Name: _____ Group: _____ Date: _____

CONCEPT REVIEW 17

Chemical changes

ST

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Complete this Concept Review so you can keep a record of what you have learned.

Chemical change

Chemical change	Description or definition
Synthesis	*Combination of two or more reactants to form a new product* Generic formula: *$A + B \rightarrow AB$*
Decomposition	*Separation of a compound into two or more compounds or elements* Generic formula: *$B \rightarrow A + B$*
Precipitation	*Formation of an insoluble, or only slightly soluble, solid substance, precipitate, when two solutions are combined.*
Acid-base neutralization	*Reaction of an acid with a base to form a salt and water* Generic formula: *$acid_{(aq)} + base_{(aq)} \rightarrow salt_{(aq)} + water_{(l)}$*
Oxidation	*Chemical change involving oxygen or a substance with properties similar to those of oxygen*
Combustion	*Form of oxidation that releases a large amount of energy.*
Cellular respiration	*Chemical change in which glucose and oxygen are used to generate energy. The reaction also produces carbon dioxide and water.*
Photosynthesis	*Chemical change that produces glucose and oxygen from solar energy, carbon dioxide and water.*

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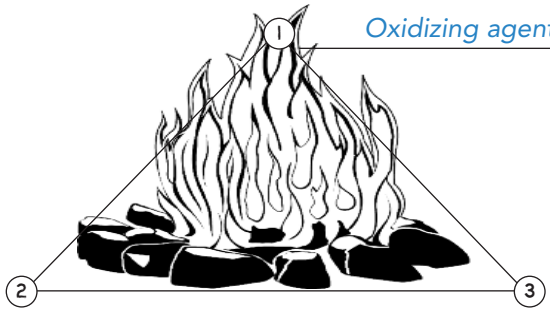
Types of combustion and characteristics

Type of combustion	Characteristic
Rapid combustion	Releases a great deal of energy within a short period of time.
Spontaneous combustion	*Rapid combustion in which the fuel reaches its ignition temperature without any energy from an outside source.*
Slow combustion	*Combustion that occurs over a very long period of time.*

Conditions necessary for combustion



1. *Oxidizing agent*
2. *Fuel*
3. *Ignition temperature*

Cellular respiration and photosynthesis