

Thursday/Friday, October 19, 2018

Your Learning Goal:

Students will read about Mendeleev in order to practice using a literacy strategy called text tags.

Table of Contents:

It's Elementary- 14R

Catalyst (14L) :

- Monday, Tuesday, Wednesday, _____, _____
- One, two, four, eight, _____, _____
- O, T, T, F, F, S, ____, ____, __



Homework:

Watch Video at home for
Page 10R&10L (Cornell
Notes)



Agenda:

1. Catalyst
2. Coloring Periodic Table
3. Battleship

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<u>Date</u>	<u>Assignment</u>	<u>Pg #</u>
10/8/18	Our Expanding Universe	9 L+ R
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10/11/18	Going Subatomic	11L + R
10/15/18	Changing Phases	12 L + R
10/16/18	Conservation of Mass	13L + R
10/19/18	It's Elementary	14L + R

10/19/18

It's Elementary

Catalyst: Fill in the blank

• Monday, Tuesday, Wednesday,

_____, _____

• One, two, four, eight,

_____, _____

• O, T, T, F, F, S, _____, _____, _____

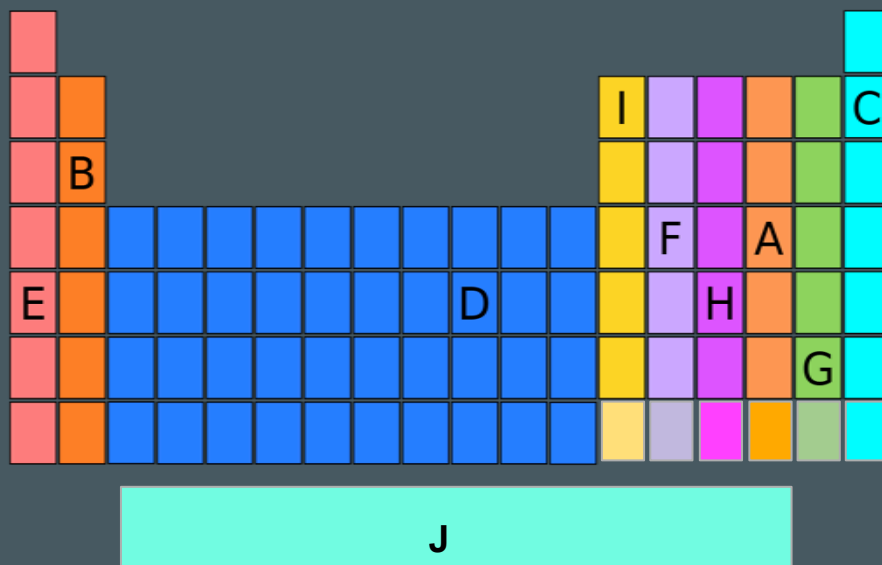
• **Reflection:**

14L

14R

Families on the Periodic Table

Elements on the periodic table can be grouped into families based on their **chemical** properties.



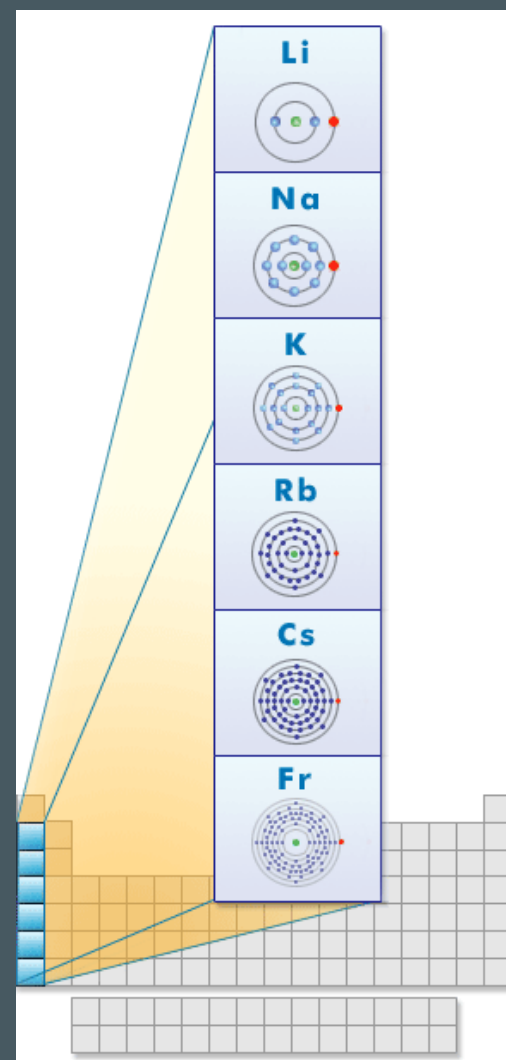
Each family has a **specific name** to differentiate it from the other families in the periodic table.

