**Classifying Matter: Properties, Changes and the Periodic Table   
Learning Targets**

**(Book pages: 42-51, 102-104, 114-119)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Target** | **With Help** | **On My Own** | **Teach It** |
| 1. I can differentiate between physical and chemical properties and can label them correctly when given examples. |  |  |  |
| 1. I can differentiate between physical and chemical changes and can label them correctly when given examples. |  |  |  |
| 1. I know the four identifiers or evidence that a chemical change has occurred and can give examples of each. |  |  |  |
| 1. I can find an element’s symbol on the periodic table and can write it correctly. |  |  |  |
| 1. I can describe the difference between an element’s symbol and a compound’s formula. |  |  |  |
| 1. I can explain the general properties of metals. |  |  |  |
| 1. I can explain the general properties of metalloids (semi-metals.) |  |  |  |
| 1. I can explain the general properties of nonmetals. |  |  |  |
| 1. I can identify where metals, nonmetals and metalloids are located on the periodic table. |  |  |  |
| 1. I can use the physical property of density to identify an unknown element. |  |  |  |

**Make and study flashcards for these vocabulary terms. Some page numbers are in parentheses for you to use.**

|  |  |  |  |
| --- | --- | --- | --- |
| Matter (42) | Viscosity | Nonmetal (114) | Insulator |
| Atom (42) | Metal (103) | Metalloid (118) | Precipitate (68) |
| Element (44) | Luster (104) | Semi-metal | Chemical Reaction |
| Molecule (44) | Ductility (104) | Semiconductor (118) | Density (89) |
| Compound (45) | Malleability (104) | Conductor | Chemical Symbol |
| Physical Property (88) | Chemical Property(91) | Physical Change (65) | Chemical Change(67) |

**\*Conductor** – a substance that allows heat or electricity to pass through it; conductivity is a

physical property of metals  
**\*Insulator** – a substance that does not allow heat or electricity to pass through it; a physical

property of non-metals  
\***Semi-metal**– another term for metalloid

**Target 1 and Target 2  
  
Properties: Identify each as PP or CP**

\_\_\_\_\_\_Vinegar can react with baking soda to make Carbon Dioxide (CO2)

\_\_\_\_\_\_Talc is the softest substance on the Moh’s Hardness Scale.

\_\_\_\_\_\_The freezing point of water is 0oC.

\_\_\_\_\_\_Iron has the ability to react with Oxygen and water to form Iron Oxide.

**Changes: Identify each as PC or CC**

\_\_\_\_\_\_Water is broken down to Hydrogen and Oxygen gas during electrolysis.

\_\_\_\_\_\_Water evaporates.

\_\_\_\_\_\_Sugar dissolving in water.

\_\_\_\_\_\_A hamburger patty cooks on a grill.

**Target 3**

|  |  |  |
| --- | --- | --- |
| **Identifier/Evidence** | **Example** | **Non-Example** |
| 1. |  |  |
| 2. |  |  |
| 3. |  |  |
| 4. |  |  |

**Target 4: \_\_\_\_Calcium \_\_\_\_Carbon \_\_\_\_Sodium \_\_\_\_Mercury**

**\_\_\_\_Chlorine \_\_\_\_Lead \_\_\_\_Bromine \_\_\_\_Iron**

**Target 5 – 8**

|  |  |  |
| --- | --- | --- |
| **Metals** | **Metalloids** | **Nonmetals** |
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**Target 10**

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| --- | --- |
| **Name** | **Density (g/cm3)** |
| Copper | 8.3-9.0 |
| Gold | 19.8 |
| Aluminum | 2.69 |
| Cedar | .5 |
| Iron | 7.8 |

Calculate the density of the unknown block to identify which element it is.



Mass: 7206.21g

Volume: 2669cm3

\_\_\_\_\_\_\_\_\_\_\_\_

(name of object)