



4-H Flavorful

Hands in the Kitchen, Hearts at the Table.

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Survey



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Build Your Plate: Grain

Eating grains, especially whole grains, can provide health benefits. People who regularly eat grains that are low in added sugars, sodium, and saturated fats as part of an overall healthy diet may have a reduced risk of some diseases. Grains provide many nutrients that are vital for the health and maintenance of our bodies.

Health Benefits

All food and beverage choices matter. Focus on variety, amount, and nutrition.

- Eating whole grains as part of a healthy diet may reduce the risk of getting heart disease.
- Eating whole grain foods that have fiber, as part of an overall healthy diet, can support healthy digestion.
- Eating whole grains, as part of an overall healthy diet, may help with weight management.

What counts as a serving of grains?

The following are some grain food portions that are equal to one ounce:

- 1 slice of bread
- 1 cup of ready-to-eat cereal
- ½ cup of cooked rice, cooked pasta, or cooked cereal

*Recipes can be adjusted to cater to various food allergies and personal preferences. The recipes featured in 4-H Flavorful aim to introduce participants to new dishes and unique food combinations.

Taste Test Reflections

Share your taste test reflections for 4-H Flavorful by reporting about your experience. Reporting is easy and takes less than 5 minutes. Visit the QR code to complete a brief survey or use the following link: https://sdstateoira.sjc1.qualtrics.com/jfe/form/SV_73sUVVgMaUGIAdg

Respond to the following statements about this month's theme, activities and recipes:

- “I learned ...”
- “I plan to ...”
- “My family enjoyed ...”

Recipes are taste tested by South Dakota State Fair 4-H Special Foods Contestants.

Table Talk

- What is your favorite thing about our family?
- What book are you reading or have you recently read?
- If you could have any superpower, what would it be and how would you use it?
- What is your favorite meal?
- What family activity would you like to plan for this week/month?

Flavorful Futures

Exploring the Job of Food Scientists

Why does a muffin rise? Why do some recipes have so many ingredients in common? Why do foods change color during cooking? What can be done to keep them looking good? Have you ever wondered how new foods you see at the grocery store are developed? The idea of food science may be new to you, so take a close look at your next meal. There is food science and food technology behind every bite you take, all the way from the farm to the end of your fork.

Food science is the discipline in which engineering, biological and physical science are used to study the nature of foods, the causes of deterioration, the underlying principles, and the improvement of foods for the consuming public.

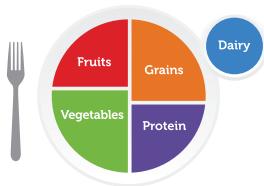
Food technology is the application of food science to the selection, preservation, processing, packaging, distribution and use of safe, nutritious and wholesome food.

Check out these videos describing the job of Food Scientists:

- What is a Food Scientist and what do they do: <https://www.youtube.com/watch?v=ULaw7GNjE6Y>
- Candy Scientist <https://www.youtube.com/watch?v=Z6Fb1pP6EbQ>
- A Day In the Life of a Food Technologist <https://www.youtube.com/watch?v=n4II-BSNmqs>
- Food Scientist Breaks Down Oreo Ingredients <https://www.youtube.com/watch?v=fQL16H9HRzg>
- Food Science Versus Food Technology <https://www.youtube.com/watch?v=fQL16H9HRzg>

What's on your plate? it's a mixture of chemistry, biology, and physics. Exploring food science is a hands-on experience and the kitchen is your "laboratory."

Source: Craig, B. Susie, and Gayle Alleman. What's On Your Plate: Exploring Food Science, 1st ed., vol. 4, National 4-H Council, Washington, DC, 2014, pp. 2-4.

**Start simple
with MyPlate**

Make Half Your Grains Whole Grains

Healthy eating is important at every age. Eat a variety of fruits, vegetables, grains, protein foods, and dairy or fortified soy alternatives. When deciding what grains to eat, choose options that are full of nutrients and limited in added sugars, saturated fat, and sodium. Start with these tips:



Have whole grains at breakfast

Enjoy a whole-grain hot cereal. Oatmeal is a favorite but consider trying a grain that's new to you, like buckwheat or millet. You might find a new breakfast favorite.