Reactivity varies between the families.

Alkali Metals

Group 1

- Hydrogen is *not* a member, it is a **non-metal**
- All are metals and solid at room temp
- 1 Valence Electron
- Soft and silvery, shiny
- **Very** reactive, esp. with water
- Conduct electricity

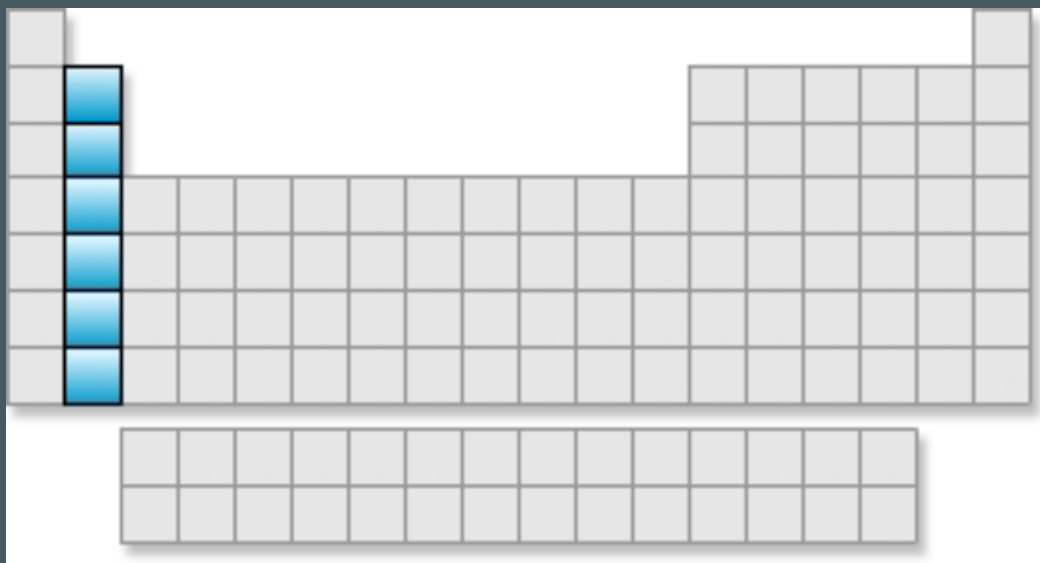


Potassium



Alkaline Earth Metals

Group 2

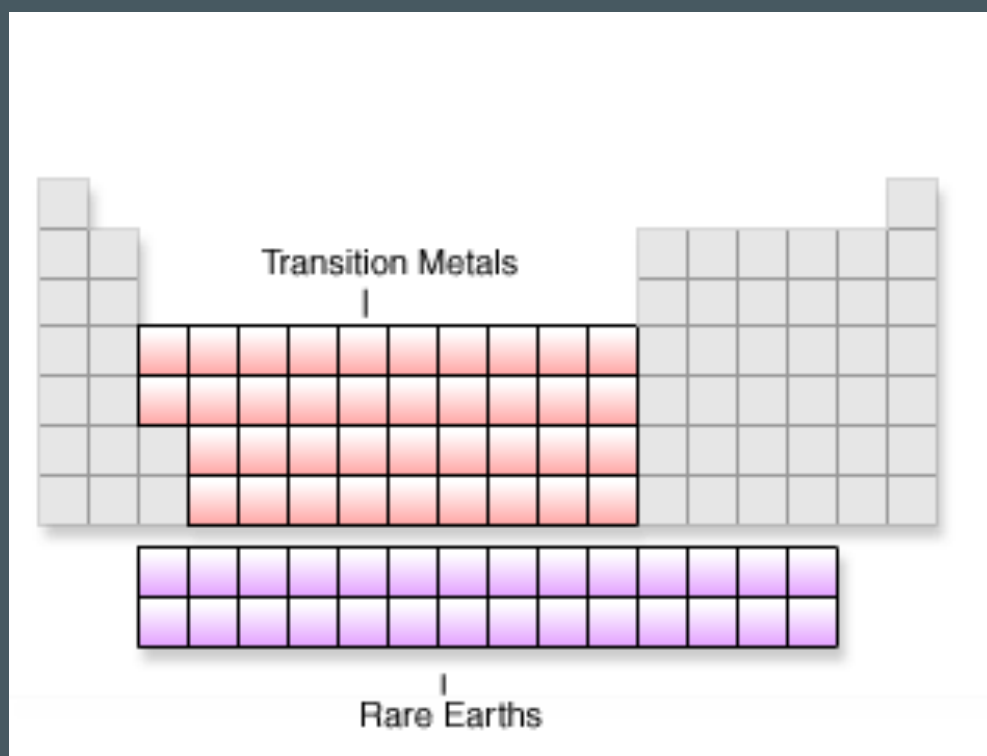


- Metals
- Solids at room temp
- 2 electrons in the outer shell
- White, silvery, and malleable
- Reactive, but less than Alkali metals
- Conduct electricity

