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| **Chemical Property** | **Physical Property** |
| Magnesium can react with hydrochloric acid to produce hydrogen gas | Water boils at 100.000oC |
| Iron rusts easily | Water freezes at 0.000oC |
| Copper reacts with oxygen to form a pretty green patina (as seen on the Statue of Liberty) | Nitrogen boils at -195.8oC |
| Water can decompose into hydrogen gas and oxygen gas | Sodium chloride freezes at 1,474oC |
| Helium is inert (it cannot react) | Graphite, a form of carbon, can conduct  electricity |
| Neon is inert (it cannot react) | Aluminum can conduct electricity |
| Oxygen supports combustion | Methane, CH4, is a gas at room temperature |
| Methane, natural gas, is highly combustible | Butane, C4H10, is a liquid at room temperature |
| Stomach acid can be neutralized by tums, an antacid | Silver has a density of 10.5 g/cm3 |
| Water can decompose into hydrogen and oxygen | Gold has a density of 19.3 g/cm3 |
| Sodium metal is explosive upon contact with water | Water has a density of 1.0 g/mL |
| Hydrogen peroxide can decompose into water and oxygen gas easily | Water is colorless and odorless |
| Zinc is very reactive with oxygen | Oil floats on water |
| An apple turns brown not long after it is cut | Copper (II) sulfate is blue |
| Francium is the most reactive element on the periodic table | Magnesium has luster |
| Hydrogen gas is highly flammable | Nitrogen gas is colorless and odorless |
| Describes how a material can react with another material | Aluminum is malleable |
| Chlorine gas is highly reactive | A piece of aluminum weighs 35.0 g |
| Aluminum can react with copper (II) chloride solution to produce copper | A sample of water has a volume of 25.2 mL |
| Paper can burn | Sulfur dioxide, SO2, smells like rotten eggs |
| Copper (II) chloride can be decomposed into copper metal and chlorine gas | Oil is immiscible in water |
| Stainless steel does not rust easily | Copper (II) chloride can dissolve in water |
| Describes how a substance can change into a new substance | Can be observed without altering the identity of the substance |

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| **Chemical Change** | **Physical Change** |
| Burning paper | Ice melting |
| Fireworks | Liquid water freezing |
| Iron rusting | Copper (II) chloride dissolving in water |
| Aluminum reacting with copper (II) chloride solution | Sugar dissolving in tea |
| Sodium metal reacting with chlorine gas to produce salt | Shredding paper |
| Photosynthesis:  6 CO2 + 6 H2O 🡪 C6H12O6 + 6 O2 | H2O (l) 🡪 H2O (g) |
| Respiration:  C6H12O6 + 6 O2 🡪 6 CO2 + 6 H2O | Slicing cheese |
| Burning magnesium | Tearing off a piece of magnesium ribbon |
| Dehydrating sugar into carbon and water | Forming wire out of copper |
| May have indicators such as energy released, precipitate formation, bubbles produced, color change, or production of an odor |  |
| A dead deer decaying on the side of Moore Road | Cutting a diamond to make a pretty shape for a ring |
| Grass growing | Mixing cream into your coffee |
| Boiling an egg | Putting ice into your (VERY) sweet tea from Chick-fil-A |
| Baking a cake | Dry Ice (frozen CO2) subliming |
|  | Vaporizing liquid nitrogen |
| Makes a product that is new, with new properties | Does not change the identity of the substance |