

## Forms of Matter

**Cross-Curricular Focus: Physical Science**



Everything around you is made of **matter**. Scientists group matter based on its properties, or characteristics: what it looks like and how it acts in different situations. Matter can take three different **forms**. The three forms are solid, liquid, and gas.

Solid matter has a definite shape. It also takes up a definite amount of space. This means it has a specific volume. If you could look at solid matter under a very powerful microscope, you would see its tiny particles moving back and forth. The particles are packed together, so they vibrate in place. Their overall shape does not change.

Liquid matter takes the shape of its container. When liquid is in a cup, it is shaped like the cup. When the liquid is in a vase, it is shaped like the vase. The volume of the liquid stays the same. If you were to look at liquid matter under the microscope, you would see its tiny particles sliding past each other. Because of this unique sliding movement, the liquid is able to change its shape so we can pour it.

In the form of a gas, matter is usually invisible. The air around us has several different gases, like the oxygen we breathe in and the carbon dioxide we breathe out. If you could look at gas matter under the microscope, you would see its tiny particles floating around with lots of space in between them. They spread out to fill any container the gas is placed in.

Name: \_\_\_\_\_

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What does the word properties mean in the first paragraph?

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2) What are the three forms that matter can take?

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3) What does the word vibrate mean in the second paragraph?

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4) What is one difference between a solid and a liquid?

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5) Are the tiny particles closer together in a solid, a liquid, or a gas?

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