## CAPTAIN CREATE

### Make Half Your Grains Whole Grains 4-6<sup>th</sup> grade

#### **UTAH HEALTH EDUCATION CORE STANDARDS:**

4.N.4: Examine how health can be managed through healthy eating and physical activity

5.N.4: Explain the role of healthy eating and physical activity in maintaining health.

PE 4.5.1 Examine the health benefits of participating in physical activity.



PE 5.2.2 Use movement strategies in small game situations.

PE 6.5.5 Demonstrate respect for self and others in activities and games by following the rules, encouraging others, and playing in the spirit of the game or activity.

#### **MATERIALS NEEDED:**





- Helping Hands MyPlate Pocket Chart and mini cards that came with it\*\* Sort mini cards into food groups ahead of time and keep separated (given at fall conference 2018)
- MyPlate ball or balls (depending on class size) (sent fall 2020 to 4H training or mailed winter 2021)
- Tasting Experience Ingredients: MyPlate Stack whole grain cracker or bread; cheese; vegetable such as baby carrot; fruit such as apple slice; almonds

**Objective 1:** Children will learn about MyPlate and the different foods groups.

**Objective 2:** Children will be able to put together lunch and dinner meals with all five food groups represented.

Before class hang up MyPlate Pocket Chart. Sort mini cards into food groups and set in stacks.

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#### **MATERIALS NEEDED:**

- MyPlate plate, MyPlate poster or MyPlate chart
- Large hard backed Whole Grains Detachable Parts Poster (in Captain CREATE kit given fall conf 2020)
- Optional: Grains Sample Kit jars of grains, wheat stalk; and photos of grains in fields and grains food models (part of Captain CREATE kit- in separate flat 12 x 12" plastic box)
- Print Make Half your Grains Whole Grains handouts for each student
- Print one set Whole Grain or Not? Game Cards
- Tasting Experience: Homemade Granola Bars made ahead of time

**Objective 1:** Children will learn that half of grains eaten should be whole grains.

**Objective 2:** Children will be able to identify foods that are whole grains and high in fiber using ingredient lists and food labels.

#### **Nutrition Message:**

Hello class, my name is \_\_\_\_\_\_ and I am a Create Better Health educator with Utah State University Extension. Today we are going to talk about grains. As you can see, grains are a food group in MyPlate. Show MyPlate poster, plate or chart. One the key messages about the grain food group is that you should make half your grains

whole grains. Does anyone have a guess what that means? Allow students to give answers. Possible answers may be: eating wheat bread instead of white; eating healthier foods in grains group half of the time.

Let's look at this poster to help understand what makes up a whole grain so we will be able to identify it. Show the Whole Grains Detachable Parts Poster. A grain is made up of 3 parts – the bran, the germ and the endosperm. A whole grain has all three parts and is full of vitamins and minerals and fiber. Fiber removes food waste from our bodies the way a garbage truck takes away all the trash from our homes. We want to eat whole grains so the "trash" doesn't pile up in our bodies.

Some grains have the bran and the germ removed (pull the bran and germ from the poster). These are refined grains and are often called "white" such as white bread or white rolls. Manufacturers do this to make the texture finer and lengthen the shelf life of the food. Some grains called enriched grains have vitamins and minerals added back to the endosperm making the grain "enriched". Even though some nutrients are added, the enriched grain is never as good for you as the whole grain. Fiber cannot be added back in. So which grain is the best grain? Add the germ and bran back onto poster. Allow students to answer. Whole grains. A good goal every day is to make at least half of your grains whole grains. Although wheat is probably the best-known whole grain, there are many others such as corn, barley, oats, brown rice.

How do you know if a food in the grain group is a whole grain? If you don't know, it's hard to make half of the grains you eat whole grains. Packaging can be tricky too - especially the front of packaging. Some words aren't regulated and can be used freely such as: Multi grain; Stone ground; 100% wheat; cracked wheat; 12 grain; bran. (Optional: write these words on the board with title "Unregulated"– Manufacturers can use even if not whole grain)

Give a "Make Half your Grains Whole Grains" handout to each student. Teach the information at the top portion of the handout. Then ask students to work through the handout. Share the answers and what food it was after students have finished.

