

# Brainpop—States of Matter

Name:

Period:

Watch the Brainpop on states of matter, then answer the questions below.

- \_\_\_\_\_ 1. Which statement best describes matter?
- a. matter is anything that is solid
  - b. matter is anything that takes up space
  - c. matter is anything that has a fixed volume
  - d. matter is anything that can be seen
- \_\_\_\_\_ 2. What is all matter made of?
- a. atoms
  - b. molecules
  - c. solids
  - d. liquids
  - e. gases
- \_\_\_\_\_ 3. The chemical formula for water is H<sub>2</sub>O. What does this code mean?
- a. water is composed of hydrogen molecules and oxygen molecules
  - b. when hot, water contains 20 hydrogen atoms
  - c. each water molecule contains two hydrogen atoms and one oxygen atom
  - d. when heated, water turns 2 steam
- \_\_\_\_\_ 4. In what way are liquids different from solids?
- a. liquid molecules are lighter than solid molecules
  - b. liquids are made of atoms; solids are made of molecules
  - c. liquids don't have a fixed shape; solids do
  - d. liquids are always heavier than solids
- \_\_\_\_\_ 5. What is the basic shape of a liquid?
- a. a sphere
  - b. the same as a gas, only rounder
  - c. a cube
  - d. whatever the shape of its container is
- \_\_\_\_\_ 6. What happens to the chemical structure of water when it changes into a different state of matter?
- a. water molecules break apart to form individual atoms
  - b. water molecules harden into ice molecules
  - c. water molecules melt into gas molecules
  - d. nothing happens to the chemical structure
- \_\_\_\_\_ 7. What will happen if you keep increasing the temperature of a liquid?
- a. it will eventually boil
  - b. it will eventually melt
  - c. it will eventually solidify
  - d. nothing
- \_\_\_\_\_ 8. How can you remove energy from matter?
- a. by increasing its volume
  - b. by lowering its temperature
  - c. by increasing its pressure
  - d. by boiling it
- \_\_\_\_\_ 9. Gases have a tendency to expand. What's the best synonym for "expand"?
- a. collide
  - b. spread out
  - c. shrink
  - d. boil
- \_\_\_\_\_ 10. What would be the best way to describe the movement of particles in a solid?
- a. they move quickly in all directions
  - b. they move slowly and slide past each other
  - c. they barely move and vibrate in place
  - d. they don't move at all


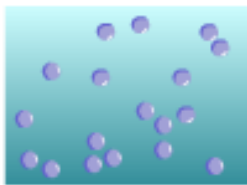

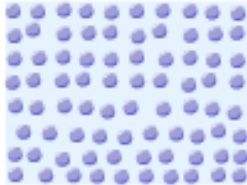

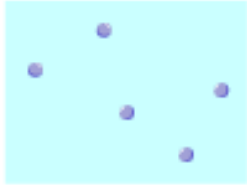
Determine if the statement is true or false. If false, replace the word in **bold** with the correct word on the line. If true, write "true" on the line. Possible word choices are provided below:

energy    molecules    volume

1. \_\_\_\_\_ All matter is made up of tiny particles called **ATOMS**.
2. \_\_\_\_\_ Liquids have a fixed **TEMPERATURE**, but no fixed shape.
3. \_\_\_\_\_ Molecules of ice have less **MASS** than molecules of water.

Practice: 8 points, Assessment: 2 points

**Match the object on the left with the configuration of its molecules on the right.**

	<ul style="list-style-type: none"> <li>• a bar of gold _____</li> </ul>	<p>A •</p>	
	<ul style="list-style-type: none"> <li>• a diving tank full of oxygen _____</li> </ul>	<p>B •</p>	
	<ul style="list-style-type: none"> <li>• lava erupting out of a volcano _____</li> </ul>	<p>C •</p>	



Why does the freezer in your refrigerator turn water (a liquid) into ice (a solid)? You must use the word **energy** in your answer.