PHASES OF MATTER & PHASE CHANGES

1. What is a solid?
2. Describe how the particles are arranged in the solid phase.
3. Here is how the particles look in the SOLID PHASE



1. What is a liquid?
2. Describe how the particles are arranged in the liquid phase.
3. Here’s how the particles look in the LIQUID PHASE



1. What is a gas?
2. Describe how the particles are arranged in the gas phase.
3. Here’s how the particles look in the GAS PHASE.



1. What is the kinetic theory of matter?

*Phase Changes Questions: Fill in the blanks for the following sentences on each phase change.*

1. The phase change when a **SOLID** turning into a **LIQUID** is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) As a substance goes from the solid phase to the liquid phase the speed of the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) During this phase change, energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The phase change when a **LIQUID** turning into a **SOLID** is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) As a substance goes from the liquid phase to the solid phase the speed of the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) During this phase change, energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The phase change when a **LIQUID** turning into a **GAS** is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) As a substance goes from the liquid phase to the gas phase the speed of the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) There are two types of vaporization, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ happens at the surface of the liquid. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_happens throughout the entire liquid when a substance reaches its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. The phase change when a **GAS** turning into a **LIQUID** is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) As a substance goes from the gas phase to the liquid phase the speed of the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) During this phase change, energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. The phase change when a **SOLID** turning into a **GAS** is called (without going to the liquid phase) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) As a substance goes from the solid phase to the gas phase the speed of the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) During this phase change, energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. The phase change when a **GAS** turning into a S**OLID** is called (without going to the liquid phase) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. During this phase change, temperature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) As a substance goes from the gas phase to the solid phase the speed of the particles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (increase/decrease/remains the same) During this phase change, energy is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.