

Vocabulary: Phases of Matter

- Gas – a phase in which matter has no definite shape or volume.
 - A gas will expand to fill any container. A gas can also be compressed.
 - Molecules in a gas are relatively far apart and move freely.
 - Water in the gas phase is called water vapor.
- Kinetic energy – energy of motion.
 - The formula for kinetic energy is $KE = mv^2 \div 2$.
 - Temperature is proportional to the average kinetic energy of particles making up a substance.
- Liquid – a phase in which matter has definite volume but no definite shape.
 - A liquid will take the shape of a container but cannot expand or be compressed.
 - Molecules in a liquid move randomly but stay close to one another.
- Solid – a phase in which matter has a definite shape and a definite volume.
 - A solid will retain the same shape and volume in any container.
 - Atoms in a solid are held in a rigid structure and cannot move freely.
 - Water in the solid phase is called ice.