

Best Lesson – Lesson Plan

Grade Level: 1 / 2

Title of Lesson: States of Matter

Unit Title: Science – the states of matter

Performance Standard(s) Covered: S2P1 – Students will investigate the properties of matter and changes that occur in objects

Essential Question: What are the three states of matter? How are they different from one another? What are some examples of solids, liquids, and gases?

Objective: After learning about the three states of matter, students will apply their newly acquired knowledge by sorting examples of matter into solids or liquids, and then complete an activity which will demonstrate the arrangement of particles in each state of matter.

Key Words and Terms: matter; states of matter; solids; liquids; gases

Learning Activity

Abstract: In this lesson, students will identify and differentiate between the three states of matter.

Materials Needed:

- 2 bins (labeled “solids” / “liquids”)
- 3+ examples of solids (e.g. blocks, marbles, pencils, etc.)
- 3+ examples of liquids (e.g. water bottle, juicebox, milk carton, etc.)
- 3 sheets of construction paper per student (labeled “solid” / “liquid” / “gas”)
- 1 sticker sheet per student
- 1 printout of a solid (e.g. sock) per student
- 1 printout of a liquid (e.g. glass of water) per student
- 1 printout of a gas (e.g. inside of balloon) per student
- 1 pair of scissors per student

Safety Concerns:

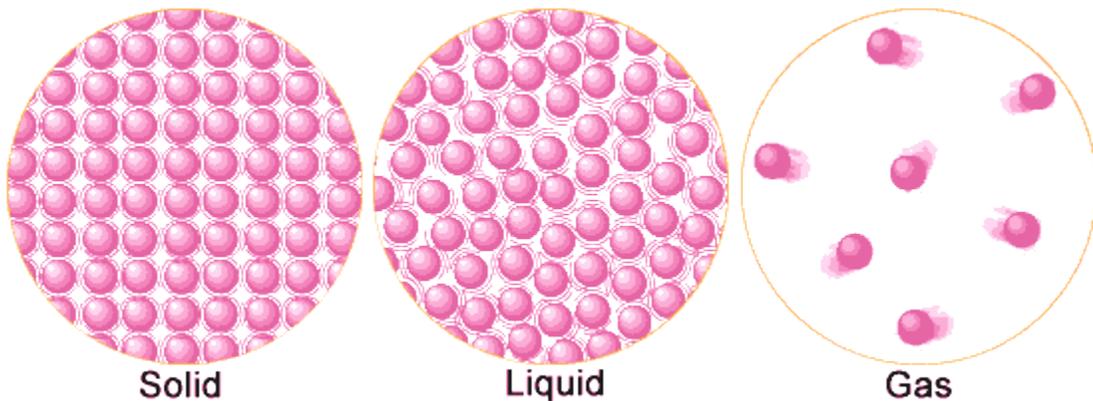
Students should be careful (esp. no running) with scissors!
Students must always be supervised while using scissors.

Procedure: List step by step what you are doing in the activity. What did you need to do to prepare? What are the students doing during the activity?

1. Introduce students to the three states of matter by showing them examples of water in each of its three states – ask them what differences there are among the three, and why these differences might exist:



2. Using the diagram below, explain what the “spheres” or “balls” or “dots” are, and how they are arranged in each state:

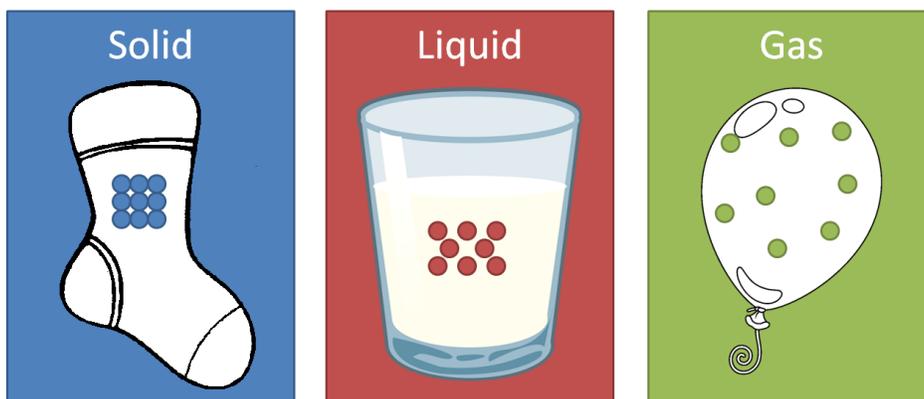


3. Have the students hold hands and sit up straight. Tell them that each one of them represents one “dot” in an object, and that they are currently a solid (rigid, tightly packed together, etc.).
4. Now have the students “loosen up” a bit and wave their arms around (while still holding hands). Tell them that they are now a liquid (flowing, less tightly packed together, etc.).
5. Finally, have the students let go of each others’ hands and wave them around in the air – they are now a gas (moving quickly, lots of energy, no longer packed together, etc.).

- Wait for the students to calm down a bit, and then explain to them again what they had just done. Emphasize the difference in the arrangement and movement of the “dots” in each state of matter.
- Gather the class and present them with the solid and liquid objects. Ask them to identify each object as either a solid or liquid and sort them accordingly.
- Have students cut out the solid, liquid, and gas printouts and paste them onto the corresponding sheets of construction paper:



- Have students place stickers (as the “dots” mentioned earlier) onto each of the objects in an appropriate arrangement (i.e. indicative of the arrangement of the “dots” in each state of matter):



- Assess student learning by asking questions about what the three states of matter are, what the stickers represent, and why they are arranged differently in each state of matter.

Notes and Tips: Overall, this lesson worked out pretty well. The students had a much better grasp of the states of matter than I had originally anticipated, and the printout activity at the end seemed to be the most helpful. The object sorting was a bit lackluster, however, and may have been better if gases could have been included as well.

References: N/A