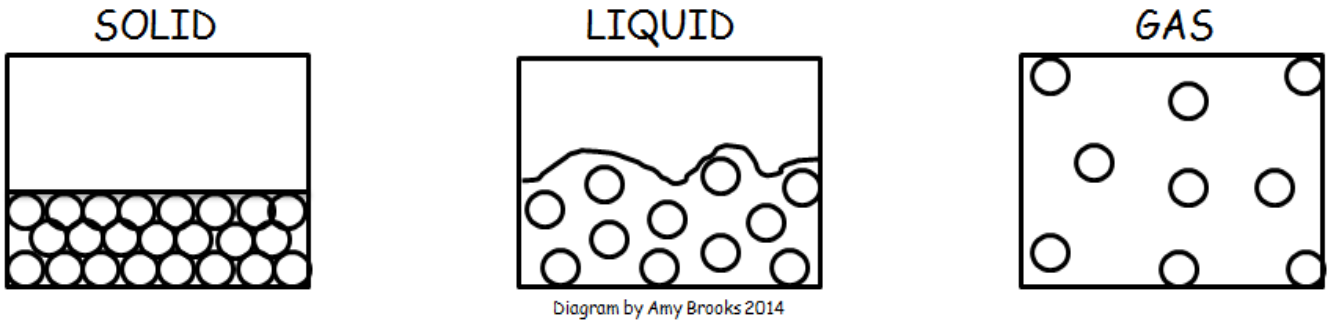
Name _____ Date _____

States of Matter



Matter is all around us. Everything that you can touch, taste, smell, and see is made of matter. There are three states of matter: solid, liquid, and gas.

Solid matter has its own shape. This is because the tiny molecules that make up solids are very close together, and they do not move very much. Solid matter can be big, small, round, square, or any shape you can imagine. Ice, a cup, apples, paper, and windows are all solids. The shapes of solids do not change unless something makes them change. For example, you can cut solid paper or break a solid cup.

Liquid matter does not have its own shape. The tiny molecules in liquids are not as close together as they are in solids, and they can move around more. Water, glue, milk, gasoline, and juice are all liquids. Liquid matter takes the shape of the container that it is in. For example, the shape of milk looks like the shape of the glass that you pour it in. Liquids can pour, drip, flow, and splash.

Gas matter, like liquid, does not have its own shape. The tiny molecules in gases are far apart, and they move a lot. Steam, exhaust from the car, oxygen, carbon dioxide, and helium are all gases. Gases spread out and fill up their container. For example, when someone blows up a balloon, the carbon dioxide in their breath spreads out inside the balloon to make the balloon get bigger.

Sometimes matter can change from one state to another if the matter is heated or cooled. For example, liquid water can turn into solid ice when cooled. Liquid water can also be turned into steam when heated.

Name _____ Date _____

Questions

1. Where can you find matter? _____

2. What are the three states of matter? _____

_____

3. How is the shape of solid matter different from the shape of liquids and gases?

_____

4. Explain why the shape of solid matter cannot change on its own.

_____

5. Give two examples of solids _____

6. How do the shapes of liquids change? _____

7. Explain why liquids can change shape.

_____

8. Give two examples of liquids. _____

9. What other state of matter is similar to liquids? _____ What makes them similar?

_____

10. Explain why a balloon gets bigger when you blow into it.

_____

11. How can matter change from a liquid to a gas?

_____

12. How can matter change from a liquid to a solid?

_____

Name _____ Date _____

Questions (Answer Key)

1. Where can you find matter? Everywhere, in everything, all around us

2. What are the three states of matter? Solid, liquid, gas

3. How is the shape of solid matter different from the shape of liquids and gases?

Solids have their own shapes.

4. Explain why the shape of solid matter cannot change on its own.

The molecules are close together and do not move much.

5. Give two examples of solids Answers may vary: ice, cup, apples, paper, windows, etc

6. How do the shapes of liquids change? They take the shape of their containers

7. Explain why liquids can change shape.

The molecules are more spread out and they can move.

8. Give two examples of liquids. Answer may vary: water, glue, milk, gasoline, juice, etc.

9. What other state of matter is similar to liquids? gas What makes them similar?

Neither of them have their own shape.

10. Explain why a balloon gets bigger when you blow into it.

The the molecules in the carbon dioxide gas are spreading out to fill up the balloon.

11. How can matter change from a liquid to a gas?

The liquid can be heated to turn into a gas.

12. How can matter change from a liquid to a solid?

The liquid can be cooled to turn into a solid.

