

Objective

By the end of this lesson, Room 218 will understand the basic concepts of matter, including its states, properties, and how it changes. The student will be able to identify different types of matter and explain the differences between solids, liquids, and gases through hands-on activities.

Materials and Prep

- Water
- Ice cubes
- A balloon
- A small container (like a cup or jar)
- Paper and pencil for notes

Before the lesson, ensure that the water is available at room temperature and that the ice cubes can be accessed easily. Prepare a space for the activities to take place, preferably somewhere that can handle a little mess!

Activities

1. **Ice to Water Experiment:** Start by placing ice cubes in a small container and observe them as they melt into water. Discuss the changes that occur and what state of matter each form represents.
2. **Balloon Blow-Up:** Use the balloon to demonstrate gases. Inflate the balloon and explain how the air inside is a gas that takes up space. Discuss how gases can expand and compress.
3. **Water States Chart:** Create a simple chart that shows the three states of matter: solid, liquid, and gas. Draw or write examples of each state, such as ice for solid, water for liquid, and steam for gas.

Talking Points

- **What is Matter?** "Matter is anything that has mass and takes up space. Can you think of something that is matter?"
- **States of Matter:** "There are three main states of matter: solids, liquids, and gases. Solids have a fixed shape, liquids take the shape of their container, and gases fill up the space they are in!"
- **Changing States:** "Matter can change from one state to another. For example, when ice melts, it becomes water. What happens when you heat water?"
- **Examples of Matter:** "Can you name some examples of solids, liquids, and gases? Think about things around you!"
- **Everyday Matter:** "Matter is all around us! From the air we breathe to the food we eat, everything is made of matter. What is your favorite example of matter?"