Heating Curves

* Shows how the temperature of a substance changes when heat is applied
* Plateaus occur when the phase/state is changing. Heat is being added, but temperature does not change
* Pure substances melt and boil at a constant temperature, but mixtures melt and boil over a range of temperatures
* Depending on their state, molecules/atoms have different types of motion available to them.

Phase Changes and Energy

Liquid

Solid Gas

**Movement of particles**

* Kinetic molecular theory says that all particles are always in motion
* The higher the temperature, the faster the particles are moving
* The degree of motion (freedom to move) depends on the phase/state

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| --- | --- | --- |
| **Phase** | **Type of motion** | **Diagram** |
| Solid |  |  |
| Liquid |  |  |
| Gas |  |  |