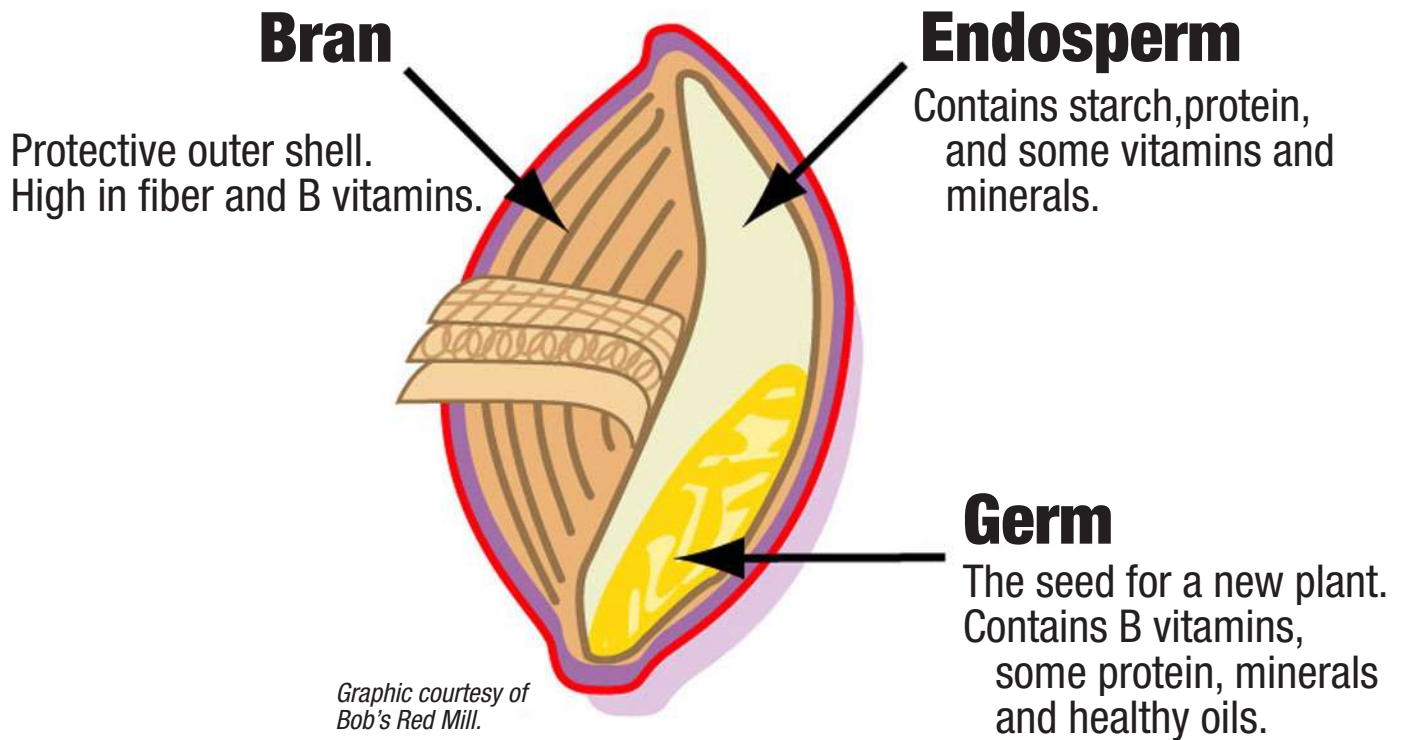
Whole grains can be eaten whole, cracked, split, or ground. They can be milled into flour to make breads, cereals and other processed foods. If a food label states “whole grain,” the whole grain part of the food inside the package is required to have virtually the same proportions of bran, germ, and endosperm as the harvested kernel before it is processed. Eating fiber-rich whole grains may reduce risks of heart disease, stroke, colon cancer, diabetes, and obesity. Fiber is also important for the health of the digestive tract and for relieving constipation.

(Source: Whole Grains Council website, <http://www.wholegrainscouncil.org/>.)

LEADERS: CHECK RECIPE INGREDIENTS AND ASK PARENTS IF PARTICIPATING CHILDREN HAVE FOOD ALLERGIES.



What is a Whole Grain?



