



# STEM Career Adventures: Food Scientist

## Whipping Up Ice Cream

### Introduction to Career:

**Food Scientist:** A scientist who learns about what food is made of. Food scientists also come up with ways to make sure food is safe (and healthy) for people to eat. Without food scientists, we might be eating unsafe food with germs.

**Adventure Description:** A food scientist is trying to find a way to make ice cream in a small plastic bag. The food scientist does not have many ingredients and does not have a lot of time. Have explorers think like a food scientist and make their own ice cream.



### Activity: Making Homemade Ice Cream (20 - 30 minutes)

- Explain to explorers that they will be making ice cream! Food scientists have figured out what ingredients to put in a plastic bag to make ice cream.
- Have explorers guess which ingredients are needed to make ice cream in a plastic bag. Have explorers record their predictions on **Discovery Page: Whipping Up Ice Cream**.
- Next, give explorers **Ice Cream Making Steps** for a list of ingredients and instructions.
  - Ask explorers if their predictions were close to the listed ingredients. What did they write down that was different?
- Explain that food scientists have figured out that ice cream made in a plastic bag needs a certain amount of each ingredient.
- Now, its time to make ice cream. Each explorer needs:
 

- 1 gallon-size plastic bag	- 2 tablespoons sugar
- 1 pint-size plastic bag	- $\frac{3}{4}$ tablespoon vanilla extract
- 2 trays of ice cubes	- Sprinkles or any other toppings!
- 1 cup half and half	
- $\frac{1}{2}$ cup Kosher salt	

**Contact Allison, Director of Customer Service, with any questions or feedback at 314-272-2560 or [allison@rozzylearningcompany.com](mailto:allison@rozzylearningcompany.com)**

Send photos of your explorers and their projects to [allison@rozzylearningcompany.com](mailto:allison@rozzylearningcompany.com) to be featured on Rozzy's website, social media pages, and blog!



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## Creating Ice Cream

- Instructions for explorers to make ice cream (suggestion: have explorers work in small groups):
  - (1) Pour 1 cup half and half,  $\frac{3}{4}$  tablespoon vanilla extract, and 2 tablespoons of sugar into the pint-size bag. Seal the bag tightly, so that there is not extra air and nothing will leak out!
  - (2) Fill the gallon-size plastic bag halfway full with ice cubes (this is about 2 trays of ice cubes). Sprinkle some salt on the ice cubes.
  - (3) Insert the pint-size bag with the ingredients into the big bag of ice and salt. Seal the big bag tightly, so that there is no extra air and nothing leaks out.
  - (4) Time to shake! Shake bag for 5-10 minutes until the mixture begins to get hard and ice cream begins to form. Once the ice cream is hard, remove the pint-size bag from the bigger bag.
  - (5) Time to eat! Open bag and pour ice cream into a dish. Add toppings!

### Extra time?

- Have explorers experiment by adding different amounts of the ingredients to see if the ice cream can still be made/tastes the same. Explain to explorers that food scientists have to test out different amounts of each ingredient to find the best way to make ice cream.

## Materials List

### Provided online:

• **Discovery Page: Whipping Up Ice Cream**

• **Ice Cream Making Steps**

### Not provided (each explorer or groups of explorers needs):

- |                                  |   |
|----------------------------------|---|
| • 1 gallon size plastic bags     | • 2 Tablespoons sugar                       |
| • 1 pint size plastic bags       | • $\frac{3}{4}$ Tablespoons vanilla extract |
| • 2 trays of ice cubes and water | • Sprinkles or other toppings               |
| • 1 cup half and half creamer    | • Measuring cups and spoons                 |
| • $\frac{1}{2}$ Kosher salt      |   |

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# Ice Cream Making Steps

## What You'll Need

1 Gallon sized plastic bag.  
1 pint sized plastic bag.  
2 trays of ice cubes.  
1 cup half and half.  
1/2 cup salt.

2 tbsp. sugar.  
3/4 tbsp. vanilla extract.  
Any other toppings,  
like sprinkles.

## How To make it

STEP

**1** Pour 1 cup half and half, 3/4 tbsp. vanilla extract, and 2 tbsp. of sugar into the small plastic bag. Seal the bag tightly.

STEP

**2** Fill the large plastic bag halfway with ice cubes. Sprinkle salt on the ice cubes.

STEP

**3** Put small bag inside the big bag of ice and salt. Seal the big bag tightly.

STEP

**4** TIME TO SHAKE! Shake the bag for 5-10 minutes until the mixture hardens and becomes ice cream.

STEP

**5** TIME TO EAT! Open the bag and pour out the ice cream onto a dish. Add toppings!



# Discovery Page

## Whipping Up Ice Cream

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**Write what ingredients you think are needed to make ice cream and how much of the ingredient is needed.**