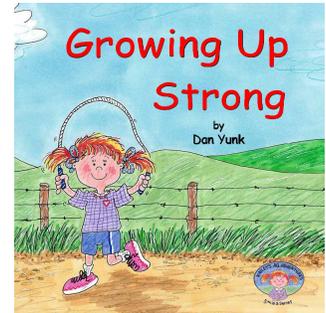


A Smart Way to Grow Up Strong



Using **math** with the **My Plate** food guide and the **Growing Up Strong** Ag Adventure book to better understand nutrition.



Learning Objectives/Outcomes:

Students will keep track of daily food intakes and relate them to their appropriate food groups. In doing so, they will better understand serving sizes as well as the importance of eating a variety of foods to obtain many different vitamins and minerals.

Students will be expected to graph their food tracking log and apply mathematical concepts that they will then be able to relate to their diet.

As part of the graphing activity, students will be able to visually see the array of colors they have eaten in their diet, and then understand the importance of eating a variety of foods.

Students will also understand, with the help of Growing Up Strong, the role that agriculture plays in providing safe and nutritious food.

Activity:

Materials Needed:

- Growing Up Strong
- Food Groups Information Page
- Copies of Food Tracker Handout
- Copies of Graph Handout
- Crayons/Colored Pencils

Instructions:

Day 1

Begin by reading Growing Up Strong to the students. Explain to them that, just like Kailey in the story, they are going to be learning about food nutrition, eating right by selecting healthy food choices and correct portion sizes, and the importance of having a rainbow of colors on their plate.

Go over each of the five food groups and correct serving sizes which can be found on the Food Groups Information page. This will give the students a better understanding of how to fill out their food tracker logs.

Level:

2nd-4th graders

Subjects/Standards:

K-4th grade Math

Standard 4: Data– The student uses concepts and procedures of data analysis in a variety of situations.

Benchmark 1: Math

Statistics– The student collects, organizes, displays, and explains numerical (whole numbers) and non-numerical data sets including the use of concrete objects in a variety of situations.

Indicator A: graphs using concrete objects;

Indicator D: horizontal and vertical bar graphs.

Hand out a copy of the Food Tracker Handout to each of the students.

Instructions for Food Tracker Handout

1. Explain to them that they are going to be keeping track of the foods they eat throughout the day on the handout.
2. It would work best to have the students, while they are in class, fill in all the foods they ate for breakfast, and lunch if possible, so if they have any questions about portion sizes or the correct location for a certain food, it can be answered there. This will also give them some examples to use later on when they take the food log home.
3. Have the students take the food tracker log home with them and record all the different foods they eat there. Have them bring the log back with them the following day.
4. If the students have any questions about where a certain food should go or how many servings they ate while they are at home, they can write them in the area at the bottom of the page under "Unknown Food Items."

Remember to keep in mind there is not a location on the graph for unhealthy food items, so they will not be part of the food log.

As an added bonus to this activity, it will give the students an incentive to eat healthy foods to fill in their logs.

Day 2

After the students return the following day with their completed food tracker logs, and with any questions they have, give them each a copy of the graph handout.

Incorporate math into the lesson by explaining to the students that they are going to be graphing out their food tracker log. They will make a bar graph to show the foods they ate the previous day.

Instructions for Graph Handout:

1. First have the students label the y-axis (vertical side with numbers) as, "Number of Items Ate". The x-axis (horizontal side) should be labeled, "Type of Food".
2. Below the line of the x-axis, have the students draw a picture of an example of food from each food group to represent the different bars of the graph.
3. When the students add up the servings of each food for each food group and begin to color in the corresponding number of boxes. Have them color each box to match the color of the corresponding food group. Example: 1 serving of fruit would dictate a red box for the fruit food group bar. When they are finished, they should be able to see the rainbow of colors they ate during one day. This will also help them in the future to eat many different colors and varieties of nutritious foods.

Have the students share their food graphs with the class and have them explain the different food choices they made.

Conclude the lesson by asking what the students learned about making healthy food choices, correct serving sizes, and the importance of having a variety of foods in their diet. Also encourage them to try to get as many colors in their food rainbow every day so they can stay healthy and strong.



