



POPTASTIC GRAIN SORGHUM

Overview

Students will have the opportunity to learn about grain sorghum and have a tasty treat when they are done. This lesson demonstrates that grain sorghum has more uses than just livestock feed and grain flour food items. It can also be popped.

Objectives

1. Students will hypothesize the outcome of popping grain sorghum.
2. Students will compare and contrast popped grain sorghum with regular popcorn.
3. Students will apply and understand the real-world use of fractions.

**Suggested
Grade Level:**
2nd-6th

Time:
20-30 minutes

Subjects:
Science
Math

Background Information

Sorghum grain is gluten free. Gluten free foods are needed for people suffering from celiac disease. Celiac disease causes mild to severe distress of the digestive system. Sorghum is nutritionally high in fiber, protein and iron. It is also antioxidant-rich, which is believed to lower the risk of some health related diseases. These grains are able to be popped because their soft hull easily disintegrates when heated. Unlike making popcorn, you are able to eat the sorghum kernels that did not pop because the hull disintegrated during heating. How do the kernels pop? When they are heated quickly, steam builds and then pushes against the hull. Once it is hot enough and there is enough pressure, the steam pops the kernel.

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Materials

- Large pot
- Spoon
- Protective gloves
- Splatter screen
- Oil
- 1/2 cup of Grain Sorghum kernels per person
- Regular popcorn
- Napkins or plates

Procedures

1. Have a bowl of regular popcorn prepared for the students to taste.
2. Have the students hypothesize what the outcome will be when heating grain sorghum kernels.
3. Put stove on medium heat.
4. Pour oil into the large pot and allow to heat up first.
5. Add grain sorghum to pot (be sure that gloves are worn and splatter screen is used).
*No need to put lid on.
6. Once the grains start to pop, turn the heat down.
7. Stir continuously, being sure that the already popped grains don't burn.
8. Add flavoring or salt, if desired.
9. Pour the sorghum out onto plates or napkins for each student and have them try it.
10. Have them taste the regular popcorn to use as a comparison.
11. Have the students compare the regular and grain sorghum popcorn using the student worksheet.

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Student Worksheet

Poptastic

Name: _____

Instructions: Answer questions thoroughly.

1. $\frac{1}{2}$ cup of grain sorghum kernels equals 3 cups of popped kernels. This is equal to one serving. How many cups of kernels do you pop to feed six family members and yourself?

$$\frac{1 \text{ serving}}{.5} = \frac{\text{number in family}}{X}$$

2. How many cups of grain sorghum are needed to feed your whole class?

$$\frac{1 \text{ serving}}{.5} = \frac{\text{number in class}}{X}$$

Compare and Contrast

Please rank the following criteria from 1-5, with 5 being the best.

	Flavor	Texture	Volume	Satisfaction	Color
Sorghum Grain	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Popcorn	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5