Answers to Whole Grains Foods handout: 1) Breakfast Biscuits, Whole Grain, Excellent; 2) Wheat Hamburger Buns, Not Whole Grain, Poor; 3) Oats, Whole Grain, Excellent; 4) Whole Grain Fish Crackers, Whole Grain, Excellent, 5) Fish Crackers, Not Whole Grain, Poor.

Discuss the difference with the two fish crackers in particular. They taste nearly identical, yet one is a whole grain and is an excellent source of fiber.

#### **ON THE MOVE:**

Sample text for instructor is in blue font.

#### Whole Grain Flying Game

Before starting the game, place two baskets or paper grocery bags with the "Whole Grain" "Not a Whole Grain" 1/2 sheet posters across the room <u>for each team</u>. There will be two teams.

Teams may need help making paper airplanes, so you may want to watch a few videos ahead of time on how to make simple airplanes.

Now that we've practiced reading a few ingredient lists and looking at the Daily Value Percent for fiber for some foods, let's play a game to see what you remember. Before we get started, who can tell me how many grams of fiber are needed per serving for a food to be an *excellent* source of fiber? Allow children to give answers. 5 grams is the answer. How many grams to be a *good* source of fiber? Allow students to answer. 3 grams of fiber.

When reading the ingredients in a grain food, what are some words to look for in the first ingredient? Allow students to give some answers. "Whole" is often a word used to tell you it is a whole grain. Look for it to be the first ingredient listed. A whole grain may be listed without the "whole" such as oats, corn, barley, brown rice. Looking at the amount of fiber provided can help determine if a food is whole grain.

#### Activity

Let's break into teams of 3 or 4. Each team will receive the same number of Whole Grain or Not? Game cards. Decide as a group if the first card is a whole grain. Then, one person will fold it into a paper airplane. The next person will try to fly it into the correct basket/bag. You have three tries to fly the airplane into the correct basket/bag. Each attempt must be made by a new person. Only one airplane can be made at a time. After that, have a team member run down and put airplane in correct bag.

Continue until all eight game cards are in bags/baskets. Pull out each game card and reveal what food it was for and check if it is in the correct bag/basket.

Answers: 1) Chocolate Mint Cookies, Not Whole Grain; 2) Chicken Ramen, Not Whole Grain; 3) Whole wheat bread; Whole Grain; 4) Whole grain spaghetti; Whole Grain, 5) Granola bar; Whole Grain; 6) Tortilla chips; Whole Grain; 7) Crispy Wheat Crackers; Not Whole Grain, 8) Air popped popcorn; Whole Grain

#### **TASTE EXPERIENCE:**

Before giving a snack, make sure you ALWAYS check for any allergies. If teaching in a school make sure to get a list of food allergies in the school. If any child in the school has an allergy to a certain food do not use it as part of the snack.

#### Homemade Granola Bars - Make ahead of time and bring

Yield: 32 small sample size bars

2 1/2 cups old fashioned rolled oats

1/2 cup nuts (optional – do not use if any children in school have nut allergies)

1/4 cup honey

1/4 cup unsalted butter

1/3 cup brown sugar

1 tsp vanilla extract

<sup>3</sup>⁄<sub>4</sub> cup mix-ins (about <sup>1</sup>⁄<sub>4</sub> cup of various things such as dried fruit, coconut, chocolate chips)

Preheat oven to 350 degrees. Line a 9-inch square baking dish with parchment paper and lightly spray. Place the oats and nuts on a rimmed baking sheet and bake for 8 minutes until lightly toasted. While oats are toasting, in a small saucepan add honey, butter and brown sugar. Stir constantly until butter melts and sugar dissolves. Let the mixture bubble, while stirring, for 1 minute. Remove from heat. Place nuts and oats in large bowl. Stir vanilla into butter mixture. Pour butter mixture over oat and nut mixture and stir to combine. Pour add-ins into bowl and mix. Press mixture into prepared pan. Press it in firmly. Chill granola bars at least 2 hours. Lift using parchment paper. Cut into desired sizes.

