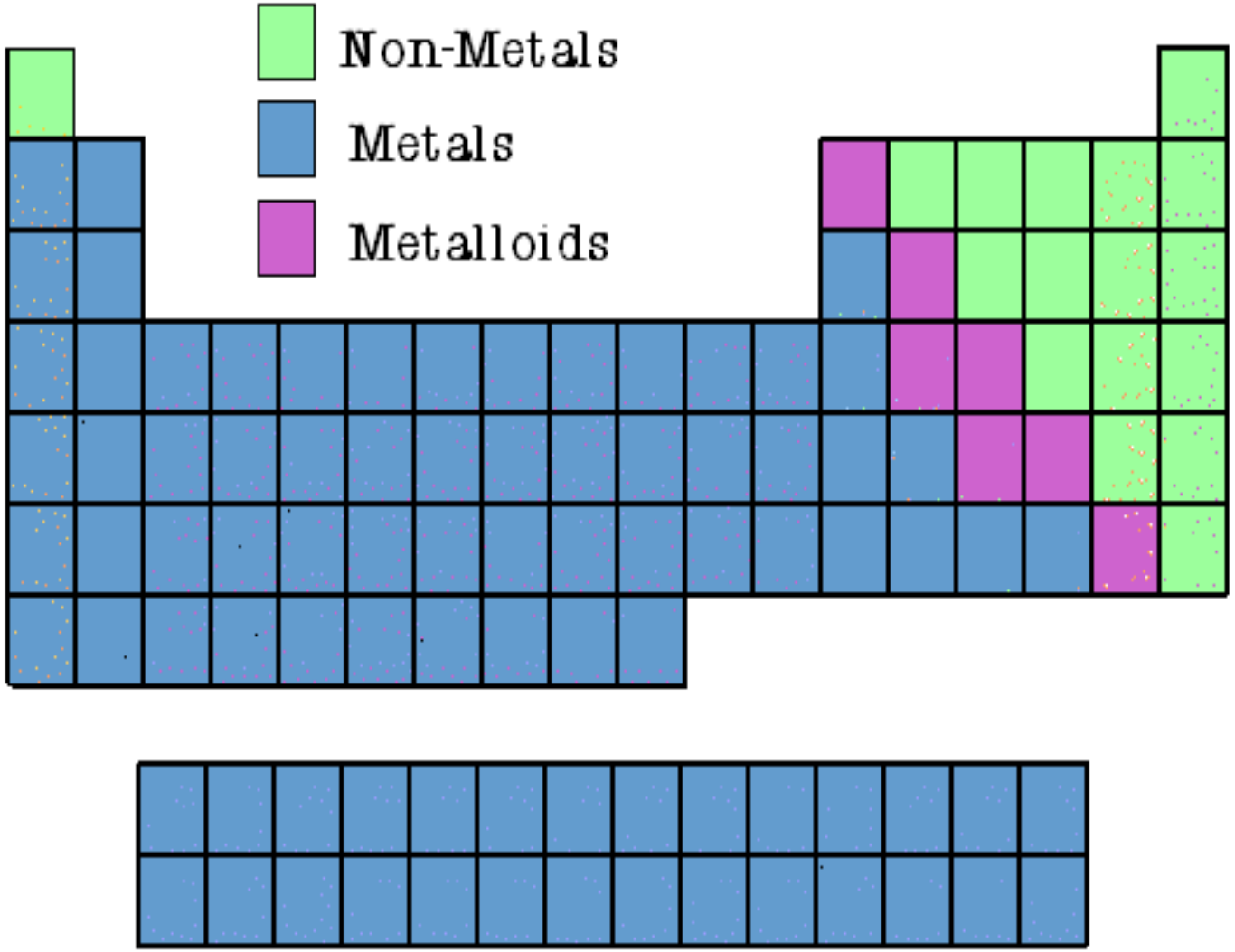
Periodic Table

Metals, Non-metals & Metalloids

Groups and Periods

The elements of the periodic table can be divided into three main categories: Metals, Non-Metals, and Metalloids.