Magnesium



Transition Metals

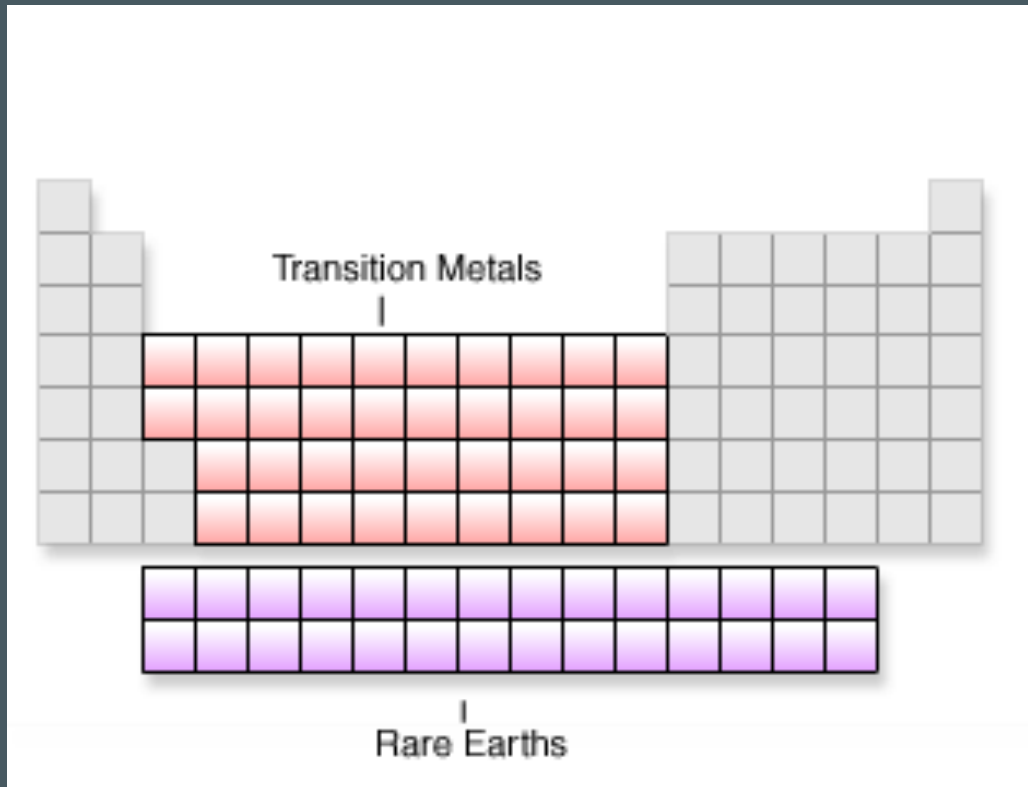


- Metals
- Almost all are solids at room temp (Hg)
- Good conductors of heat and electricity.
- 1 or 2 Valence Electrons
- Less Reactive than Alkali and Alkaline Earth Metals
- Can bond with many elements in a variety of shapes.

Mercury



Rare Earth Metals



