Glue this side down into your science notebook.

Draw molecules for each state of matter. Use a different color for each state.
Gases and liquids are two of the __________ main states of matter. The third is solids. Matter is anything that takes up __________. It’s the material that all the stuff in the universe is made of. All physical matter is composed of tiny particles called __________. These atoms behave differently depending on the __________ and pressure of their environment. (Zoom into glass of water.) Water is made up of tiny particles called ___________. Each water molecule is made up of two hydrogen atoms and one __________ atom.

At room temperature, and in normal atmospheric pressure, these molecules form a ___________. The particles within a liquid are pretty close together, but they are not arranged in any kind of rigid ___________. They move around and slide past each other pretty regularly. Liquids have a fixed __________ but not a fixed ___________. If you put liquid in a glass, it will take the shape of the glass. If you put it in a water gun, it will take the shape of the water gun.

If we raise the temperature of the water, for example __________ it, it will change state and become a gas. When you increase the temperature of the water, you are adding __________ to it. The particles get excited—they start moving around a lot __________ and get farther and farther away from one another. The changes in state are only ____________—the chemical structure stays the same. The particles are still water molecules made up of oxygen and hydrogen. Unlike liquids, gasses don’t have a fixed ___________. They have a tendency to expand, which means they’ll fill up any container you put them in.

You are probably already familiar with solid water, we call it __________! When you lower the temperature of water, you are removing ___________. As a result, the particles do not move around much. They are still made of hydrogen and oxygen— but now they are locked into a pretty rigid structure. Solids have a definite __________ and a definite volume. Under normal conditions, they look pretty much the same, no matter what container you put them in. The main states of matter are not just for water, all __________ can be a solid, liquid, or gas.

Another state of matter is called ____________, its an electrically charged gas. Every star in the sky, including the sun, is made up of plasma. So is lightning. Fluorescent light bulbs in your classroom are filled with plasma.

__________ are mixtures that contain two separate phases of matter. Butter, gelatin, and paint are all colloids.