Periodic Table: Metals

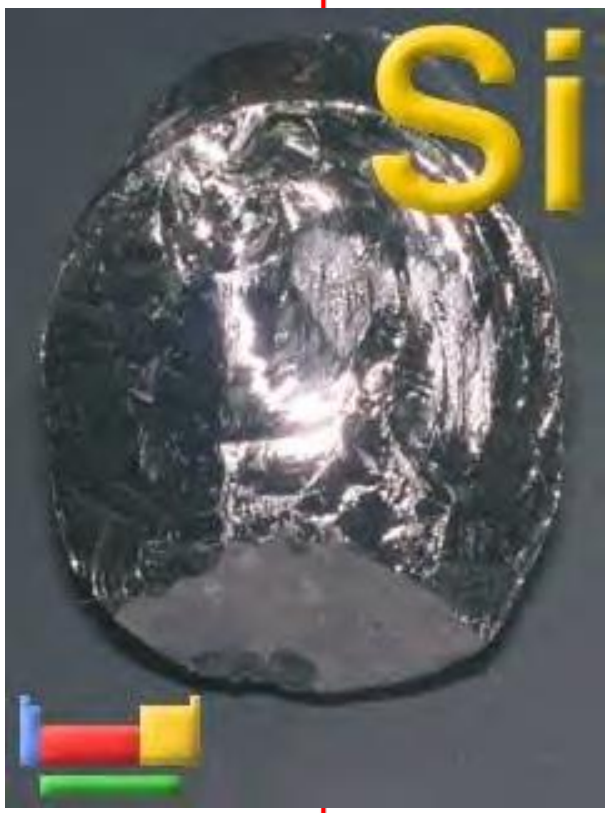
- Metals are good conductors of heat and electricity.
- Metals are shiny.
- Metals are ductile (can be stretched into thin wires).
- Metals are malleable (can be pounded into thin sheets).
- A chemical property of metal is its reaction with water which results in corrosion.

Periodic Table: Non-metals

Sulfur

- Non-metals are poor conductors of heat and electricity.
- Non-metals are not ductile or malleable.
- Solid non-metals are brittle and break easily.
- They are dull.
- Many non-metals are gases.

