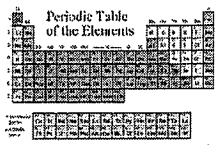
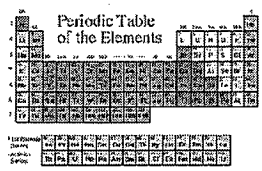
Coloring the Periodic Table Families



Families on the Periodic Table

- Elements on the periodic table can be grouped into families bases on their **chemical** properties.
- Each family has a **specific name** to differentiate it from the other families in the periodic table.
- Elements in each family **react** differently with other elements.



ALKALI METALS

Group 1

- Hydrogen is *not* a member, it is a non-metal
- 1 electron in the outer shell
- Soft and silvery metals
- *Very* reactive, esp. with water
- Conduct electricity
- Color Blue

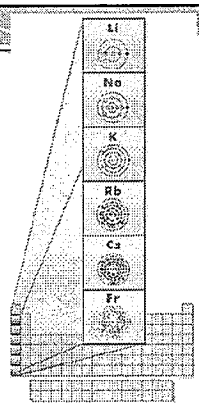
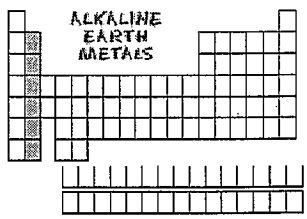


Image: http://www.learner.org/interactives/periodic/groups2.html

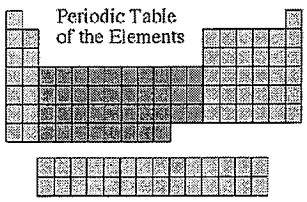
ALKALINE EARTH METALS



Group 2

- 2 electrons in the outer shell
- White and malleable
- Reactive, but less than Alkali metals
- Conduct electricity
- Color Green

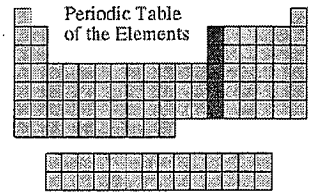
TRANSITION METALS



Groups in the middle

- Good conductors of heat and electricity.
- Some are used for jewelry.
- The transition metals are able to put up to 32 electrons in their second to last shell.
- Can bond with many elements in a variety of shapes.
- Color Cerulean

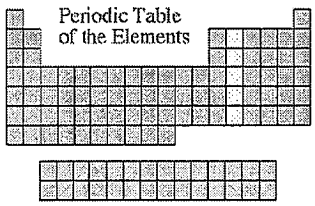
BORON FAMILY



Group 3

- 3 electrons in the outer shell
- Most are metals
- Boron is a **metalloid**
- **Color Red**

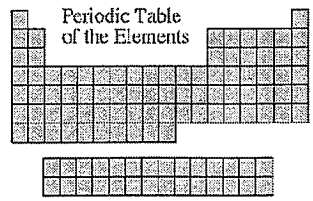
CARBON FAMILY



Group 4

- 4 electrons in the outer shell
- Contains metals, metalloids, and a **non-metal** Carbon (C)
- Color Yellow

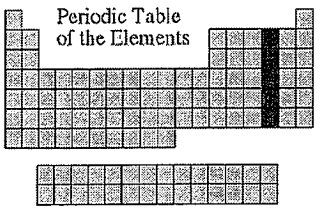
NITROGEN FAMILY



Group 5

- 5 electrons in the outer shell
- Can share electrons to form compounds
- Contains metals, metalloids, and **non-metals**
- **Color Yellow-Green**

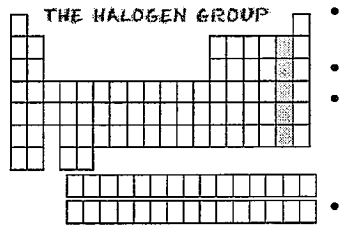
OXYGEN FAMILY



Group 6

- 6 electrons in the outer shell
- Contains metals, metalloids, and **non-metals**
- Reactive
- Color Violet

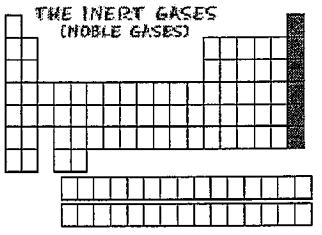
Halogens



Group 7

- 7 electrons in the outer shell
- All are **non-metals**
- **Very reactive** are often bonded with elements from Group 1
- Color Dandelion

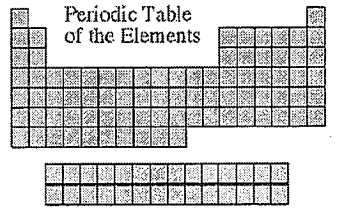
Noble Gases



Group 8

- Exist as gases
- Non-metals
- 8 electrons in the outer shell = Full
- Helium (He) has only 2 electrons in the outer shell = Full
- Not reactive with other elements
- Color Scarlet

Rare Earth Metals



- Some are Radioactive
- The rare earths are silver, silvery-white, or gray metals.
- Conduct electricity
- Color Blue Green

The end of the study guide.

The next guide is determining shells and valence electrons