



ACTIVITY 4

Let's Make Ice Cream

TEKS 6.1 Number, operation and quantitative reasoning. The student represents and uses rational numbers in a variety of equivalent forms. The student is expected to: **(B)** generate equivalent forms of rational numbers including whole numbers, fractions and decimals.

TEKS 6.2 Number, operation and quantitative reasoning. The student adds, subtracts, multiplies and divides to solve problems and justify solutions. The student is expected to: **(A)** model addition and subtraction situations involving fractions with objects, pictures, words and numbers; **(B)** use addition and subtraction to solve problems involving fractions and decimals; **(C)** use multiplication and division of whole numbers to solve problems, including situations involving equivalent ratios and rates.

Objective: Students are to make an individual portion of ice cream, but the exact measurement tools will not be available to each pair. They will have to use $\frac{1}{8}$ cup, $\frac{1}{4}$ cup or others while they find the equivalent measures of the ingredients. Students in some pairs may be asked to increase their amounts, so that two or four servings will be made to share with other teachers and students. This is a real-world use of fractions, ratios and measurement.

Number of students: Students can work in pairs.

Materials:

- $\frac{1}{2}$ cup half-and-half
- $\frac{1}{2}$ teaspoon of vanilla extract or favorite flavoring
- 1 tablespoon of granulated sugar
- 4 cups of crushed ice
- $\frac{1}{4}$ cup of rock salt
- Plastic sandwich bag that seals airtight
- Plastic quart size bag that seals airtight
- Plastic spoon (for tasting)

Steps: Students will make changes to their recipes based on the measurement tools to which they have access. They will record the changes and present them to the teacher or helper, who will assess the correctness accuracy of their recipes before mixing begins. Students will follow their correct recipe (amount of ingredients) and complete their ice cream making!

Step 1: Mix the milk, vanilla and sugar in the sandwich-size bag. Remove as much air as possible and seal tightly.

Step 2: Place sandwich bag inside the quart size bag. Fill quart-size bag with ice and sprinkle rock salt on top of the ice. Remove as much air as possible and seal tightly.

Step 3: Now shake, shake, shake for ten to 15 minutes.

Step 4: Enjoy your ice cream.

Extensions/Modifications:

- Students may bring in their favorite recipes and have the class adjust the portions or servings as needed.
- Ask the Manager at your school's cafeteria to share recipes he or she may use to feed hundreds of students, and adjust the recipes to feed a small family.