All grains, when they grow in the field, have three parts: the bran, germ and endosperm, as shown in the illustration here. Whole grains or foods made from them contain all the essential parts and naturally-occurring nutrients of the entire grain seed. Enriched ("white") flour contains only the endosperm, while whole grain flour contains extra protein, fiber, vitamins and minerals that are found only in the bran and germ. All three parts are important!

The following are considered whole grains, when all three parts – the bran, germ, and endosperm – are included:

Amaranth, Barley (lightly pearled), Brown and Colored Rice, Buckwheat, Bulgur, Corn and Whole Cornmeal, Emmer, Farro, Grano (lightly pearled wheat), Kamut® grain, Millet, Oatmeal and Whole Oats, Popcorn, Quinoa, Sorghum, Spelt, Triticale, Whole Rye, Whole or Cracked Wheat, Wheat Berries, and Wild Rice.

MATERIALS FOR LESSON 3

Physical Activity: no materials needed

Health Activities

No. 1: Drawing a Whole Grain

- box of crayons
- sheets of plain, white paper, one per kid
- pencils, one per kid
- popped popcorn, small amount
- 2 packages of 100 percent whole wheat bread (may also be used for the meal)
- 1 package of processed white bread
- picture of wheat or stalk of wheat, optional

No. 2: Name That Grain!

- whole grains: oats, brown rice, wild rice, barley, popcorn, rye, and whole wheat berries (recommended, but not all are required)
- bowls or containers for grains, one bowl for each grain
- whole grain name cards (reproducible sheet provided)
- “Name That Grain!” participant activity sheet, one per kid (reproducible sheet provided)

Cooking and Eating Activity

(See shopping list on next page.)

Menu: Scrambled eggs, whole grain toast, and fruit salad
Serves 10

Equipment and supplies

- stickers
- New Food Taster’s Club Chart
- stove and frying pan or electric skillet
- 1 large bowl
- 10 small bowls or cups
- 10 fork or whisks
- 6 knives
- 6 cutting boards
- 1 large spoon
- 2 spatulas
- 1 toaster
- 10 plates
- 10 cups
- 10 utensils
- 10 napkins
- 1 roll paper towels
- dilute bleach solution in a spray bottle (1 teaspoon of bleach added to 1 quart of water) (For equivalents between U.S. and metric systems of measurement, a conversion table is provided at the end of this publication.)

Quick Write and Goal-Setting Activities

(can be used for all six lessons)

- binder with dividers, one divider per kid
- lined binder paper, one sheet per kid
- pencils or pens, one for each kid
- index cards, sticky notes, or paper, one for each kid

Take-Home Materials

- recipe
- Family Letter



Shopping List For Lesson 3

Serves 10 people

Use this checklist when grocery shopping for recipe ingredients to prepare for the lesson.

- 1 dozen large eggs
- 1 bunch green onions, optional
- 2 large tomatoes, optional
- salt and pepper shakers
- cooking oil spray
- 2 gallons of 1 percent milk
- 2 loaves of 100 percent whole wheat bread
- 1 loaf of enriched white bread or plastic bag wrapper from a loaf of enriched white bread
- spreadable butter or margarine (should contain no trans fats)
- 100 percent fruit spread, optional
- ketchup, optional
- mild salsa, optional
- 3 bananas
- 3 apples
- 4 oranges

Note: Other types of fruit may be added to the fruit salad.

Menu

- scrambled eggs
- whole wheat toast
- fruit salad
- milk

Physical Activity

Knots

Number of players: 5 or more

Materials: none

Space needed: minimal



Key Points

- It is important to be physically active every day to build strong bones and muscles and grow normally.
- Lots of kids do not get enough physical activity.
- Kids need at least 60 minutes per day of physical activity.
- Physical activity can be fun. Playing games like “Knots” counts as physical activity.

Procedure

1. Players stand in a circle, facing each other.
2. Players reach both arms into the center and randomly take another player’s hands.
 - You cannot hold both hands of the same player.
 - You cannot hold hands with players standing next to you.
4. Players start to untangle the knot. Turn, twist, step over or under other players’ arms. Do not let go!
 - If a handhold slips, reconnect just as it was.
5. When completely untangled, play it again!

Goal Setting

1. Discuss how goal setting went since the last lesson.
2. Have kids tell about the new foods they tried over the past week.

Sample questions

Think about the goal you set last week.

- How easy or difficult was the goal to complete?
- If you found it easy to complete the goal, why?
- If you found it difficult to complete the goal, why?
- What would help you achieve the goal?
- What did you learn about yourself?

