

States of Matter Play



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Sensory playtime that includes an introduction to chemistry.

Duration

Preparation: 5 minutes

Activity: 20 minutes

Supplies

- Shallow pan, bin, bowl, or baking tray with sides
- Ice
- Manipulatives - scoops, small cups, spoons, colander, ladle, measuring cups, etc.
- Towel or plastic sheet (optional, recommended for indoor play)

Background

Early science education can expose children to concepts and ideas, but more importantly, focuses on sparking their curiosity and interest. Here, we are introducing chemistry concepts surrounding states of matter through play and exploration.

Instructions

1. If you will be playing indoors, place a towel or sheet down to protect the floor from drips and splashes.
2. Place a handful or two of ice cubes in your container.
3. Add two or three manipulatives per person playing.
4. With your child, investigate the ice. How does it feel, look, maybe even taste? What happens if you hold a piece in your hand? Slide it around the container or hold it up and watch water drip off.
5. As it melts, play in the water, too. Can you make the water splash? Can ice splash? Try using a colander or strainer, if you have one, to separate the ice and water.

Vocabulary

Try introducing a couple of these terms as you play and observe.

Matter: anything that takes up space and has mass.

Solid: matter that is hard. The molecules (pieces) are jammed so tightly together that they can't move around each other.

Liquid: matter that can flow freely and takes the shape of its container. The molecules have more space and can slide past each other.

Melt: the process by which matter transitions from solid to liquid through the addition of heat.

Freeze: the process by which matter transitions from liquid to solid through the removal of heat.

Extension

Boil some water and point out the steam to introduce gas – water that is in the air. It will be very hot, so this is an observation only activity.

Try adding a drop of food coloring on an ice cube to watch how it spreads as the ice melts and mixes with the warmer water. Food coloring can stain when at full concentration, so don't use on your best towels.