

Coloring the Periodic Table Families

Periodic Table of the Elements

1 H																	2 He								
3 Li	4 Be																	11 Na	12 Mg	13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr								
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe								
55 Cs	56 Ba	57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu									
87 Fr	88 Ra	89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr									

* Lanthanide Series

+ Actinide Series

6th Grade
Mrs. Riedinger's Class

Some images are from www.chem4kids.com

www.middleschoolscience.com 2008

Families on the Periodic Table

- Elements on the periodic table can be grouped into families based on their chemical properties and react in similar ways to other elements outside their family.
- Each family has a **specific name** and most are a column.
- Elements in different families **react differently** with other elements.

Periodic Table of the Elements

1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg	13 Al	14 Si	15 P	16 S	17 Cl	18 Ar										
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	57 *La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	89 +Ac	104 Rf	105 Ha	106 106	107 107	108 108	109 109	110 110								

* Lanthanide Series

58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
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+ Actinide Series

90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr
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Assignment

As you read through the power point color code your blank copy of the periodic table. Be sure to include a color key with a title and DESCRIPTION of each family using the information on the power point page.

Have fun!

ALKALI METALS

Group 1

- Soft and silvery metals
- **Very** reactive, especially with water – will explode!
- Conduct electricity

Hydrogen (top left square) is **not** in a family. It is a **non-metal** with properties of two families – Alkali metals & Halogens.

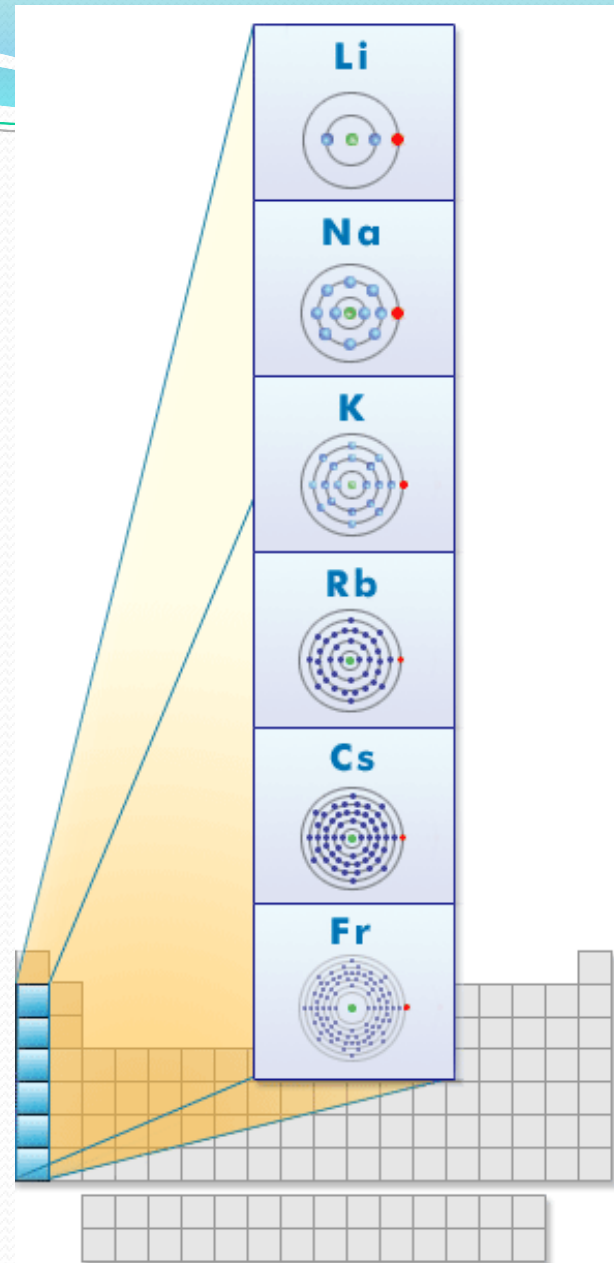


Image: <http://www.learner.org/interactives/periodic/groups2.html>

ALKALINE EARTH METALS

Group 2

- White and malleable
- Reactive, but less than Alkali metals
- Conduct electricity

A blank periodic table with the text "ALKALINE EARTH METALS" written in the top left corner. The table is a grid of squares representing elements, with the first two columns highlighted in green. The text is in a bold, black, sans-serif font.

TRANSITION METALS

Periodic Table
of the Elements

Groups in the middle

- Good conductors of heat and electricity.
- Some are used for jewelry.
- Can bond with many elements in a variety of shapes.

BORON FAMILY

Periodic Table
of the Elements

Group 4

- Most are metals except for Boron
- Boron is a **metalloid**

CARBON FAMILY

Periodic Table
of the Elements

Group 5

- Contains **metals**, **metalloids**, and a **non-metal Carbon (C)**

NITROGEN FAMILY

Periodic Table of the Elements

The image shows a simplified periodic table with a grid of cells. The main body of the table is 7 rows high. The first two rows have 2 cells each. The next three rows have 8 cells each. The last row has 6 cells. A single column of 7 green cells is highlighted in the middle of the table, representing Group 6. Below the main table is a separate row of 14 cells, representing the lanthanide and actinide series.