As students enjoy the snack, review how to tell if a food is a whole grain or not. Use the example of the fish crackers which taste almost the same, yet wheat version is a whole grain.

Although we haven't talked about it yet in the lesson, can anyone tell me how many servings of grains a boy or girl your age needs a day? Allow students to give possible answers. For girls, 5 - 7 ounces a day. For boys, 5 - 9 ounces a day. How many of those servings should be whole grains? Allow students to give answers. Half your grains should be whole grains.

#### **References:**

U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025.* 9th Edition. December 2020. Available at <u>DietaryGuidelines.gov</u>.

U.S. Department of Agriculture. <u>ChooseMyPlate.gov</u> Website. Washington, DC. 10 Tips: Choosing Whole Grain Foods. Accessed August 11, 2021. https://www.myplate.gov/eat-healthy/grains

#### Captain CREATE Grades 4-6 Make Half your Grains Whole Grains Worksheet

General Overall Tips to look for if a food is a whole grain:

Ingredients list: The word WHOLE is helpful to identify a whole grain. Ingredients are

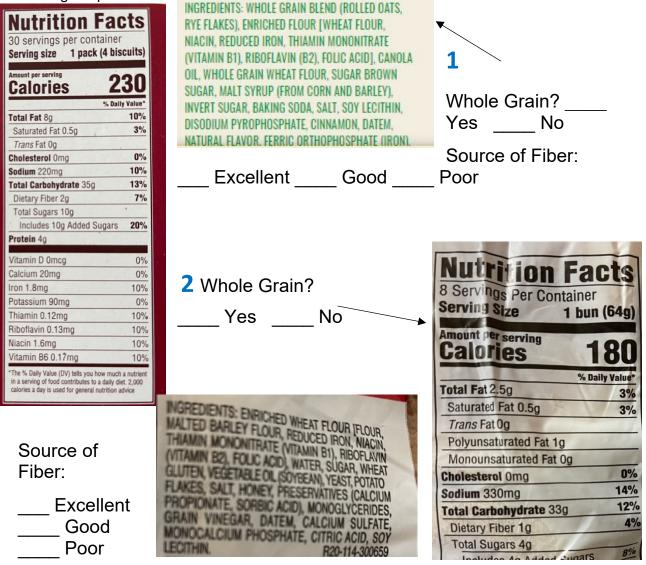
listed by weight- so the ingredient that is used the most in the recipe will always be

first. Look for WHOLE as the beginning of the list. However, there are many kinds of

grains. Some common ones are: wheat, corn, oats, brown rice, barley. Corn does not need whole before it.

<u>On nutrition facts label</u> – Look for at least 5% of Dietary Fiber in % Daily Value for it to be considered an excellent source of fiber. If it has 3% then is considered a good source of fiber

Let's practice with a few ingredients lists and nutrition facts labels to see if you can identify a whole grain product.





