

Solids, Liquids, Gases- Build, See, Compare

Materials per Student/Group: 3 test tubes and stoppers, split peas (enough to fill 1 ½ test tubes), ice cube. Later you'll also need a fresh bar of Ivory soap and a cold can of soda.

Procedure:

1. Put an ice cube near each student. After observing it, have them tell you why it's changing (energy).
2. Read a few background sentences/paragraphs aloud on states of matter.
3. Solids:
 - a. fill a test tube completely with split peas, so that they cannot move
 - b. observe it- (packed, can't move...)
 - c. apply to ice cube- ask what this means that solid ice is like
 - d. read the sentences/paragraphs about solids in the book
4. Liquids:
 - a. fill a test tube halfway with split peas
 - b. observe it- (moves, no shape...)
 - c. apply to melted ice- what are liquids like?
 - d. read the sentences/paragraphs about liquids in the book
5. Gases:
 - a. Put 1 pea in the 3rd test tube
 - b. observe it- (moves a lot, high energy...)
 - c. apply to melted ice that has vaporized- what are gases?
 - d. read the sentences/paragraphs about gases in the book
6. Copy this-
 - a. "Energy flows in and out of atoms. More energy causes atoms to become more active, so they need more space. Less energy causes them to become less active, so they need less space."
7. Heat ¼ of a bar of fresh Ivory soap for 30 seconds in a microwave. *Homework- have students explain what happened, applying what they learned. Begin class tomorrow by sharing these.