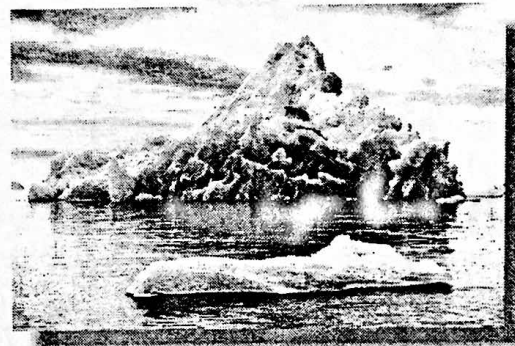


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Three States of Matter

You may know that most materials can take three different forms called **solid**, **liquid**, and **gas**. These forms are known as the three **states of matter**. We are most familiar with the three states of water. Solid water is ice; we drink liquid water; and water as a gas is called steam or water vapor. Some people think fog and clouds are gas, but they are actually very small drops of liquid water.



Each state of matter has its own **properties**:

Solids have a fixed **shape** and a fixed **volume**. This means that a solid's shape and volume always stay the same.

Liquids do not have a fixed shape; they take the shape of their container. Liquids do have a fixed volume.

Gases take the shape of their container, and they completely fill their container. So gases do not have a fixed shape or a fixed volume.

Show the properties of the three states of matter by writing YES or NO in each box of the table below.

State of Matter	Does it have a fixed shape?	Does it have a fixed volume?
Solid		
Liquid		
Gas		



But why are there different states of matter? What makes a material change from one state to another? We can answer these questions by looking at the behavior of the **particles** in each state. Remember that all matter is made up of very small particles called atoms and molecules.