Pre-AP Chemistry/Chemistry/AP Chemistry
Unit #3—Matter

Properties and Changes

<table>
<tr>
<th>Physical Properties</th>
<th>Chemical Properties</th>
</tr>
<tr>
<td>Properties that can be measured without changing the composition of a substance.

Qualitative Properties
Touch
Smell
Sight
Taste
Hear

Quantitative Properties
Mass
Density
Length
Area
Velocity
Acceleration
Volume</td>
<td>Properties that describe a substance's composition and its reactivity; how the substance reacts or changes into other substances.

Reactivity
Oxidation State
Conductivity
Electronegativity
Toxicity
Flammability
Type of Bond
Enthalpy
Malleability
Ductility</td>
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<table>
<tr>
<th>Intensive Properties</th>
<th>Extensive Properties</th>
</tr>
<tr>
<td>Properties that are independent of the amount of material considered.

Temperature
Density
Specific Gravity
Specific Heat Capacity
Hardness
Melting and Boiling Point</td>
<td>Properties that depend on the amount of material considered.

Mass
Volume
Entropy
Enthalpy
Energy</td>
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</table>

<table>
<tr>
<th>Physical Changes</th>
<th>Chemical Changes</th>
</tr>
<tr>
<td>Changes that occur with no change in chemical composition.

Melting
Freezing
Boiling
Cutting
Tearing
Breaking
Shattering</td>
<td>Processes in which one or more substances are converted into other substances. These processes are considered a chemical reaction.

Oxidizing
Burning
Rusting
Decomposing
Synthesizing
Reducing
Corroding</td>
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</table>