Group 6

- Can **share electrons to form compounds**
- Contains metals, metalloids, and **non-metals**

OXYGEN FAMILY

Periodic Table
of the Elements

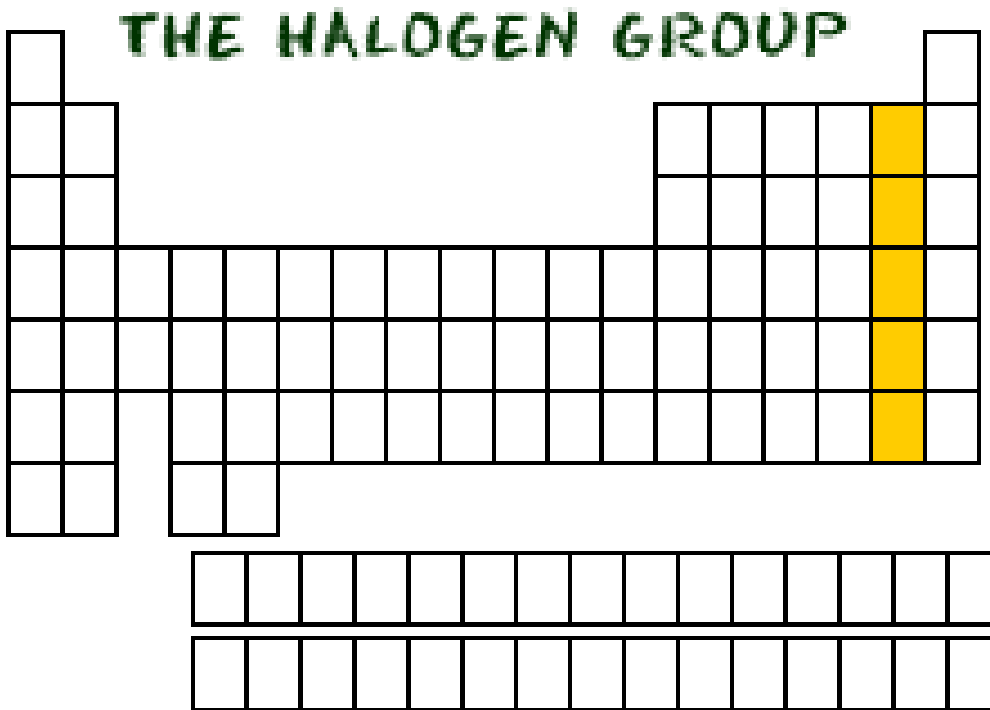
Group 7

- Contains **metals**, **metalloids**, and **non-metals**
- **Reactive**

Halogens

Group 8

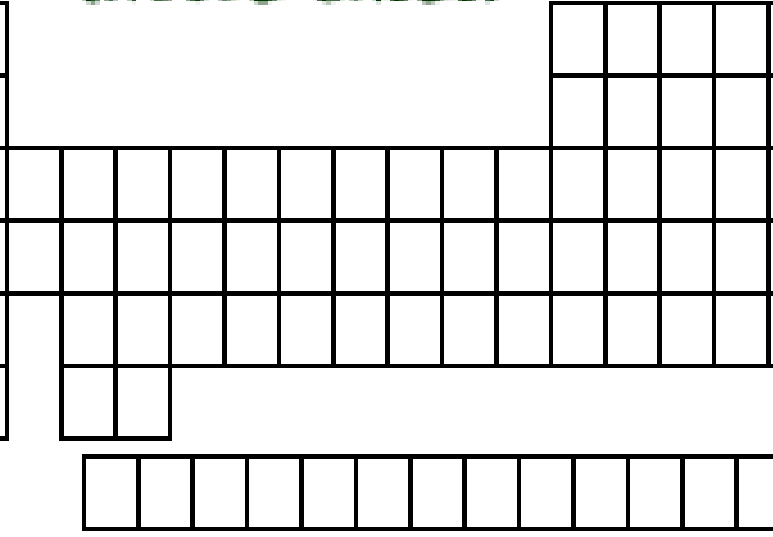
- All are **non-metals**
- **Very reactive** are often bonded with elements from Group 1



Noble Gases

THE INERT GASES (NOBLE GASES)

THE INERT GASES
(NOBLE GASES)



The periodic table shows the noble gases (Group 18) highlighted in red. These elements are known for their chemical inertness. The noble gases are Helium, Neon, Argon, Krypton, Xenon, and Radon.

Group 9

- Exist as **gases**
- **Non-metals**
- **Not reactive** with other elements

Rare Earth Metals

Periodic Table
of the Elements

The diagram shows a simplified periodic table. The main table consists of a central block of 16 columns and 6 rows. The first two columns on the left are 3 rows high, and the last two columns on the right are 3 rows high. Below the main table is a separate row of 14 blue cells, representing the f-block (lanthanides and actinides).

- Some are **Radioactive**
- The rare earth metals are **silver, silvery-white, or gray metals.**
- **Conduct electricity**

**The end of the
study guide.**