Enjoy a multigrain bowl

Create a one-dish meal by layering a mixture of grains like barley or wild rice with some colorful veggies and some low-fat cheese. Add your favorite protein and a dash of hot pepper sauce.



Swap your sandwich bread

Look for sandwich-type breads made with whole grains. Pita, tortillas, naan, sliced breads, and rolls are all available as whole grains.



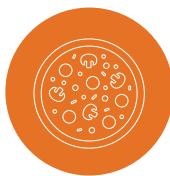
Choose whole-grain takeout

Ask about whole-grain options when dining out or ordering take-out food. For example, make a switch to whole-wheat pasta or brown or wild rice.



Experiment with a new grain

Cook a new grain like quinoa, amaranth, or millet. You can find cooking tips and recipes online. Grains are pretty versatile and also have lots of important nutrients.



Switch up pizza night

Create individual, homemade pizzas on whole-wheat English muffins or tortillas. Or, make a traditional pizza using a premade whole-wheat flour. Don't forget the veggie toppings.

What Is Gluten and Why Should We Know About It?

Have you ever noticed labels on food that say “gluten-free” and wondered what that actually means? Gluten is a natural protein found in some grains like wheat, barley, and rye. It’s what helps bread stretch and gives pizza dough its chewy texture.

For many people, gluten is totally fine to eat. But for some kids and adults, gluten can cause their bodies to feel sick. These people might have celiac disease, a gluten allergy, or gluten sensitivity, which means their body can’t handle gluten very well. When they avoid gluten, they feel healthier and have more energy.

So why should everyone know about gluten? Because understanding helps us:

- Be kind and helpful to friends who need gluten-free food.
- Make safe choices when bringing snacks to school or sports.
- Understand food labels and what’s in the things we eat.
- Learn about our bodies and how different foods affect people differently.

Knowing about gluten isn’t just about what you can or can’t eat—it’s about being aware, thoughtful, and making sure everyone feels included and safe.

Food scientists also play a role in developing whole grain products. What makes whole grain products special? A whole grain contains all the edible parts of the grain – the bran the germ and the endosperm. These parts contain important nutrients which are stripped away when making “white” flour. To find whole grain foods, check the ingredient label. The first ingredient of a whole grain bread or cereal should include the word “whole” in front of the name of the grain.

Gluten Substitutions

It is not hard to make gluten substitutions. Here are some gluten free options:

Noodle/Pasta Substitutions

- Rice Noodles
- Quinoa pasta,
- Lentil pasta
- Black bean pasta
- Veggie noodles make with a spiralizer - zucchini, sweet potato, carrots.
- Spaghetti squash
- Veggie Rice – broccoli and cauliflower

All Purpose Flour

- 1:1 flour
- Almond, Oat, Rice, Coconut, Spelt, Buckwheat Flour

Shopping List



Meat/Protein

- Pepperoni
- Optional Pizza Toppings (sausage, ground beef, Canadian bacon, etc.)
- Eggs
- Peanut Butter

Canned/Jar

- Honey
- Olive Oil
- Pizza Sauce

Produce

- Lime
- Fresh Mint
- Blueberries
- 3 types of fresh fruit (blueberries, strawberries, mango, pineapple, kiwi, grapes, etc.)
- Orange Juice

Dry Ingredients/Seasonings

- Baking Soda
- Baking Powder
- Garlic Powder
- Italian Seasoning
- Salt
- Sugar
- Quinoa
- Old Fashioned Oatmeal
- Chocolate Chips
- Mini M&M Candies

Dairy

- Mozzarella Cheese

Grains

- English Muffins





Blueberry Muffins

Cook Time: 8 minutes | **Servings:** 6 Muffins

Ingredients

- » ½ cup oatmeal
- » ½ cup orange juice
- » 1 ½ cup flour
- » 2 teaspoons baking powder
- » ½ teaspoon salt
- » ¼ teaspoon baking soda
- » ½ cup sugar
- » ½ cup oil
- » 1 egg beaten
- » 1 cup fresh blueberries, rinsed

Directions

1. Mix oatmeal and orange juice. Let sit for 10 minutes.
2. Combine flour, baking powder, salt, baking soda and salt in a bowl and stir.
3. Beat egg in a small bowl. Add egg, oil and oatmeal mixture to dry ingredients. Stir to combine.
4. Fill greased muffin cups to ⅔ full.
5. Bake at 350 degrees F for 18 minutes or until done. Makes 6 large or 12 small muffins.