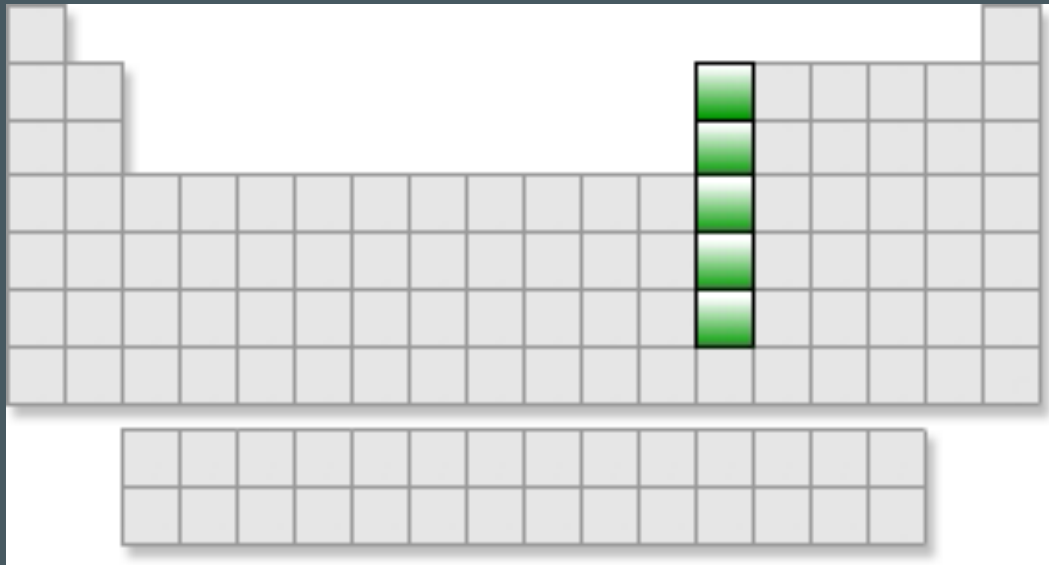
- Some are Radioactive
- The rare earths are silver, silvery-white, or gray metals.
- Conduct electricity

Americium



Boron Family

Group 3



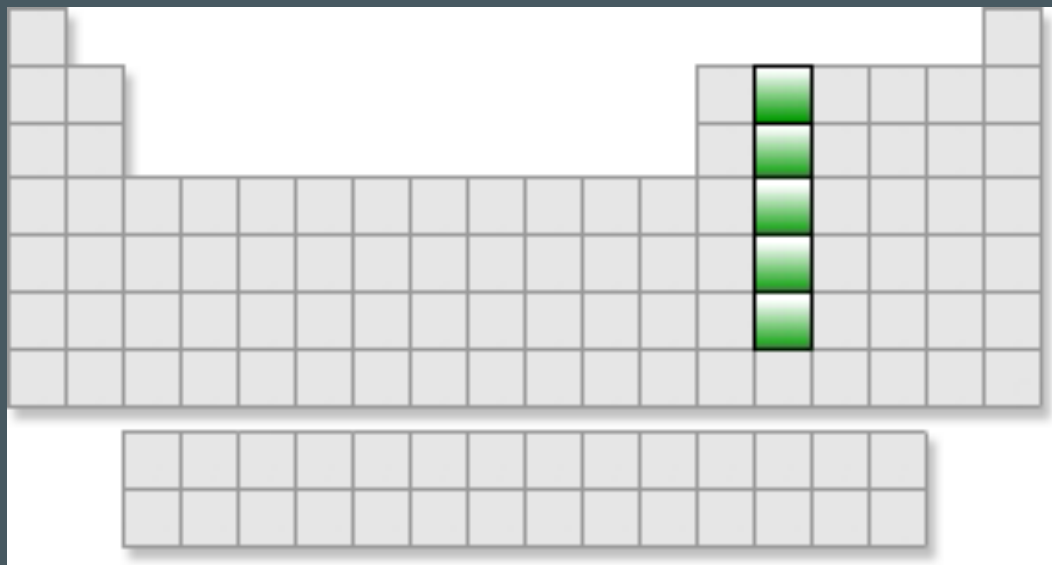
- 3 electrons in the outer shell
- Most are metals
- Boron is a **metalloid**
- Reactive
- Solid at room temp

