

Brainpop—States of Matter

Name:

Period:

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

- _____ 1. Which statement best describes matter?
- matter is anything that is solid
 - matter is anything that takes up space
 - matter is anything that has a fixed volume
 - matter is anything that can be seen
- _____ 2. What is all matter made of?
- atoms
 - molecules
 - solids
 - liquids
 - gases
- _____ 3. The chemical formula for water is H₂O. What does this code mean?
- water is composed of hydrogen molecules and oxygen molecules
 - when hot, water contains 20 hydrogen atoms
 - each water molecule contains two hydrogen atoms and one oxygen atom
 - when heated, water turns 2 steam
- _____ 4. In what way are liquids different from solids?
- liquid molecules are lighter than solid molecules
 - liquids are made of atoms; solids are made of molecules
 - liquids don't have a fixed shape; solids do
 - liquids are always heavier than solids
- _____ 5. What is the basic shape of a liquid?
- a sphere
 - the same as a gas, only rounder
 - a cube
 - 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?
- water molecules break apart to form individual atoms
 - water molecules harden into ice molecules
 - water molecules melt into gas molecules
 - nothing happens to the chemical structure
- _____ 7. What will happen if you keep increasing the temperature of a liquid?
- it will eventually boil
 - it will eventually melt
 - it will eventually solidify
 - nothing
- _____ 8. How can you remove energy from matter?
- by increasing its volume
 - by lowering its temperature
 - by increasing its pressure
 - by boiling it
- _____ 9. Gases have a tendency to expand. What's the best synonym for "expand"?
- collide
 - spread out
 - shrink
 - boil
- _____ 10. What would be the best way to describe the movement of particles in a solid?
- they move quickly in all directions
 - they move slowly and slide past each other
 - they barely move and vibrate in place
 - they don't move at all


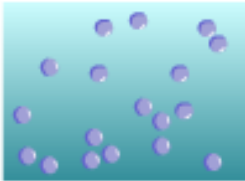

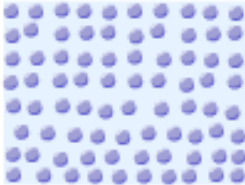

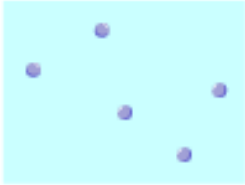
Determine if the statement is true or false. If false, replace the word in **bold** with the correct word on the line. If true, write "true" on the line. Possible word choices are provided below:

energy molecules volume

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

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