Nutrition Facts		
Serving size 1/2 cup dry (40g)		
Calories 150 <sup>% Daily Value*</sup>	Source of Fiber:	
Saturated Fat 3g         4%           Saturated Fat 0.5g         3%           Trans Fat 0g         3%		
Polyunsaturated Fat 1g           Monounsaturated Fat 1g           Cholesterol 0mg         0%           Sodium 0mg         0%		
Solution Uning         0%           Total Carbohydrate 27g         10%           Dietary Fiber 4g         13%           Soluble Fiber 2g         13%		
Total Sugars 1g Includes 0g Added Sugars 0%		
Protein 5g Vitamin D 0mcg 0% • Calcium 20mg 0%	Source of Fiber: About 28 Serving	s Per Container
Iron 1.5mg 8% • Potassium 150mg 2% Thiamin 0.2mg 15% • Phosphorus 130mg 10%		,
Magnesium 40mg 10% The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	MADE WITH SMILES AND WHOLE WHEAT FLOUR, ENRICHED WHEAT FLOUR (FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), CHEDDAR CHEESE	140 % Daily Value* 6% 5%
Nutrition Facts About 6 Servings Per Container	([CULTURED MILK, SALT, ENZYMES], ANNATTO), VEGETABLE OILS (CANOLA, SUNFLOWER AND/OR SOYBEAN), SALT, CONTAINS 2% OB LESS OF YEAST AUTOLYZED YEAST	at 1g Fat 3g
Serving Size 55 Pieces (30g)	EXTRACT, PAPRIKA, SPICES, CELERY, BAKING SODA, MONOCALCIUM PHOSPHATE, ONION POWDER. Dietary Fiber 2g	10%
% Daily Value* Total Fat 5g 6%	5 Whole Grain? Yes No	ed Sugars 0%
Saturated Fat 1g 5% Trans Fat 0g Polyunsaturated Fat 1g Monounsaturated Fat 2g	REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), Thiamin 0.14mg 10% •	Potassium 70mg 0% Riboflavin 0.15mg 10%
Cholesterol     10mg     3%       Sodium     250mg     11%       Total     Carbohydrate     20g     7%       Dietary     Fiber     Less than 1g     4%       Total     Sugars     0g	CHEDDAR CHEÈSE ([CULTURED MILK, SÄLT, ENZYMES], ANNATTO), VEGETABLE OILS (CANOLA, SUNFLOWER AND/OR SOYBEAN), SALT, CONTAINS 2% OR LESS OF: YEAST, SUGAR, AUTOLYZED YEAST EXTRACT, PAPRIKA, SPICES, CELERY, ONION POWDER, MONOCALCIUM PHOSPHATE, BAKING SODA.	(30mcg folic acid) s you how much a nutrient utes to a daily diet. 2,000
Includes Og Added Sugars 0% Protein 3g Vitamin D Omcg 0% • Calcium 40mg 4%	CONTAINS: WHEAT, MILK.	
Iron 1.3mg         8% • Potassium 50mg         0%           Thiamin 0.15mg         15% • Riboflavin 0.17mg         15%           Niacin 2.3mg         15% • Folate 75mcg DFE 20%	Source of Fiber:	
(45mcg folic acid) *The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	Excellent Good Poor	

This material was funded by USDA's Supplemental Nutrition Assistance Program -- SNAP. This institution is an equal opportunity provider. Utah State University is an affirmative action/equal opportunity institution and is committed to a learning and working environment free from discrimination, including harassment. For USU's non-discrimination notice, see https://www.usu.edu/equity/non-discrimination.

8 Servings Per Container	
	okies (32g
Amount Per Serving	
<b>Calories</b>	160
%	Daily Value
Total Fat 7g	9%
Saturated Fat 5g	25%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 105mg	5%
Total Carbohydrate 22g	8%
Dietary Fiber < 1g	2%
Total Sugars 10g	
Includes 10g Added Sugars	20%
Protein 1g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 1.6mg	8%
Potassium 0mg	0%

1

Ingredients: ENRICHED WHEAT FLOUR (FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), SUGAR, VEGETABLE OIL SHORTENING (PALM AND PALM KERNEL OILS), COCOA (PROCESSED WITH ALKALI), CARAMEL COLOR, INVERT SUGAR, SALT, BAKING SODA, SOY LECITHIN, NATURAL AND ARTIFICIAL FLAVOR.

#### **Nutrition Facts**

2

mount per serving	280
	% Daily Value
fotal Fat 12g	15%
Saturated Fat 5g	25%
Trans Fat 0g	
Cholesterol Omg	0%
Sodium 1160mg	50%
Total Carbohydrate 37g	13%
Dietary Fiber 1g	4%
Total Sugars 2g	
Includes 1g Added Sugars	2%
Protein 5g	
Vitamin D 0mcg	0%
Calcium 18mg	2%
Iron 2mg	10%
Potassium 134mg	2%

**INGREDIENTS: WHOLE GRAIN** 

**DURUM WHEAT FLOUR.** 

Ingredients: Enriched flour (wheat flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), Palm olein, Seasoning (salt, sugar, maltodextrin, yeast extract, hydrolyzed soy & corn protein, autolyzed yeast, disodium inosinate, disodium guanylate, spices, dehydrated vegetables [chives, garlic, onion], extractive of turmeric. soybean oil), Dried carrot, Salt, Dried onions, Dried peas, Dried corn, Potassium carbonate, Guar gum, Sodium tripolyphosphate, Soda ash.

