

Name _____

States of Matter Webquest

http://teach.fcps.net/trt8/Weaver/states_of_matter_webquest.htm

Part I

1. List the four states of matter:

_____, _____, _____, _____

2. Place the four main states of matter on the diagram below.



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.



Scroll back up and click on the LIQUID link on the left hand side

7. One characteristic of a liquid is that it fills _____
_____.
8. Atoms in a liquid have _____ energy than atoms in a solid, so the easiest way to change a solid to a liquid is to add _____. When changing from a solid to a liquid, there is a magic temperature for every substance called the _____.
9. To change a gas to a liquid, you will need to lower _____.
The _____ is the temperature when the gas becomes a liquid.
10. Sometimes a liquid can be sitting there and its molecules will become a gas.
That's called _____.

Scroll back up and click on the GAS link on the left hand side.

11. Gases are really _____ and the atoms and molecules are full of _____, bouncing around constantly.
12. One of the physical characteristics is that a gas can _____
_____.

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

Part II

1. Click on Gas

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 amount of space between gas molecules? _____

2. Click on Liquid.

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?

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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.

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 _____.