Goals from last lesson

1. Try a new food during the week.
2. Eat a meal with at least three food groups on at least one day during the week.
3. Make a snack with three food groups during the week.

Health Activity 1

What Is a Whole Grain?

Activity 1 Questions

What is a whole grain? Why is it important to eat whole grains?

Key Points

- Whole grains are made of three parts, all of which are important for health.
- Whole grains are important for normal growth, digestion, and health.

Materials

- box of crayons
- 11 sheets of plain, white paper
- pencils, one per kid
- 1 cup popped popcorn, 1 package each of 100 percent whole wheat and enriched white bread
- picture of wheat or stalk of wheat, optional

Procedure

1. Adult leader *shows* kids the popcorn and *asks*: “Who likes popcorn?”
2. Leader *asks*: “Do you know that popcorn is a *whole grain*?”
3. Leader *asks*: “What is a whole grain?” “What does the word whole mean?” “For example, if I say, ‘I ate the whole apple,’ what does that mean?” (the entire or complete apple)
4. Leader *distributes* paper, crayons, and pencils. (Note that the drawing portion of this activity may be less interesting to older children and therefore can be omitted, depending on the ages of the participants.)
5. Leader *labels* the top of paper with the phrase “*Whole Grain = all 3 parts.*” Kids do the same.
6. Leader *draws* a large oval with a crayon on paper and *labels* it “*Bran.*” Kids do the same.
7. Kids *draw* a small oval within the larger oval with a different colored crayon and *label* it “*Germ.*”
8. Kids *color* the area inside the larger oval with a third crayon and label the area “*Endosperm.*”
9. Leader *asks*: “What did we draw?” (a whole grain)
10. Leader *asks*: “How many parts does a whole grain have?” (three: bran, germ, endosperm)
11. Leader *distributes* kernels of popped popcorn to everyone.
12. Leader *asks*: “How many of the three parts can you see in the popcorn?”
 - the dark, thin outer layer of bran
 - the light, big endosperm, which makes up the majority of the popcorn
 - the germ, the third part, cannot always be seen
13. Leader *shows* picture of wheat. Say: “When grain grows, it contains all three parts.”
14. Leader *explains* that some food is made from a whole grain, all three parts, and some is not.
15. Leader *passes* packages of 100 percent whole wheat bread and one package of enriched white bread around for kids to read.

Health Activity (*continued*)

16. Leader *asks*: “Are these breads made from whole grain? One is and one is not. There are three ways to tell.” Allow time for kids to look at packages and offer ideas. (100 percent whole wheat bread is made from whole grains; enriched white bread is not.)

- the word “*whole*” (“100 percent whole wheat bread” listed on the package)
- the whole grain symbol (See symbol on the package.)



• the first item on the ingredient list is a whole grain (Example: “whole wheat flour”)

17. Leader *asks*: “What benefits do we get from eating whole grains?” *Wait* for responses.

- The body needs whole grains (all three parts) to grow properly, to digest food, and to be healthy.

18. Leader *asks*: “When you go shopping, how can you tell that you are buying whole grains?”

Look on the food package for these three things:

- the word “*whole*”
- the whole grain symbol
- the first ingredient on the list is listed as a whole grain

Additional Resources

The Whole Grains Council website, www.wholegrainscouncil.org.

USDA Center for Nutrition Policy and Promotion. 2005. Food groups: Grains. MyPyramid.gov website, www.mypyramid.gov/pyramid/grains_print.html.

Health Activity 2

Name That Grain!

Activity 2 Question

Are you eating a variety of whole grains? Variety is important for health.

Key Point

- Make one-half of the grains you eat whole. For example: 100 percent whole wheat bread, oatmeal, brown rice, etc.

Materials

- whole grains
- bowls or containers for grains, one bowl for each type of grain
- whole grain name cards (reproducible sheets provided)
- “Name That Grain!” Participant Activity Sheet (reproducible sheet provided)

Grain List (recommended, but not all are required)

- oats
- brown rice
- wild rice
- barley (pearl or pearled)
- popcorn
- whole wheat (berries)
- rye

Activity Notes

- Name as many whole grains as you can.
- This activity also works using fewer grains.

