

The States of Matter - Experiment

In this experiment we will observe transformations in three states of matter: solid, liquid and gas. Matter can transform from one state to another if enough energy is added.

Take, for example, a pot of ice cubes on a stove. If you turn on the eye under the pot and heat the ice cubes, the ice cubes absorb energy in the form of heat. Generally, heat is transferred from higher-temperature objects to lower-temperature objects.



If enough energy is added, the ice cubes melt and become water. The matter has changed from a solid to a liquid.



If you continue to add energy, the matter will change states again. When liquid water absorbs enough heat energy, it evaporates, and becomes water vapor. Water vapor is a gas. Another word for water vapor is steam. In this instance the matter has changed from a liquid to a gas.



1. What is *matter*?

- A. a solid physical substance
- B. a physical object that occupies space and has mass
- C. something that always stays the same

2. What does *transform* mean?

- A. move
- B. shape
- C. change

3. What does *absorb* mean?

- A. take in or soak up
- B. change
- C. lose
- D. give off

4. What does *evaporate* mean?

- A. melt
- B. freeze
- C. to turn from liquid into vapor
- D. float away