

Properties of Matter
Assessed Understandings
7th Grade

1. The increase or decrease of energy can affect the arrangement of particles in matter to cause a change in volume, density, and or phase of matter.
2. Matter can be divided into substances and mixtures. Mixtures can be heterogeneous or homogenous and can be separated into their component substances by physical means. Substances are pure and cannot be separated by physical means.
3. Physical and characteristic properties are used to distinguish and separate one substance or material from another.
4. Solids, liquids, and gases all have mass, volume, and density each of which can be measured or calculated.
5. The rate of solubility is affected by the increase or decrease of energy applied to the system (heating/cooling, stirring, as well as the surface area of the solute). When a solute no longer dissolves in a solvent, saturation has occurred.
6. When a solute dissolves in a solvent, the dissolved solute does not disappear but is added to the mass of the solvent. This is conservation of matter.
7. Selection of a material is based on the properties and the function for which it will be used.