Preparation

1. Obtain whole grains. Listed examples are recommended, but not all are needed.
2. Make a whole grain number key, e.g., oats = #1; popcorn = #2; brown rice = #3, etc.
3. Write numbers on small pieces of paper, one for each type of grain.
4. Place small amount of each grain into a bowl along with its number.
5. Make whole grain name cards. (reproducible sheet provided)

Additional Resources

NSF International. 2004. The 6 steps of handwashing poster. NSF International Scrub Club website, http://www.scrubclub.org/assets/pdf/6steps_poster.pdf.

Partnership for Food Safety and Education (PFSE). Fight BAC! PFSE website, http://www.fightbac.org/storage/documents/flyers/fightbac_color_brochure.pdf.

Health Activity 2 (continued)

Procedure

1. Adult leader *says*: “Now that you know what a whole grain is, let’s check out some whole grains!”
2. Kids try to *match* each type of grain with its correct name card.
3. After matching is done, kids use key to correctly *identify* each type of grain and *answer* the following questions as a small group.
 - Do you recognize any of the whole grains? If yes, which ones?
 - How many parts does each of these whole grains have?
 - What foods would be made from these whole grains?
 - How many different whole grains or foods made from whole grains do you normally eat?
 - What does it mean to eat a variety of whole grains?
4. Kids *report* their findings back to the large group.
5. Leader *explains* that one-half of the grains that kids eat each day should be made from whole grains (100 percent whole wheat bread, oatmeal, brown rice, etc.) For example, if a kid eats cereal for breakfast before school, at least every other day he or she might choose a hot cereal like oatmeal or an instant cereal made from whole grains.



Oats

Brown Rice

Wild Rice

Barley

Popcorn

Whole Wheat

Rye



Cooking and Eating Activity

Scrambled Eggs

Scrambled eggs, 100 percent whole grain toast, and fruit salad

Serves 10 people

Adult Leader Notes

- Ask about allergies to egg and gluten! Offer alternatives.
- Suggested cooking order: make fruit salad first, prepare toast, and then cook eggs.
- Each kid will scramble and cook his or her own egg.
- Plug-in skillet may be used if a stove or hot plate is not available. Review safe handling of electrical appliances and/or stove. Remind kids to use pot holders and place pot handles so that they do not extend over the aisle in front of the stove. Review knife safety.
- Have kids wipe down food preparation surfaces with dilute bleach solution before beginning.
- Ask one of the kids to demonstrate a skill taught at a previous lesson, such as cutting fruit, before starting. This provides a review as well as a way of building self-confidence.

Fruit Salad Materials

- 1 large bowl
- 6 cutting boards
- 6 knives
- 1 large spoon

Fruit Salad Ingredients

- 3 apples
- 3 bananas
- 4 oranges
- additional fruit as needed

Fruit Salad Directions

1. Wipe counters with dilute bleach solution before starting. Pull hair back and wash hands.
2. Peel bananas and oranges.
3. Separate oranges into slices and then cut into bite-sized pieces.
4. Slice bananas and then cut into bite-sized pieces. (Ask for a volunteer to demonstrate cutting fruit.)
5. Cut apples into slices and remove seeds. Then cut apples into bite-sized pieces.
6. Prepare additional fruit as needed.
7. Add fruit to large bowl and mix with spoon.

Menu

- scrambled eggs
- whole wheat toast
- fruit salad
- milk



Cooking and Eating Activity (continued)

Adult Leader Notes

- Prepare toast before cooking eggs.
- Each kid prepares and cooks his or her own egg.
- Encourage kids to use less salt.

Scrambled Egg Materials

- 10 small bowls
- fork or whisk
- frying pan
- spatula
- measuring spoons
- 6 knives
- 6 cutting boards

Scrambled Egg Ingredients

- 10 eggs, one egg per kid
- vegetables (e.g., green onions, tomatoes, mushrooms)
- salt and pepper, added while cooking
- 1 percent milk, 1 tablespoon per kid
- cooking oil spray

Scrambled Egg Directions

1. Pull hair back and wash hands thoroughly.
2. Wash and chop vegetables into small pieces. (This can be prepared ahead, with stations set up before lesson.)
3. Spray pan with cooking oil spray and heat.
4. Crack and scramble the egg in a small bowl.
5. Wash hands after discarding egg shells.
6. Add 1 tablespoon of milk to egg and mix.
7. Add egg mixture to the hot frying pan.
8. Add vegetables.
9. Add small amount of salt and pepper.
Try adding little or no salt.
10. Cook for a couple of minutes or until the egg is completely solid and vegetables are tender.

