Brainpop—Matter Changing States

Name:

Period:

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

_____ 1. What is matter?

a. anything that is visible
b. anything that has mass and takes up space
c. anything that is solid
d. anything that has a fixed volume

_____ 2. What are the three main states of matter?

a. solid, liquid, and gas
b. ice, water, and steam
c. temperature, pressure, and energy
d. hot, cold, and warm

_____ 3. Which form of H_2O has vibrating molecules locked in a crystal lattice?

a. solid ice
b. liquid water
c. gaseous vapor (steam)

_____ 4. Compared to ice, how do molecules of water move?

a. they move less freely
b. they are locked into a crystal lattice
c. they move more freely
d. they bounce off one another randomly

_____ 5. If you put a thermometer into a pot of melting ice, when will the temperature rise past zero?

a. as soon as the ice begins to melt
b. after most of the ice has melted
c. when the ice begins turning into steam
d. when all the ice has melted

_____ 6. What is the easiest way to add energy to matter?

a. heating it
b. cooling it
c. connecting it to a battery
d. giving it caffeine

_____ 7. The melting point of H_2O is 0 degrees Celsius. When measuring the temperature of melting ice, why does it stay at 0 degrees Celsius for so long?

a. ice makes matter cool and particles slow
b. water is turning into steam and floating away
c. ice is turning into water too fast to be measured
d. energy is breaking apart the crystal lattice

_____ 8. How do the molecules of a gas behave?

a. they vibrate in place
b. they bounce around randomly
c. they are locked in a crystal lattice
d. they clump together

_____ 9. The boiling point of H_2O is 100 degrees Celsius. When measuring the temperature of boiling water, why does it stay at 100 degrees Celsius for so long?

a. ice in the water makes the water stay cool for a long time
b. the temperature stays here until enough energy has been added to change all of the water into vapor (steam)
c. water is turning into vapor (steam) too fast to be measured
d. some water energy is still locked in a crystal lattice

_____ 10. What is it called when a solid turns directly into a gas?

a. sublimation
b. vaporization
c. melting
d. fusion

_____ 11. What is dry ice made of?

a. helium
b. hydrogen
c. air
d. carbon dioxide

Practice: 10 points, Assessment: 4 points

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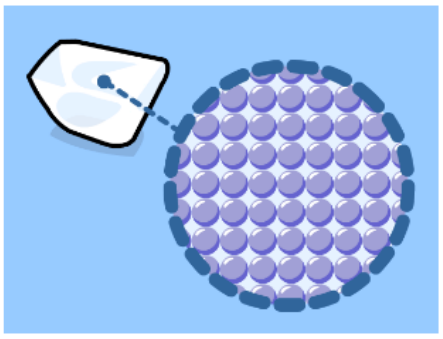
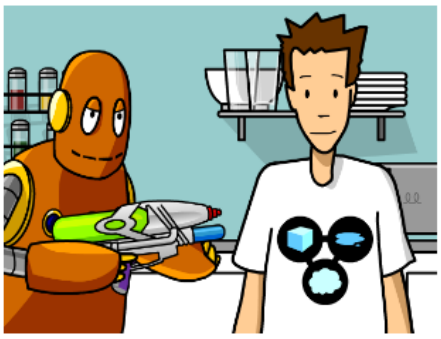
Add the correct missing words to each sentence below. Use words from the word bank.

boiling gas lattice liquid matter melting randomly solid

1. _____ is anything that has mass and takes up space.
2. The three basic states of matter are _____ , _____ , and _____ .
3. Bonded water molecules form a _____ structure.
4. The temperature at which a solid melts into a liquid is its _____ point.
5. Gas molecules have more energy than liquid molecules and bounce around _____ .
6. The temperature at which a liquid turns into a gas is the _____ point.





Why does energy need to be added to change matter from solid to liquid, or from liquid to gas?

Why does energy need to be removed to change matter from liquid to solid, or from gas to liquid?

Practice: 10 points, Assessment: 4 points