

Lesson Plan: "Frozen Fun: Ice Cube Races!"

Age Group: 5 years and up

Duration: 30-40 minutes

Objective:

By the end of this lesson, students will understand the concept of freezing and melting, and observe how objects change states from solid to liquid.

Materials Needed:

- Video Tutorial by DiscoverlifeSkills.com: "Frozen Fun: Ice Cube Races!"
 - Ice cube trays
 - Small toys (e.g., toy cars, animals, figures)
 - Water
 - Freezer
 - Plate or tray for melting ice cubes
 - Towels or cloths for cleanup
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Introduction (5 minutes):

1. Greeting & Warm-up Discussion:

- Start by asking: "Have you ever seen ice melt? What happens to it when it melts?"
- Introduce the activity: "Today we're going to have fun with ice cube races! We'll freeze some toys in ice cubes and then watch them melt. It will help us see how ice turns into water."

2. Introduce the Concept:

- Explain that ice starts as a solid and turns into a liquid when it melts, and that the ice cube races will help us see this process in action.

Main Activity (20-25 minutes):

1. Watch the Video (5 minutes):

- Play the video tutorial "Frozen Fun: Ice Cube Races."
- Before watching, tell the students to watch closely for the steps to create the ice cubes and what happens during the race.

2. Create Ice Cube Races (15-20 minutes):

- **Step 1: Prepare Toys** (5 minutes):
 - Choose small toys that can fit into the compartments of the ice cube tray.
- **Step 2: Fill the Tray** (5 minutes):
 - Place each toy into a separate compartment of the ice cube tray.
 - Pour water into the tray to cover the toys completely.
- **Step 3: Freeze the Ice Cubes** (2 minutes):
 - Ask an adult to help place the tray in the freezer.
 - Allow the water to freeze into ice cubes (this part will be done in advance).
- **Step 4: Ice Cube Race** (5-10 minutes):
 - Once the ice cubes are solid, remove them from the freezer.
 - Place the ice cubes on a plate or tray.
 - Observe which toy escapes from the ice first as the ice melts.
 - Discuss what is happening: the ice is melting and turning back into water.

Discussion and Reflection (5-7 minutes):

1. Group Discussion:

- Ask: "Which toy escaped from the ice first? Why do you think that happened?"

- Explain the process of melting: "The ice cubes are turning from solid ice into liquid water as they melt. This happens because the ice absorbs heat and changes its state."

2. Encourage Observation:

- Ask students to describe what they see as the ice melts and how the toys are freed.
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Activity: Ice Cube Art (Optional, 10 minutes):

1. Ice Cube Painting:

- Give students ice cubes that have melted slightly.
 - Provide paper and let them use the melting ice cubes to paint on the paper, observing how the water changes the colors.
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Extension Ideas:

- **Science Discussion:** Talk about other materials that change state, like ice cream melting or water freezing.
 - **Create Ice Sculptures:** Freeze water in different shapes and let students observe how different shapes of ice melt.
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This lesson introduces young students to the concepts of freezing and melting through a fun and engaging activity. They get to observe these changes in real-time while having fun with a race involving their favorite small toys.