Nutrition Facts

Serving Size 1 omlette (2 eggs)
Servings Per Container 10

Amount Per Serving

Calories 130 **Calories from Fat 80**

% Daily Value*

Total Fat 9g	14%
Saturated Fat 2g	10%
Trans Fat 0g	
Cholesterol 190mg	63%
Sodium 90mg	4%
Total Carbohydrate 4g	1%
Dietary Fiber 1g	4%
Sugars 3g	

Protein 7g

Vitamin A 15% • Vitamin C 15%
Calcium 8% • Iron 6%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300 mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9 • Carbohydrate 4 • Protein 4

MEAL DISCUSSION QUESTIONS

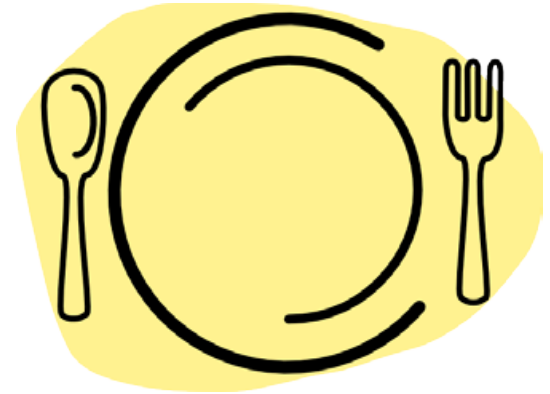
1. What do you think about the scrambled eggs and whole wheat toast?
2. Is this a meal you would prepare at home with your family?
3. What would your family think about this meal?
4. To which MyPyramid groups do foods from this meal belong?

EAT TOGETHER AS A GROUP, DISCUSS THE MEAL DISCUSSION QUESTIONS, AND ENJOY!

Have kids fill in the New Food Taster's Club Chart when they are finished eating.

CLEANUP

Cleaning up is an important part of the cooking process. Kids learn from taking responsibility. Use the kaper chart on the next page with the kids during the cleanup process. A kaper chart shows each kid's or each group's job during cleanup. The cleanup chart describes specific activities that are included under the kaper chart categories.



The kaper chart rotates cleanup jobs each week and encourages sharing of responsibility between the kids. Do the following to get the kids organized to clean up:

- Introduce the kaper chart. Explain that it will be used to organize the cleanup process, and assign each kid or group of kids a job each week.
- Divide the kids into six groups for the duration of the project.
- If fewer than six kids are participating in the project, divide the group and combine activities on the kaper chart as needed.
- Allow groups to pick a fun name to use for their group during this project. Write the name on the chart.
- Have the groups get started with cleanup.
- Remember, allow the kids to complete their assigned chores. Don't do the job for them! Kids take pride in cooking something from start to finish, including cleaning up afterwards.



Healthalicious Kaper Chart

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Set up	Group 1	Group 6	Group 5	Group 4	Group 3	Group 2
Wash up	Group 2	Group 1	Group 6	Group 5	Group 4	Group 3
Dry dishes	Group 3	Group 2	Group 1	Group 6	Group 5	Group 4
Wipe up	Group 4	Group 3	Group 2	Group 1	Group 6	Group 5
Put away	Group 5	Group 4	Group 3	Group 2	Group 1	Group 6
Sweep	Group 6	Group 5	Group 4	Group 3	Group 2	Group 1



Cleanup Chart

Cleanup job	Activity descriptions
Set up	<ul style="list-style-type: none"> • Set table with plates, cups, utensils, and napkins. • Put water and milk on the table. • Set up serving area with hot pads and serving utensils.
Wash up	<ul style="list-style-type: none"> • Wash pots, pans, cooking utensils, and dishes used for cooking. (Everyone should wash their own plates, utensils, and cups after eating.)
Dry dishes	<ul style="list-style-type: none"> • Dry and put away all pots, pans, utensils, and dishes used for cooking.
Wipe up	<ul style="list-style-type: none"> • Wipe and clean counters and serving area after cooking. • Wipe and clean tables after eating.
Put away	<ul style="list-style-type: none"> • Put away nonperishable food items.
Sweep	<ul style="list-style-type: none"> • Put away tables and chairs, if necessary. • Sweep and mop floors as needed.

QUICK WRITE

Key Point

Quick Writes help you learn more by thinking about your experiences and then jotting down your thoughts, feelings, or ideas.

