



# GRAINS

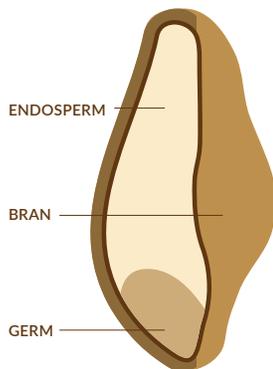
## FUEL YOUR BODY

GRAINS ARE RICH IN CARBOHYDRATES, THE MAJOR SOURCE OF FUEL FOR BOTH YOUR BRAIN AND BODY.



### WHAT IS A WHOLE GRAIN?

Whole grains contain the entire grain kernel, including the bran, endosperm and germ. Refined grains have both the outer covering (bran) and germ removed, leaving only the starchy endosperm.



### ANCIENT GRAINS



Most of the corn grown in ancient times by Native Americans was dried and ground into cornmeal using a flat stone called a metate and a smaller stone called a mano (meaning hand). Today, powerful machinery in modern-day mills grind and process corn.

### MILL YOUR OWN WHOLE GRAINS!

Using the small hand mill on the table, take a few grains of corn or wheat and crank the handle until you have a product that resembles corn meal or whole-wheat flour.





# GRAINS FUEL YOUR BODY

HERE’S WHAT TO DO AT THIS STATION:

**1** Read the poster and information below and explain the difference between whole grains and refined grains. Use the photo cards to identify whole and refined grains.

**Q. What is the difference between whole and refined grains?**

A. Whole grains contain the “whole” grain kernel (seed) while refined grains have the bran and germ removed. Because refining results in nutrient loss, grains are enriched by adding back iron and four of the B vitamins (niacin, thiamin, riboflavin and folic acid).

**Q. How can you tell if a grain is whole?**



A. Read the label and look for sources of whole grain in the first three ingredients. You can also identify whole grains by looking for the whole grain stamp on food packages. You can’t tell just by looking at the color of the food!

**Q. What are some examples of whole grains?**

A. 100% whole wheat, oatmeal, brown rice, wild rice, quinoa, amaranth, millet, spelt, farro, buckwheat, whole corn (not degerminated), popcorn, barley, spelt, buckwheat, triticale, sorghum, whole rye, teff

**Q. How many servings of whole grains are needed each day?**

A. At least half of the grains you eat each day should be in their whole form.

**2** Mill Some Whole Grains.

On the table, you will find grains of wheat and corn and a small grinder.

Using the small hand mill on the table, take a few grains of corn or wheat and crank the handle until you have a product that resembles corn meal or whole-wheat flour.

**BONUS:** Read the poster to find the answer to this question:  
*How did ancient Native Americans mill their corn?*

**3** Complete the “Grains Fuel Your Body” activity sheet.

You can also complete the “Use Your Brain To Find Whole Grains” puzzle worksheet at home.



## ACTIVITY

Take a look at the grain photo cards. Sort the cards into piles of whole grains and refined grains. If you need help, check the back of the cards. *Hint: If a grain is made from “enriched” flour, then it is a refined grain.*





LESSON 1  
THE "EAT MORE" GROUPS - GRAINS, FRUITS AND VEGETABLES  
**STUDENT ACTIVITY SHEET**



# GRAINS

## FUEL YOUR BODY



### GRAIN FACTS

- Grains contain carbohydrates, the major source of energy for both your brain and your body. Grains provide the fuel for physical activity so more servings are needed when you are active in sports, exercise and play.
- Whole grains have more nutrition than refined grains. A whole grain includes the entire grain seed or kernel. Refined grains have the outer covering (bran) and germ removed. Because refining results in nutrient loss, grains are frequently enriched by adding back iron and four of the B vitamins (niacin, thiamin, riboflavin and folic acid).
- Kids between the ages of 10-14 need about five to eight servings of grains each day. A serving is considered one ounce, which is equivalent to 1 small slice of bread, a 6-inch tortilla, 1 cup dry cereal or ½ cup of cooked grains such as rice, pasta or oatmeal. At least half of the grains eaten should be in their whole form.

### 1 Answer the following questions.

- You are looking for pancake mix in the store and the first and main ingredient is enriched flour. Is this product a whole grain? \_\_\_\_\_
- TRUE or FALSE?** You can usually tell if a grain is a whole grain just by looking at the color. If it's darker in color, it is probably a whole grain.
- Compare the labels on the photo cards for quinoa and white rice. For a one cup serving, which grain has more protein \_\_\_\_\_? Which one has more fiber \_\_\_\_\_?
- If a student is extra active in sports, he or she may need (circle one) **MORE** or **FEWER** servings of grains each day.