Food Groups Information

Grains: 3 servings per day (1 serving is about 1 ounce)

In general, 1 slice of bread, 1 cup of ready-to-eat cereal, or ½ cup of cooked rice, cooked pasta, or cooked cereal can be considered as 1 ounce equivalent from the Grains Group.

Vegetables: at least 2 cups each day

In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup from the Vegetable Group.

Fruits: at least 1-1/2 cups each day

In general, 1 cup of fruit or 100% fruit juice, or ½ cup of dried fruit can be considered as 1 cup from the Fruit Group.

Dairy: 3 cups each day

In general, 1 cup of milk, yogurt, or soymilk (soy beverage), 1 ½ ounces of natural cheese, or 2 ounces of processed cheese can be considered as 1 cup from the Dairy Group.

Protein: 5 servings each day (1 serving is about 1 ounce)

In general, 1 ounce of meat, poultry or fish, ¼ cup cooked beans, 1 egg, 1 tablespoon of peanut butter, or ½ ounce of nuts or seeds can be considered as 1 ounce equivalent from the Protein Foods Group.

For a more detailed list on food serving and examples visit
www.choosemyplate.gov

Refer to the Nutrition Fun Facts Guide, provided by Kansas Farm Bureau, for nutritional value and interesting facts about each food group.

For a reference to standard serving sizes, refer to the next page. When comparing and learning about correct portion sizes, it often helps to retain a visual image of the proper amount. The table on the following page gives a description of a food item, the correct serving size, and then a visual image of what the portion should look like.

Standard Serving Sizes

Dairy

Food Item	Serving Size	Compare to
Yogurt/Cottage Cheese	8 oz. or 1 cup	Tennis ball
Cheese	1.5-2 oz.	Two dominos pieces
Ice cream	4 oz. or 1/2 cup	1/2 baseball

Meat/Protein

Food Item	Serving Size	Compare to
Chicken, fish or other meat	3 oz.	A deck of playing cards or palm of hand
Peanut Butter	2 Tbsp.	One golf ball
Egg	1 whole or (3 oz scrambled)	
Beans	1/2 cup	1/2 baseball

Grains

Food Item	Serving Size	Compare to
Potato	1 medium baked or 1/2 cup	A computer mouse or a small fist
Rice	1/2 cup	A cupcake wrapper
Pasta (alone)	4 oz. or 1/2 cup	A computer mouse or a small fist
Cereal	3/4 c. (except granola-1/2 c.)	1/2 a soup bowl
Hot Cereal	1 c.	A baseball

Salads

Food Item	Serving Size	Compare to
Specialty salad of the week	3 oz. (side) or 8 oz. (entrée)	3 oz.-fills bowl. 8 oz.-fills 9" plate

Vegetables

Food Item	Serving Size	Compare to
Raw	1 cup or medium-sized	A baseball
Steamed	1/2 Cup	Bulb part of a light bulb
Stir-fry	6 oz.	Fills 1/2 of 9" plate

Fruit

Food Item	Serving Size	Compare to
Canned	1/2 cup	Bulb part of a light bulb
Raw	Medium-sized	A baseball

Misc.

Food Item	Serving Size	Compare to
Wraps and prepared sandwiches	1 portion/sandwich, as prepared	
French fries/Potato wedges	3 oz.	Bar of soap or 1/4 of 9" plate
Soup	6 oz.	1 soup bowl
Casserole, mixed entrée or blended pasta	8 oz. or 1 cup	A baseball
Salad dressing	2 Tbsp.	One golf ball

