

STEM at the Breakfast Table

Use breakfast cereal as a context to learn about measuring tools, nutrition, and nutrition labels.

Materials Needed

Cereal, bowl, measuring tools, cereal box, another food item with a nutrition label

Procedure

Take out your favorite breakfast cereal from the cabinet. Pour your usual amount into a bowl that you would normally use. Do not add milk!

Measure Your Serving – What tools do you have in your kitchen that will allow you to make a measurement? Try at least 3 tools to measure the amount of cereal you’ve poured into the bowl. Complete a chart like this one.

Tool	Measurement	What do you think about the “correctness” or precision of the measurement with this tool?
Cereal bowl	About ½ full	

Find the Nutrition Facts rectangle on the side of your cereal box. Find another food container that has Nutrition Facts listed on its package. Compare and contrast the information on the two labels. Jot down notes as you read and consider.

Teacher Notes

- Discuss students’ tools and measurements (e.g., measuring cup, measuring spoons, kitchen scale). Have students compare the amount of cereal in their servings.
- Have students discuss their data and observations. See specific questions below.

Discussion Questions

What advantages and disadvantages do each of the tools the students used present?
Why is “about ½ full” a problematic measurement?

Are students' servings equal to the standard serving listed on the cereal box?
Is "about ½ full" a reasonable measurement for a bowl of cereal? Can you think of examples where you would need to be much more specific than "about ½ full?"
Why use standard tools? Standard measurements?

Why does the US Food and Drug Administration require food labeling?

Lesson Extensions

Depending on your current subject matter, subsequent lessons can move in several different directions. These examples could be projects or homework.

- Math: How many servings of cereal would you have to eat to obtain the DV (Daily Value) of Vitamin A? Saturated Fat? Others? How many calories would be consumed in those servings? Look at the Net Weight of the packages. What units are used? How do the units compare? Can you figure out the conversion factors?
- Science: Pick a nutrient listed on the cereal box. Search for its chemical structure and share findings with the class. Why is this nutrient required in the body? Make a small poster, a PowerPoint Slide, or a short video that can be shared.
- STEM: How are Nutrition Facts determined? Tools used? Processes?
- Arts & Communication: Design a box for your cereal that is attractive to you, the consumer, and clearly informs the buyer about the nutritional value of the cereal.

Resources

<https://www.fda.gov/food/new-nutrition-facts-label/how-understand-and-use-nutrition-facts-label>