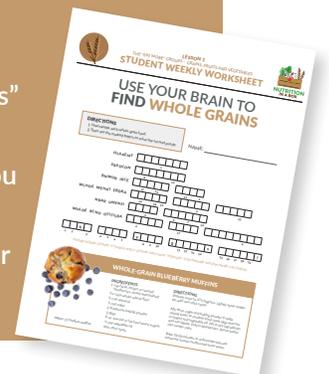
### 3 The list below includes action steps for eating more whole grains. Check one or more action that you would be willing to work on. You can also come up with your own idea.

- Make a sandwich with 100% whole wheat bread.
- Eat popcorn for a snack.
- Choose a breakfast cereal with a whole grain stamp on the package.
- Choose brown rice instead of white rice in a burrito bowl.
- My idea for including more whole grains in my diet (describe):

### 2 Circle the following grains that are whole grains. If you need help, refer to the grain cards on the table.

- |                   |                    |
|-------------------|--------------------|
| Oatmeal           | Corn flakes        |
| Brown rice        | Pancakes           |
| Tortilla          | Whole wheat flakes |
| Popcorn           | White rice         |
| Whole wheat bread | White corn bread   |

Complete the "Use Your Brain To Find Whole Grains" worksheet at home. It's an added delicious bonus if you bake the whole grain blueberry muffins with your family.





LESSON 1  
THE "EAT MORE" GROUPS - GRAINS, FRUITS AND VEGETABLES  
**STUDENT ACTIVITY SHEET**



Answer Key

# GRAINS FUEL YOUR BODY

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**1** Answer the following questions.

- You are looking for pancake mix in the store and the first and main ingredient is enriched flour. Is this product a whole grain? No
- TRUE** or **FALSE?** You can usually tell if a grain is a whole grain just by looking at the color. If it's darker in color, it is probably a whole grain.
- Compare the labels on the photo cards for quinoa and white rice. For a one cup serving, which grain has more protein quinoa? Which one has more fiber quinoa?
- If a student is extra active in sports, he or she may need (circle one) **MORE** or **FEWER** servings of grains each day.

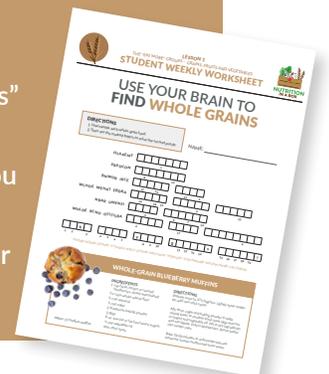
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- |                          |                           |
|--------------------------|---------------------------|
| <u>Oatmeal</u>           | Corn flakes               |
| <u>Brown rice</u>        | Pancakes                  |
| Tortilla                 | <u>Whole wheat flakes</u> |
| <u>Popcorn</u>           | White rice                |
| <u>Whole wheat bread</u> | <u>White corn bread</u>   |

Complete the "Use Your Brain To Find Whole Grains" worksheet at home. It's an added delicious bonus if you bake the whole grain blueberry muffins with your family.





LESSON 1  
THE "EAT MORE" GROUPS - GRAINS, FRUITS AND VEGETABLES  
**STUDENT WEEKLY WORKSHEET**



# USE YOUR BRAIN TO FIND **WHOLE GRAINS**

## DIRECTIONS

1. Unscramble each whole-grain food.
2. Use the marked letters to solve the second puzzle.

NAME: \_\_\_\_\_

OLAAEMT   
1

PRPOCON   
8 10

BNWOR IRCE   
11 15 13 3

WLHOE WEHAT EBDRA   
16 18 19 2 12

NBAR UMFNFI   
5 9 7 14

WHLOE RCNO OTLTILRA   
4 17 6

k   
1 2 3

4 5 6 7

y   
8 9 10

g  s  
11 12 13 14

15 16 17 18 19

WORD LIST: BRAN MUFFIN, BROWN RICE, OATMEAL, POPCORN, WHOLE CORN TORTILLA, WHOLE-WHEAT BREAD

## WHOLE-GRAIN BLUEBERRY MUFFINS

### INGREDIENTS

- 1 cup fresh, frozen or canned blueberries, rinsed and drained
- 1½ cups whole-wheat flour
- ½ cup oatmeal
- ½ cup sugar
- 2 teaspoons baking powder
- 2 eggs
- 8 ounces low-fat or fat-free lemon yogurt
- ¼ cup vegetable oil
- Non stick spray

### DIRECTIONS

Preheat oven to 375 degrees. Lightly spray muffin tin with non stick spray.

Mix flour, oatmeal, sugar and baking powder in large mixing bowl. In another bowl, beat eggs and mix in yogurt and vegetable oil. Stir in dry ingredients and mix lightly. Fold in blueberries. Spoon batter into muffin cups.

Bake 18-20 minutes or until muffin tops are browned. Loosen muffins and serve warm.



Makes 12 medium muffins