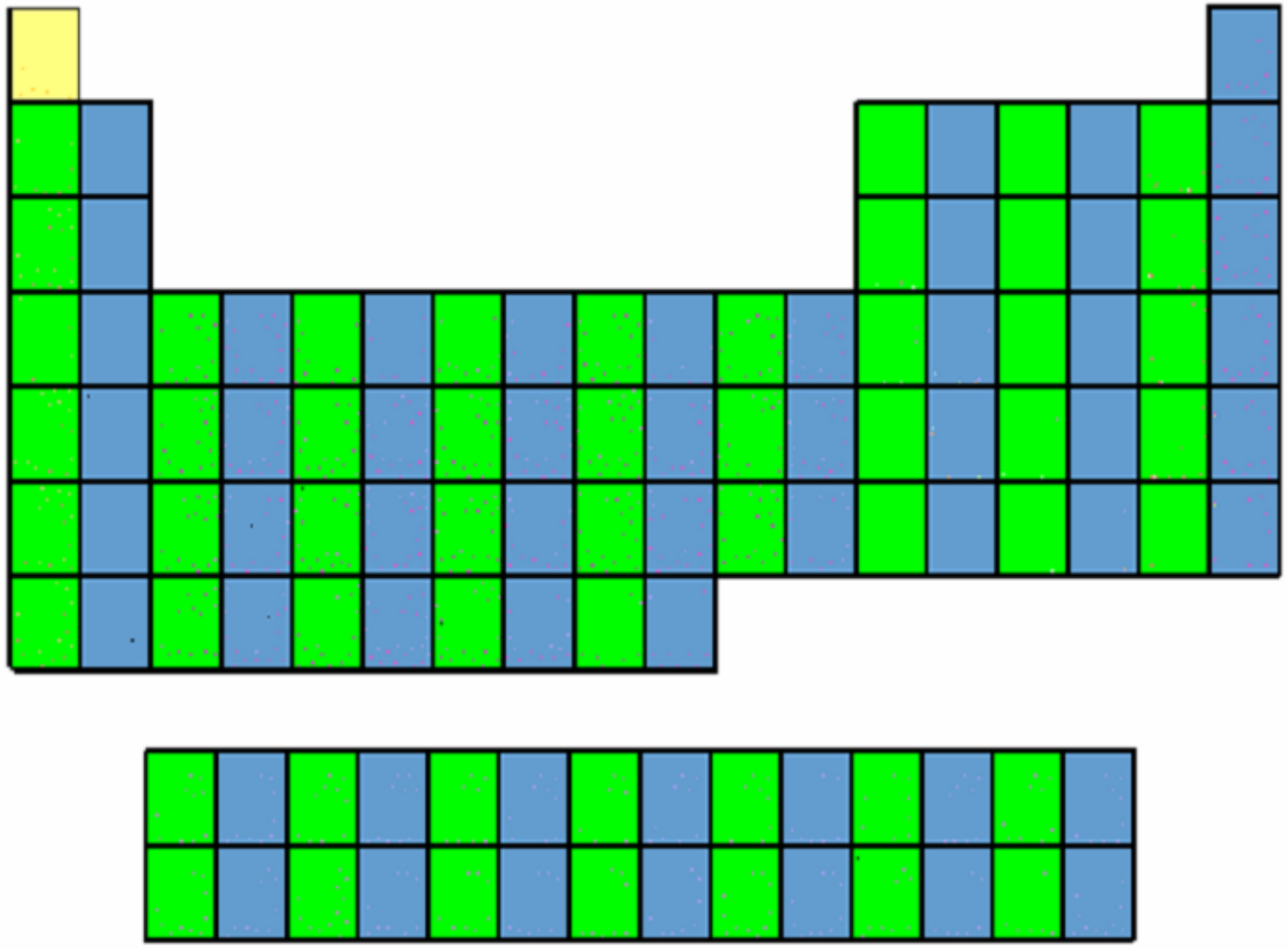
Periodic Table: Metalloids



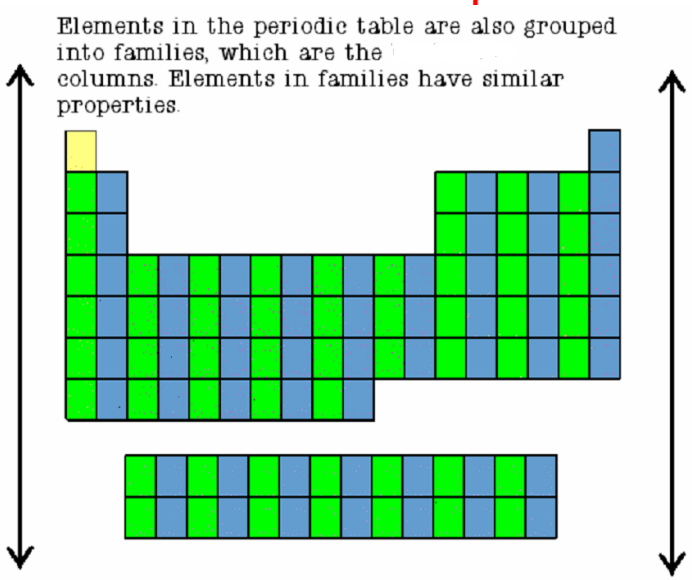
Silicon

- Metalloids (metal-like) have properties of both metals and non-metals.
- They are solids that can be shiny or dull.
- They conduct heat and electricity better than non-metals but not as well as metals.
- They are ductile and malleable.

Elements in the periodic table are also grouped into families, which are the columns. Elements in families have similar properties.

