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## **States of Matter Webquest**

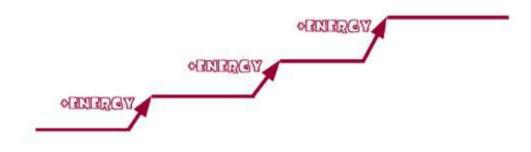
http://teach.fcps.net/trt8/Weaver/states\_of\_matter\_webquest.htm

\_\_\_\_\_\_, \_\_\_\_\_

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Part I

- 1. List the four states of matter:
- 2. Place the four main states of matter on the diagram below.



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3. If a substance changes form one phase to another, is it still the same substance? YES NO

Scroll up and click on the SOLID link on the left hand side.

4. One of the main characteristics of a solid is that they \_\_\_\_\_

5. Are the atoms in a solid allowed to move around much? YES NO

6. In the box below, draw what the atoms in a solid look like.



7. One characteristic of a liquid is that it fi	
8. Atoms in a liquid have ener	
way to change a solid to a liquid is to ac	ld When changing from a
solid to a liquid, there is a magic temper	rature for every substance called the
9. To change a gas to a liquid, you will ne	
The	is the temperature when
the gas becomes a liquid.	
10. Sometimes a liquid can be sitting there	e and its molecules will become a gas.
That's called	
Scroll back up and click on the GAS link o	on the left hand side.
11. Gases are really	and the atoms and molecules are
full of, t	ouncing around constantly.
12. One of the physical characteristics is the	hat a gas can
Return to the States of Matter WebQuest.	
1. Click on Gas	
Describe what you see in the beaker. (th	ne purple thing)
Describe what you see in the chamber (	the big round thing)

What does the description say about the amount of space between gas molecules?

2.	Click	on	Liquid	,
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Describe what you see in the beaker. (the purple thing)

Describe what you see in the chamber (the big round thing)

What does the description say about the arrangement of the particles?

3. Click on Solid

Describe what you see in the beaker. (the purple thing)

Describe what you see in the chamber (the big round thing)

What does the description say about how the particles are arranged?

Return to the States of Matter WebQuest. (keep clicking on the Back button)

## Part III

1. Particles in a gas are well \_\_\_\_\_\_ with \_\_\_\_\_ regular arrangement.

Particles in a liquid are \_\_\_\_\_\_ with \_\_\_\_\_ regular arrangement.

Particles in a solid are	, usually in a regular pattern.
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2. Particles in a gas \_\_\_\_\_\_ and move \_\_\_\_\_\_ at high speeds.

Particles in a liquid \_\_\_\_\_, move about, and \_\_\_\_\_

Particles in a solid \_\_\_\_\_(jiggle) but generally do not \_\_\_\_\_

3. \_\_\_\_\_\_ and \_\_\_\_\_ are often referred to as *condensed phases* because the particles are

4. Use the chart to identify the state of matter described by the following. Many of these have more than one answer! (Use S, L or G in the spaces.)

\_\_\_\_ Not easily compressible

\_\_\_\_\_ Rigid – particles locked into place

\_\_\_\_\_ flows easily

\_\_\_\_ Compressible

- \_\_\_\_\_ lots of free space between particles
- \_\_\_\_\_ does not flow easily
- \_\_\_\_\_ assumes the shape of the part of the container which it occupies
- \_\_\_\_\_ Particles can move past one another
- \_\_\_\_\_ retains a fixed volume and shape
- \_\_\_\_\_assumes the shape and volume of its container

.

little free space between particles

Go to the following website: http://www.chem4kids.com/files/matter\_intro.html

1. \_\_\_\_\_\_ is everything around you. Matter is anything made of

\_\_\_\_\_. Matter is anything that has \_\_\_\_\_\_

- 2. What is matter related to?
- 3. How many physical states of matter are there?
- **4.** List the states of matter below:
- 5. Describe the molecules of BEC.

6. \_\_\_\_\_ can move from \_\_\_\_\_\_ to another and not change their \_\_\_\_\_\_.

7. What is a water molecule made of?

 8. A \_\_\_\_\_\_\_ happens when the \_\_\_\_\_\_ are moved around or when \_\_\_\_\_\_. Chemical changes happen when bonds between \_\_\_\_\_\_.