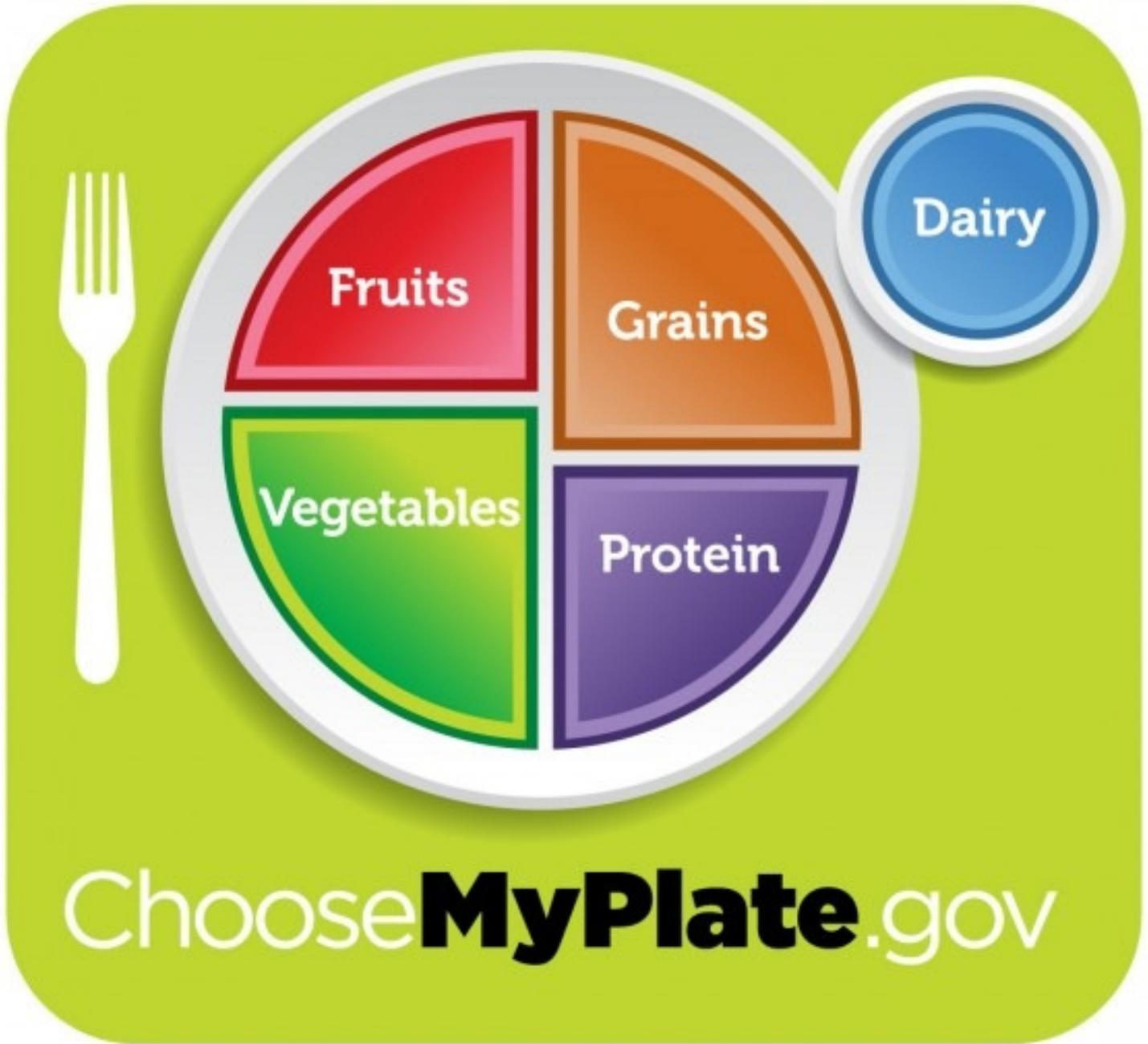
Beverages

Food Item	Serving Size	Compare to
Pop, milk	8 oz. or 1 cup	Fills dining room glass to 1" from the top
Hot beverage	4 oz.	Fills dining room coffee cup
Juice	6 oz. or 3/4 cup	Fills dining room glass 2/3 full

