

From:

[http://www.softschools.com/language\\_arts/reading\\_comprehension/science/49/solids\\_liquids\\_and\\_gases/](http://www.softschools.com/language_arts/reading_comprehension/science/49/solids_liquids_and_gases/)

## **Solids, Liquids, and Gases**

Matter is basically a substance that takes up space. All matter is a solid, liquid, or gas, and they are called the states of matter.

Everywhere a person looks, there are examples of solids: desks, chairs, windows, rocks, tissues, and much more. Examples of liquids: water, milk, juice, chocolate syrup, soda, and others. Examples of gases are harder to see, because they are invisible: the oxygen in the air, propane gas used for a grill, helium inside a balloon, and more.

Everything, all matter, can be identified as a solid, liquid, or gas.

Besides what they look like, there are many differences between solids, liquids, and gases. These differences are called characteristics. The characteristics of each state of matter are different. These characteristics determine if a substance is a solid, liquid, or gas.

A solid has a definite shape. It can be hard or soft, smooth or rough. Solids can come in all sizes. A solid can be large like the Statue of Liberty, or small like a marble. It can be very tiny like a bread crumb, or as big as a mountain, and everything in between. If small enough, solids can be held in a person's hand, and they are difficult to compress or push, or change shape.

The molecules of a solid are compact and close together, and nearly impossible to move through.

A liquid takes the shape of the container it is held in, and will fill the bottom of a container. Liquids usually have a smooth surface, but does not have a specific size. A person may be able to hold a small amount of liquid in their hand, but a liquid cannot be held like a solid. Liquids are less difficult to compress or push. It is much easier to move through a liquid than a solid.

The molecules of a liquid are spread out more than a solid, but less than a gas.

Finally, a gas has no shape, but can fill a container of any size or shape. It will fill an entire container as the molecules move. A gas cannot be felt in the hands like a solid or liquid. It has no surface or no particular size. It cannot be held in a person's hands, and it is easy to push or compress. A gas is the easiest to move through versus a liquid or solid.

The molecules in a gas are more spread out and move all the time. They are full of energy.

Water is the best example of a substance that can be a solid, liquid, or gas. Water by itself is a liquid. When water freezes it becomes a solid. If a container of water is heated it turns into a gas called water vapor.

There are many other substances that can be more than one type of matter, too. Ice cream is a solid until it melts, then it's a liquid. A moth ball is a solid, but it releases a gas that a person can smell across the room.

In summary, the different states of matter are called solids, liquids, and gases. The states of matter have different characteristics and examples of each can be found throughout the universe.

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1) Matter is basically a solid, liquid, or gas that takes up:

A: Time

C: Energy

B: Space

D: Heat

2) Oxygen, helium, and propane are examples of a

A: Solid

C: Gas

B: Liquid

D: Mineral

3) Which of the following states of matter has a definite shape?

A: Solid

C: Gas

B: Liquid

D: None of the above

4) Which of the following states of matter takes on the shape of the container?

A: Solid

C: Gas

B: Liquid

D: All of the above

5) Which of the following states of matter has no surface or particular size?

A: Solid

C: Gas

B: Liquid

D: Both b and c

6) Which of the following describes the molecules in a solid?

A: The molecules are spread out and have lots of energy.

B: The molecules are spread out some, but less than a gas.

C: The molecules can easily be moved through.

D: The molecules are compact and close together.