Source: Blueberry Muffins, Paisley Namken, Hamlin County; <https://extension.sdstate.edu/south-dakota-4-h-special-foods-recipe-book-2021-2024>



Quinoa Fruit Salad

Ingredients

- » 1 cup quinoa
- » 2 cups water
- » Pinch of salt
- » Juice of 1 large lime
- » 3 tablespoons honey
- » 2 tablespoons finely chopped fresh mint
- » 1 ½ cups blueberries
- » 1 ½ cup sliced strawberries
- » 1 ½ cup chopped mango
- » Extra mint for garnish

Source: Quinoa Fruit Salad - Eleanor Anderson, Clay County; <https://extension.sdstate.edu/south-dakota-4-h-special-foods-recipe-book-2021-2024>

Directions

1. Using a strainer, rinse the quinoa under cold water. Add quinoa, water and salt to a medium saucepan and bring to a boil over medium heat. Boil for 5 minutes. Reduce heat to low and simmer for about 15 minutes or until water is absorbed. Let quinoa cool to room temperature.
2. To make honey lime dressing, in a medium bowl, whisk the lime juice, honey and mint together until combined.
3. In a large bowl, combine cooled quinoa, blueberries, strawberries and mango.
4. Pour honey lime dressing over the fruit salad and mix until well combined.
5. Garnish with additional mint, if desired. Serve at room temperature or chilled.

Note: Use your favorite fruit in this salad. Blackberries, peaches, kiwi, raspberries, pineapple, grapes, etc., are all great options.



Peanut Butter Energy Balls

Servings: 4

Ingredients

- » 1 1/2 cup quick oats
- » 1/2 cup creamy peanut butter
- » 1/4 cup honey
- » 1/8 cup Mini M&M candies

Directions

1. In a mixer, add all ingredients. Mix well.
2. Form into balls using a cookie scoop.
3. Store in an air-tight container.

Source: Peanut Butter Energy Balls, Isaiah Jahraus, Campbell County; <https://extension.sdstate.edu/south-dakota-4-h-special-foods-recipe-book-2021-2024>



English Muffin Pizzas

Servings: 6

Ingredients

- » 6 English Muffins (split in half)
- » 3 tablespoons olive oil
- » 1/2 teaspoon garlic powder
- » 1/4 teaspoon Italian seasoning
- » 3/4 cup pizza sauce
- » 3/4 cup shredded mozzarella cheese
- » Choice of pizza toppings

Source: English Muffin Pizzas, Maddie Rogers, Hand County; <https://extension.sdstate.edu/south-dakota-4-h-special-foods-recipe-book-2021-2024>

Directions

1. Move oven rack to the middle position and preheat to 400 degrees F.
2. Line a rimmed baking sheeting with foil.
3. Place the English Muffins on the baking sheet.
4. In a small bowl, combine olive oil, garlic powder and Italian seasoning. Use a spoon or pastry brush to brush about 1/2 tablespoon of the oil mixture over each English Muffin.
5. Spoon 1 tablespoon of suace over each muffin and use the back of the spoon to spread out the sauce.
6. Sprinkel each muffin with 1 tablespoon of shredded cheese.
7. Add your choice of toppings.
8. Bake for 8-10 minutes, or until the cheese is melted and the edges of the English Muffins are golden.
9. Cool for 3-4 minutes and then serve.

Meal Builders

Check out the Meal Builders below for two fun examples to help plan your menu! Aim to include 4–5 food groups for a meal and 2–3 food groups for a snack. The five food groups are fruits, vegetables, grains, protein and dairy. Eating from all the food groups gives your body the fuel it needs to play, learn, and grow strong every day! On the lines below, write your favorite meal or snack ideas to build your plate!



Blueberry Muffins

Scrambled eggs

Fresh fruit or 100% fruit juice

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Quinoa Fruit Salad

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Peanut Butter Energy Balls

8 ounces of milk

Fresh fruit

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English Muffin Pizzas

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