**Guided Reading 8.3 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Per:\_\_\_**

**Integrated Science – Matter**

1. What are the “phases of matter?”
2. Draw a molecular diagram of a solid, liquid, and gas, describing each.
3. What are intermolecular forces?
4. A “competition” always exists between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and intermolecular forces.
5. Different substances have different melting points because the intermolecular forces \_\_\_\_\_\_\_\_\_\_\_.
   1. Exist
   2. Vary
   3. Increase
   4. Decrease
6. Why does the graph in figure 8.14 show a flat line during the phase change?
7. When a solid changes directly to a gas it is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   1. Condensation
   2. Evaporation
   3. Sublimation
   4. Freezing
8. At what temperature does matter break apart and change into plasma?
9. Man-made plasma is created when an electrical current is passed through a \_\_\_\_\_\_\_\_like \_\_\_\_\_\_\_\_\_\_\_.
10. Complete the following table to demonstrate your knowledge of the different phases of matter.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase** | **Energy** | **Characteristics** | **Temperature** | **Intermolecular**  **Forces** |
| Solid |  | Holds shape and  doesn’t flow |  | Strongest |
|  | Molecules move around |  |  |  |
| Gas |  |  | High | Weak |
|  | Atoms break apart |  | Highest |  |