Food Tracker

Name: _____

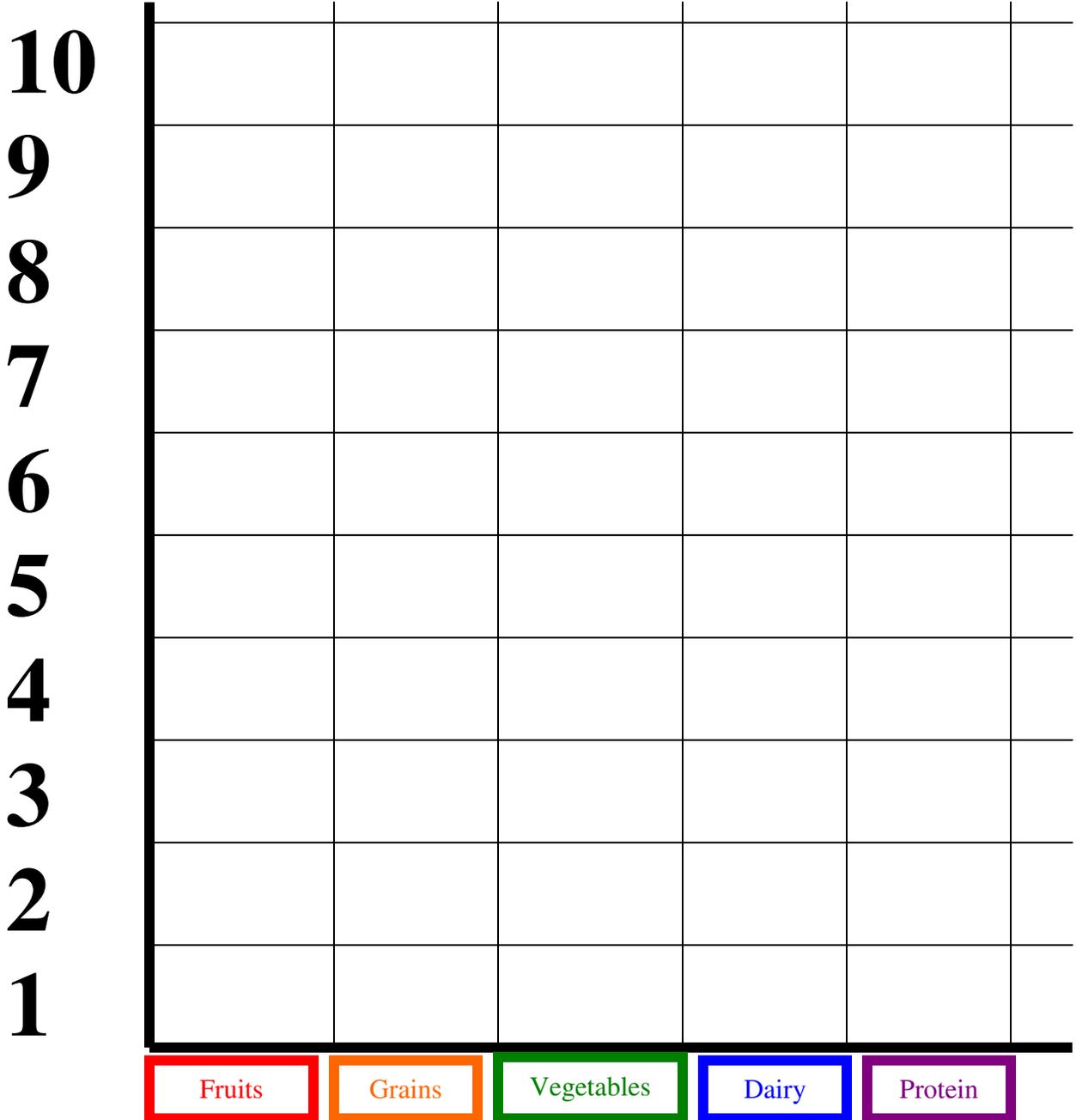
Directions: Keep track of all the food you eat in a day. Write down what you ate and how much in the correct area on the plate. **Example:** "1 Cup of Strawberries"- Write in the Fruits portion of the plate.



Unknown Food Items:

Graphing Your Diet

Name: _____



Food Tracker

Name: _____

Directions: Keep track of all the food you eat in a day. Write down what you ate and how much in the correct area on the plate. **Example:** "1 cup of strawberries"- Write in the Fruits portion of the plate.

Fruits

- 1 apple (1 serving)
- 1 cup watermelon (1 serving)
- 1 cup blueberries (1 serving)

Grains

- 1 bowl of cereal (1 serving)
- 2 slices of wheat bread (2 servings)

Vegetables

- 2 cup lettuce (1 serving)
- 1 cup carrots (1 serving)
- 1 cup red peppers (1 serving)
- 1 cup cucumbers (1 serving)

Protein

- 1 hamburger (2 ounces=2 servings)
- 1/2 cup beans (2 servings)
- 1 egg (1 serving)

Dairy

- 1 yogurt (1 serving)
- 1 cup milk (1 serving)
- 1 cheese stick (1 serving)

Choose **MyPlate**.gov

Unknown Food Items: 5 crackers?

Graphing Your Diet

Name: _____