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**Captain CREATE** 

Grades 4-6



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INGREDIENTS: GRANOLA (WHOLE ROLLED OATS, SUGAR, CANOLA OIL, MOLASSES, SODIUM BICARBONATE, SOY LECITHIN), CORN SYRUP, SEMISWEET CHOCOLATE CHIPS (CHOCOLATE LIQUOR, SUGAR, SOY LECITHIN, VANILLA EXTRACT), CRISP RICE [RICE FLOUR, SUGAR, DRIED MALT EXTRACT (CORN SYRUP SOLIDS, BARLEY MALT EXTRACT), CALCIUM CARBONATE, SALTJ, FRUCTOSE, SUGAR, CANOLA OIL, GLYCERIN, INVERT SUGAR, DRIED UNSWEETENED COCONUT, SOY LECITHIN, SALT, WHEAT FLAKES, WHEY POWDER, ASCORBIC ACID - A PRESERVATIVE, ROSEMARY EXTRACT, NATURAL FLAVOR. CONTAINS: SOY, MILK, COCONUT AND WHEAT.

Nutrition Facts

7

5

00	Amount per serving
130	Calories '
ly Value*	% Dai
5%	Total Fat 4g
0%	<ul> <li>Saturated Fat 0g</li> </ul>
	Trans Fat 0g
ōg	Polyunsaturated Fat 0.
	Monounsaturated Fat 3g
0%	Cholesterol Omg
11%	Sodium 250mg
2g 8%	Total Carbohydrate 2
4%	Dietary Fiber 1g
	Total Sugars 3g
ugars 6%	Includes 3g Added S
	Protein 3g
0%	Vitamin D 0mcg
2%	Calcium 30mg
8%	Iron 1.3mg
2%	Potassium 60mg

INGREDIENTS: UNBLEACHED ENRICHED FLOUR (WHEAT FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), SAFFLOWER OIL, CANE SUGAR, DEFATTED WHEAT GERM, CORN STARCH, SEA SALT, BROWN RICE SYRUP, MALTED BARLEY EXTRACT, LEAVENING (MONOCALCIUM PHOSPHATE, BAKING SODA), TURMERIC EXTRACT (FOR COLOR).

Nutrition Facts 18 servings per container Serv. size 1oz (28g; About 7 chips) Amount per serving Calories 511 % Daily Value Total Fat 8g 10% 10% Saturated Fat 2g Trans Fat 0g Polyunsaturated Fat 4.5g Monounsaturated Fat 2g 0% Cholesterol Omg 5% Sodium 115mg 6% Total Carbohydrate 17g 7% **Dietary Fiber 2g** Total Sugars 0g 0% Includes Og Added Sugars Protein 2g

INGREDIENTS: Corn. Vegetable Oil (Contains one or more of the following: Canola, Corn, Cottonseed, Safflower, and/or Soybean Oil), and Sea Salt.

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Nutrition	<b>Facts</b>
1 serving per container	

Serving size 1 package					
Calories	Per serving		Per cup 40		
		% DV*		% DV*	
Total Fat	3.5g	4%		2%	
Saturated Fat	0g	0%	- 0	0%	
Trans Fat	0g		0g		
Cholesterol	0mg	0%	0mg	0%	
Sodium	75mg	3%	40mg	2%	
Total Carb.	9g	3%	5g	2%	
Dietary Fiber	2g	6%	<1g	3%	
Total Sugars	0g		0g		
Protein	1g		<1g		
Vite min D	0	00/	0	00/	
Vitamin D	Omcg	0%		0%	
Calcium	0mg		0mg	0%	
Iron	0.3mg	0%	0.2mg	0%	
Potassium	0mg	0%	0mg	0%	
Not a significant source of added sugars.					
<ul> <li>The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</li> </ul>					

**INGREDIENTS:** POPCORN, VEGETABLE OIL (CORN, CANOLA, AND/OR SUNFLOWER OIL), AND SEA SALT.

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## Whole Grain



# Not a WholeGrain