Aluminium



Carbon Family

Group 4



A periodic table diagram with the elements in Group 4 highlighted in green. The highlighted elements are Tin (Sn), Lead (Pb), and the two elements in the actinide series (Th and U). The rest of the periodic table is shown in a light gray grid.

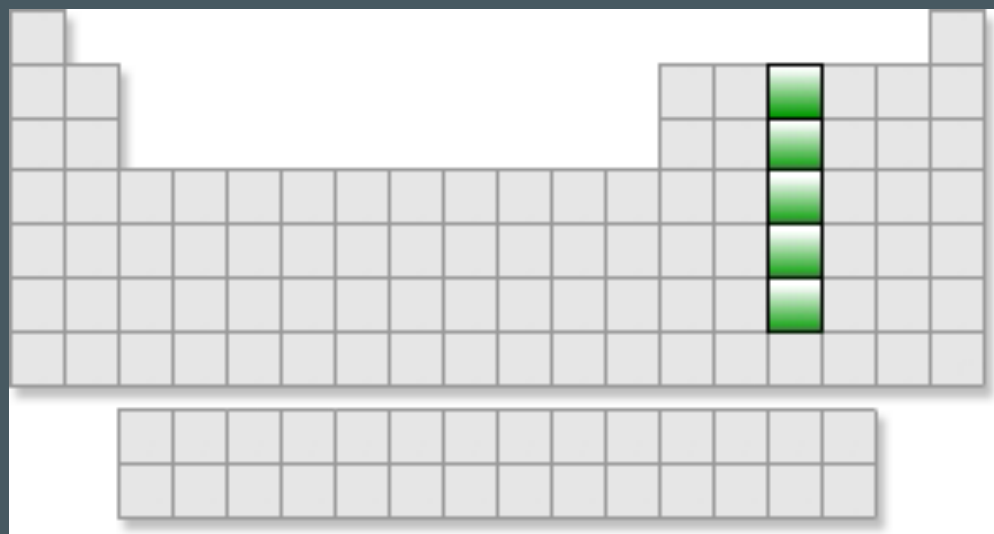
- 4 electrons in the outer shell
- Contains 3 metals, 2 **metalloids**, and 1 **non-metal** Carbon (C)
- Reactivity varies
- Solids at room temp

Silicon



Nitrogen Family

Group 5



A periodic table diagram with the elements in Group 5 highlighted in green. The highlighted elements are Vanadium (V), Niobium (Nb), Tantalum (Ta), and Rhenium (Re). The table shows the standard layout with the f-block (lanthanides and actinides) positioned below the main body of elements.