Materials

- three-ring binder with binder dividers
- lined binder paper, 8-12 sheets per kid
- pencils or pens, one for each kid

Procedure

1. As a group, kids **recall** or list the general activities of the lesson.
 - “What physical activity did we do?”
 - “What health activity did we do?”
 - “What meal did we prepare?”
2. Adult leader then **distributes** paper and pencils or pens.
3. Leader has kids **write** the following:
 - across top of paper: name, date, and title (“5 Things That I Learned Today”)
 - down the side of the paper: numbers 1 to 5
 - thoughts and feelings, etc., about activities or experiences
4. Leader asks if anyone would like to **share** one of the things they learned during the lesson. **Wait** for responses from kids.
5. Kids **put** sheets in Quick Write binder.

Activity Notes

- See Lesson 1 of *Healthalicious Cooking* for Quick Write instructions and examples.
- Ask open questions. Open questions require more than a yes/no answer. See curriculum background for more information about open questions.
- Have kids recall lesson activities before they begin to write.
- Kids who have trouble writing can have another person help them write down their thoughts.
- Emphasize that there are no correct answers. Spelling and grammar do not matter.
- Adult leader keeps the Quick Write binder. At the last lesson, return the Quick Writes to kid. Alternatively, leader may ask the kids to write their names and five things they learned on the back of the Family Letter.





GOAL SETTING

Materials

- index cards, sticky notes, or paper, one for each kid
- pencils or pens, one for each kid

Procedure

1. Adult leader has kids **choose** one of the following goals:
 - Try one new whole grain this week.
 - Eat one serving or one extra serving of a whole grain at least 3 days this week.
 - Make a snack or meal with at least one whole grain this week.
2. Leader has kids **write** their goal on the provided paper.
3. Leader **asks**: “Where are you going to post the goal?”
Have kids share.
4. Leader **asks**: “Who are you going to tell about the goal?” Have kids share. Kids may want to write their goals on the Family Letter for this week.

CLOSING THE LESSON

1. Thank kids for participating in the lesson.
2. If this lesson is presented as part of a series, remind kids of the date and time of the next lesson and of the upcoming lesson topic.

Take-Home Family Letter
Lesson 3

Date: _____

Dear Family,

This week your child learned how to identify whole grains and why it is important to eat them. We prepared and ate scrambled eggs with vegetables and whole wheat toast. Your child also enjoyed

_____.
physical activity

During this lesson your child also learned about goal setting and set a goal to work on before our next lesson. Please check the space below to find out what goal your child set. Ask your child about the goal and encourage him or her to achieve it. The time and date for the next lesson is

_____.

Best regards,

Leader's signature

.....

My Goal

I will work on accomplishing the following this week:

I plan to ask _____ to help me work on my goal.

Child's signature

REFERENCES

- NSF International. 2004. The 6 steps of handwashing poster. NSF International Scrub Club website, http://www.scrubclub.org/assets/pdf/6steps_poster.pdf.
- Partnership for Food Safety and Education (PFSE). Fight BAC! PFSE website, http://www.fightbac.org/storage/documents/flyers/fightbac_color_brochure.pdf.
- Produce for Better Health Foundation. 2009. Eat a colorful variety every day: Think variety, think color. Fruits and Veggies More Matters website, http://fruitsandveggiesmorematters.org/?page_id=45.
- The Whole Grains Council website, www.wholegrainscouncil.org.
- USDA Center for Nutrition Policy and Promotion. 2005. Food groups: Grains. MyPyramid.gov website, www.mypyramid.gov/pyramid/grains_print.html.

MEASUREMENT CONVERSION TABLE

U.S. customary	Conversion factor for U.S. customary to metric	Conversion factor for metric to U.S. customary	Metric
teaspoon (tsp)	4.93	0.20	milliliter (ml)
tablespoon (tbsp)	14.79	0.06	milliliter (ml)
ounce (oz)	28.35	0.035	gram (g)
fluid ounce (fl oz)	29.57	0.03	milliliter (ml)
cup (c)	236.59	0.004	milliliter (ml)
quart (qt)	0.95	1.06	liter (l)
gallon (gal)	3.785	0.26	liter (l)
pound (lb)	0.454	2.20	kilogram (kg)
inch (in)	2.54	0.39	centimeter (cm)
foot (ft)	0.305	3.28	meter (m)
yard (yd)	0.91	1.09	meter (m)

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