

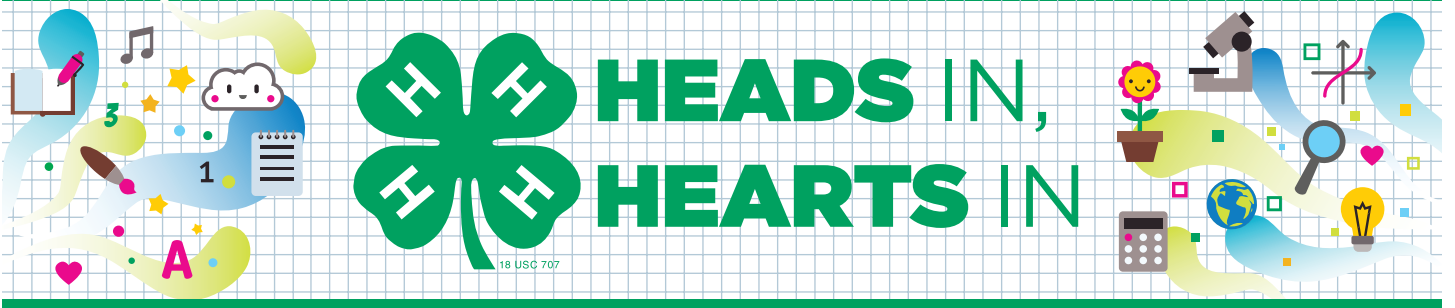
Supplies

- “Guide for Families” handout
- Clear plastic standup display (optional)
- 5-ounce plastic cups (1 per participant)
- Root beer
- Ice cream
- Ice cream scoop
- Spoons (1 per participant)
- Napkins or wet wipes
- Food handling gloves appropriate for food handling
- Hand sanitizer
- Display table

Activity Preparation

- ▶ Purchase or locate items on the supply list.
- ▶ Print one copy of the “Guide for Families” handout. Laminate or place in a clear plastic standup display to allow participants to see it more readily.
- ▶ Set up the display table with the supplies.





Root Beer Float

Guide for Families

Learning Objectives

What you need to know:

Matter is everywhere, even in a root beer float! You can find **solids**, **liquids** and **gasses** in a root beer float.

- ▶ Solid: ice cream
- ▶ Liquid: root beer
- ▶ Gas: The ice cream and root beer mix and create bubbles called **carbonation**. Those carbonated bubbles are trapped gas.

Did you know states of matter can change?

- ▶ A liquid becomes a solid when it freezes.
- ▶ A solid becomes a liquid when it melts.
- ▶ A gas becomes a liquid through the process of **condensation**.
- ▶ A liquid can become a gas through the process of **evaporation**.

Can any of those changes happen in a root beer float?

What you will do and learn:

You will understand the three types of matter and observe these three states in a root beer float. You will also discover whether the three states of matter in a root beer float can change.

Instructions

1. Begin by using a small amount of hand sanitizer.
2. Using the ice cream scoop, put a small amount of ice cream in the cup.
3. Fill cup $\frac{3}{4}$ full with root beer.
4. Observe and discuss:
 - ▶ Can you identify the solid (ice cream)? Liquid (root beer)? Gas (fizzing and popping of air bubbles on top of the root beer)?
 - ▶ What happens to the states of matter when the ice cream melts? Describe using the terms **solid**, **liquid** and **gas**.
 - ▶ What happens to the states of matter if we placed the cup in the freezer? Describe using the terms **solid**, **liquid** and **gas**.

Observe that when the ice cream and pop mix, they create bubbles. Those carbonated bubbles are trapped gas.