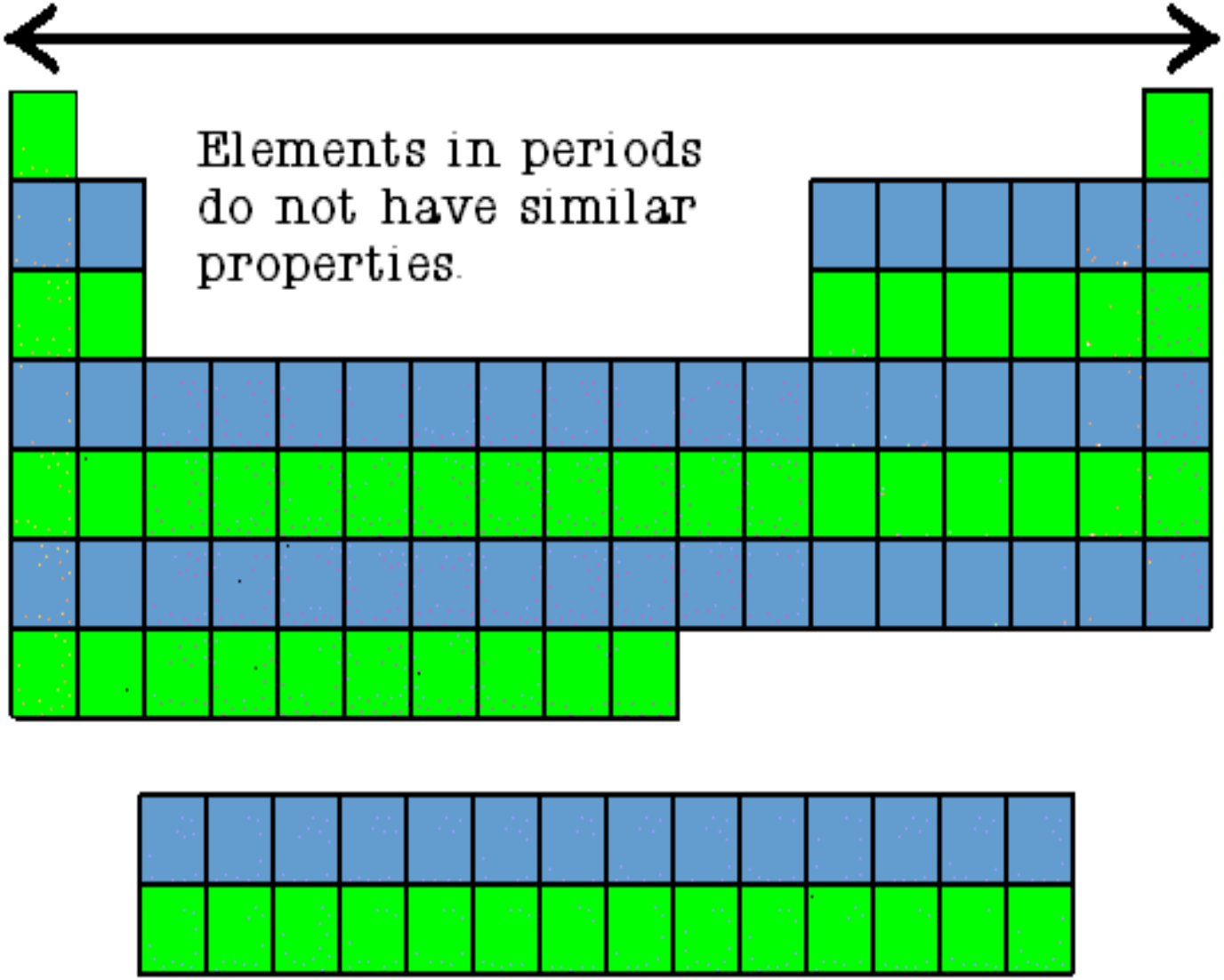


Periodic Table: Family/Group

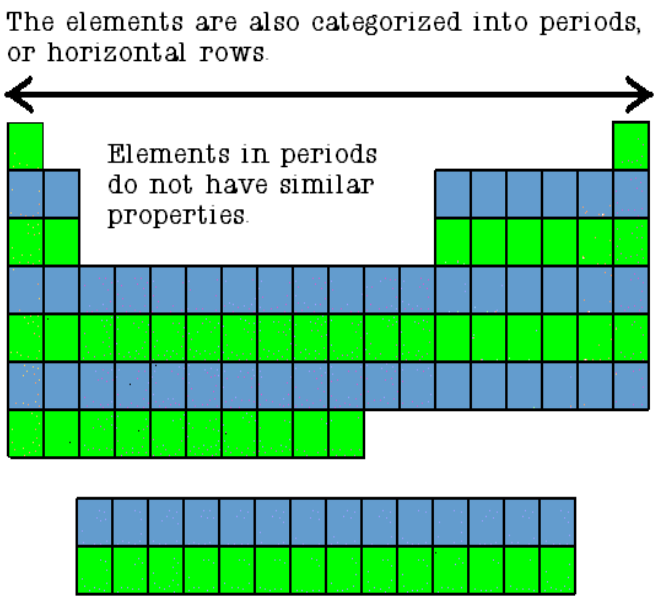


- Columns of elements are called groups or families.
- Elements in each family have similar but not identical properties.
- For example, lithium (Li), sodium (Na), potassium (K), and other members of family IA are all soft, white, shiny metals.

The elements are also categorized into periods, or horizontal rows.



Periodic Table: Period



- Each horizontal row of elements is called a period.
- The elements in a period are not alike in properties.
- In fact, the properties change greatly across even given row.
- The first element in a period is always an extremely active solid. The last element in a period, is always an inactive gas.