



Metals, Nonmetals and Metalloids

Materials

- Periodic Table (this should be partially complete)

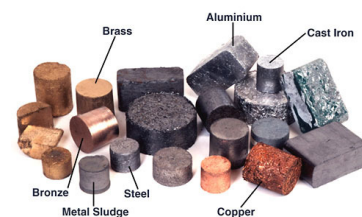
The three major groups on the Periodic Table are the **metals**, **nonmetals** and **metalloids**. Elements within each group have similar **physical** and chemical properties.

Some of the physical properties used to distinguish between the three groups are:

- **Luster** = the ability of a substance to reflect light. Usually the descriptive words are either **metallic or non-metallic**.
- **Conductivity** = the ability of the substance to conduct **electricity**. This may be tested with a conductivity meter
- **Malleability** = the ability of the substance to be **hammered** into sheets without breaking.
- **Ductility** = the ability of the substance to be pulled into a **thin wire**.

Metals are -

- found to the **left** of the zigzag line on the periodic table.
- **solid** at room temperature, except for **mercury**, which is a liquid.
- **good** conductors of electricity and **heat**. But some are better conductors than others!
- metallic looking with a **shiny luster**.
- **ductile** and can be drawn into wire, but some metals are more ductile than others.
- **malleable** and can be hammered into sheets without breaking.



Nonmetals are -

- found to the **right** of the zigzag line on the periodic table.
- **solid, liquid, or gas** at room temperature.
- **poor** conductors of electricity and heat.
- not **metallic** looking. They have a **dull luster** and do not reflect much light.
- **brittle** when they are solid.



Metalloids -

- are found along the **zigzag** line on the periodic table. The only exception is **Aluminum**. It is considered to be a **metal** even though it lies along the zigzag.
- have no set characteristics. They **share properties** of both **metals** and **nonmetals**. For example, they may have a shiny luster but be poor conductors and brittle.
- include **boron, silicon, germanium, arsenic, antimony, tellurium and polonium**

Metals, Nonmetals and Metalloids

The three major groups on the Periodic Table are the _____, _____ and _____. Elements within each group have similar _____ and chemical properties.

Some of the physical properties used to distinguish between the three groups are:

- _____ = the ability of a substance to reflect light. Usually the descriptive words are either _____
- _____ = the ability of the substance to conduct _____. This may be tested with a conductivity meter
- _____ = the ability of the substance to be _____ into sheets without breaking.
- _____ = the ability of the substance to be pulled into a _____.

Metals are –

- found to the _____ of the zigzag line on the periodic table.
- _____ at room temperature, except for _____, which is a liquid.
- _____ conductors of electricity and _____. But some are better conductors than others!
- metallic looking with a _____.
- _____ and can be drawn into wire, but some metals are more ductile than others.
- _____ and can be hammered into sheets without breaking.



Nonmetals are –

- found to the _____ of the zigzag line on the periodic table.
- _____ at room temperature.
- _____ conductors of electricity and heat.
- not _____ looking. They have a _____
_____ and do not reflect much light.
- _____ when they are solid.



Metalloids –

- are found along the _____ line on the periodic table. The only exception is _____ . It is considered to be a _____ even though it lies along the zigzag.
- have no set characteristics. They _____ of both _____ and _____. For example, they may have a shiny luster but be poor conductors and brittle.
- include boron, **silicon**, germanium, arsenic, antimony, tellurium and polonium