

# It Really Does Matter Worksheet

1. List the three basic parts of an atom, *along with their charges*.

a.

b.

c.

2. Define molecule. *Give three examples of specific molecules.*

Definition -

a.

b.

c.

3. Identify two problems with our model of the atom.

a.

b.

4. Explain what the following people did to expand our knowledge about atoms.

a. Democritus -

b. John Dalton -

c. Sir J. Joseph Thomson -

d. Niels Bohr -

e. James Chadwick -

f. Werner Heisenberg -

g. Ernest Rutherford -

5. Define matter.

6. List the three states (phases) of matter.

a.

b.

c.

7. List two properties of a solid.

a.

b.

8. List two properties of a liquid.

a.

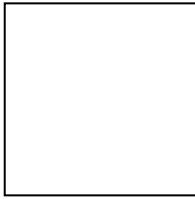
b.

9. List two properties of a gas.

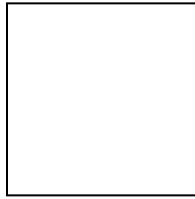
a.

b.

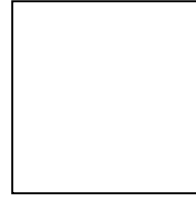
10. In the boxes below, *draw a picture showing the particles* in a solid, liquid, and gas.



Solid



Liquid



Gas

11. Describe the motion of the particles in a solid, liquid, and gas.

a. Solid -

b. Liquid -

c. Gas -

13. Describe what happens to the motion of the particles in a block of ice as it melts and boils.

a. Motion of particles as it begins to melt -

b. Motion of particles when it finishes melting -

c. Motion of particles as it begins to boil -

d. Motion of particles when it is boiling -

14. Define diffusion.

15. Give three examples of diffusion that occur in our school.

a.

b.

c.

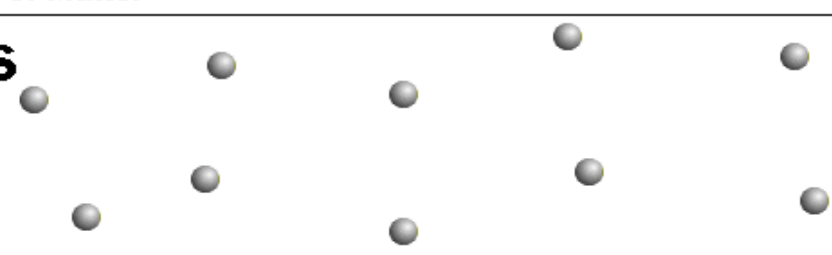


16. Complete the chart.

**Phases of Matter**

Temperature or Energy

## Gas




The gaseous phase of water is called \_\_\_\_\_

Another example of a gas is \_\_\_\_\_

When a gas cools and condenses, it becomes a \_\_\_\_\_

## Liquid



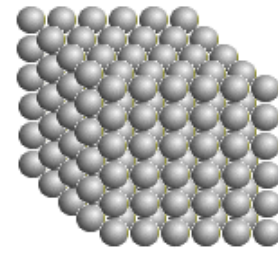
The liquid phase of water is called \_\_\_\_\_

Another example of a liquid is \_\_\_\_\_

When you heat a liquid and it changes phase, it becomes a \_\_\_\_\_

When you cool a liquid and it changes phase, it becomes a \_\_\_\_\_

## Solid



The solid phase of water is called \_\_\_\_\_

Another example of a solid is \_\_\_\_\_

When you heat a solid and it melts, it becomes a \_\_\_\_\_