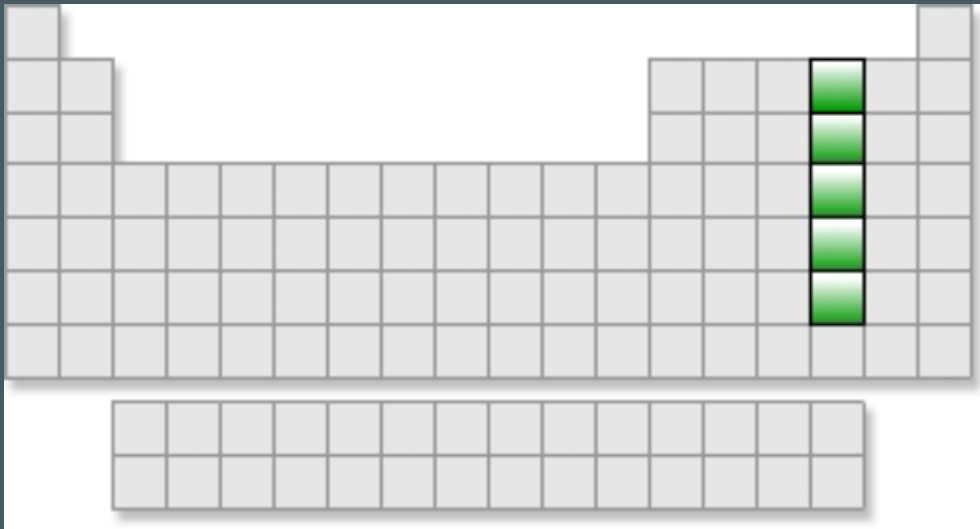
- 5 electrons in the outer shell
- Can share electrons to form compounds
- Contains 2 metals, 2 **metalloids**, and 2 **non-metals**
- Reactivity Varies
- Nitrogen is the only gas at room temp, rest are solids

Arsenic



Oxygen Family

Group 6



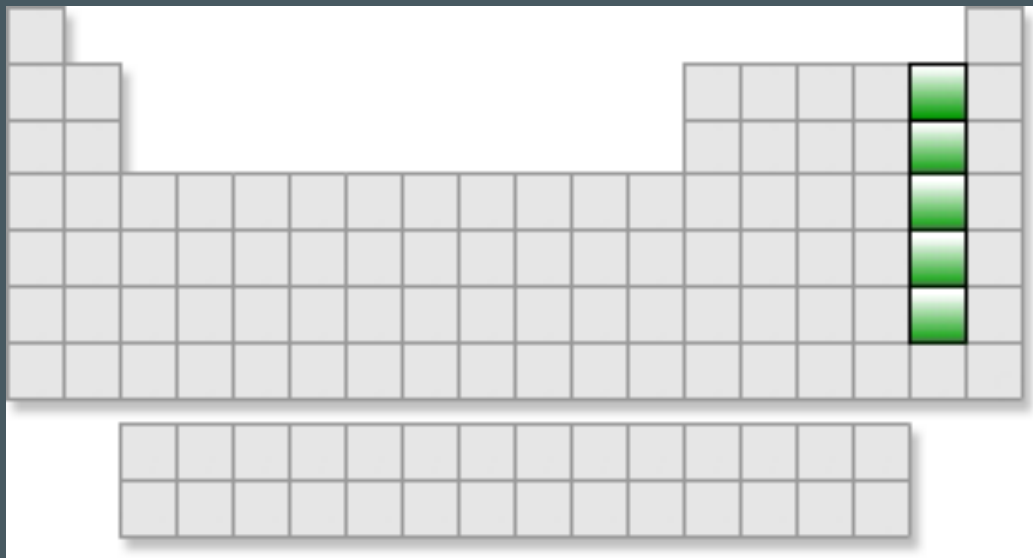
- 6 electrons in the outer shell
- Contains 2 metals, 1 **metalloid**, and 3 **non-metals**
- Reactive
- Oxygen is a gas, the rest are solids at room temp

Sulfur



Halogens

Group 7



A periodic table diagram with the elements in Group 7 highlighted in green. The highlighted elements are Fluorine (F), Chlorine (Cl), Bromine (Br), and Astatine (At). The element Tennessine (Ts) is also in Group 7 but is not highlighted. The rest of the periodic table is shown in light gray.

- 7 electrons in the outer shell
- **Non-metals**, Ts is unknown
- **Very reactive** - are often bonded with Group 1 Alkali Metals
- Has 2 gases, 1 liquid (Br), and 2 solids

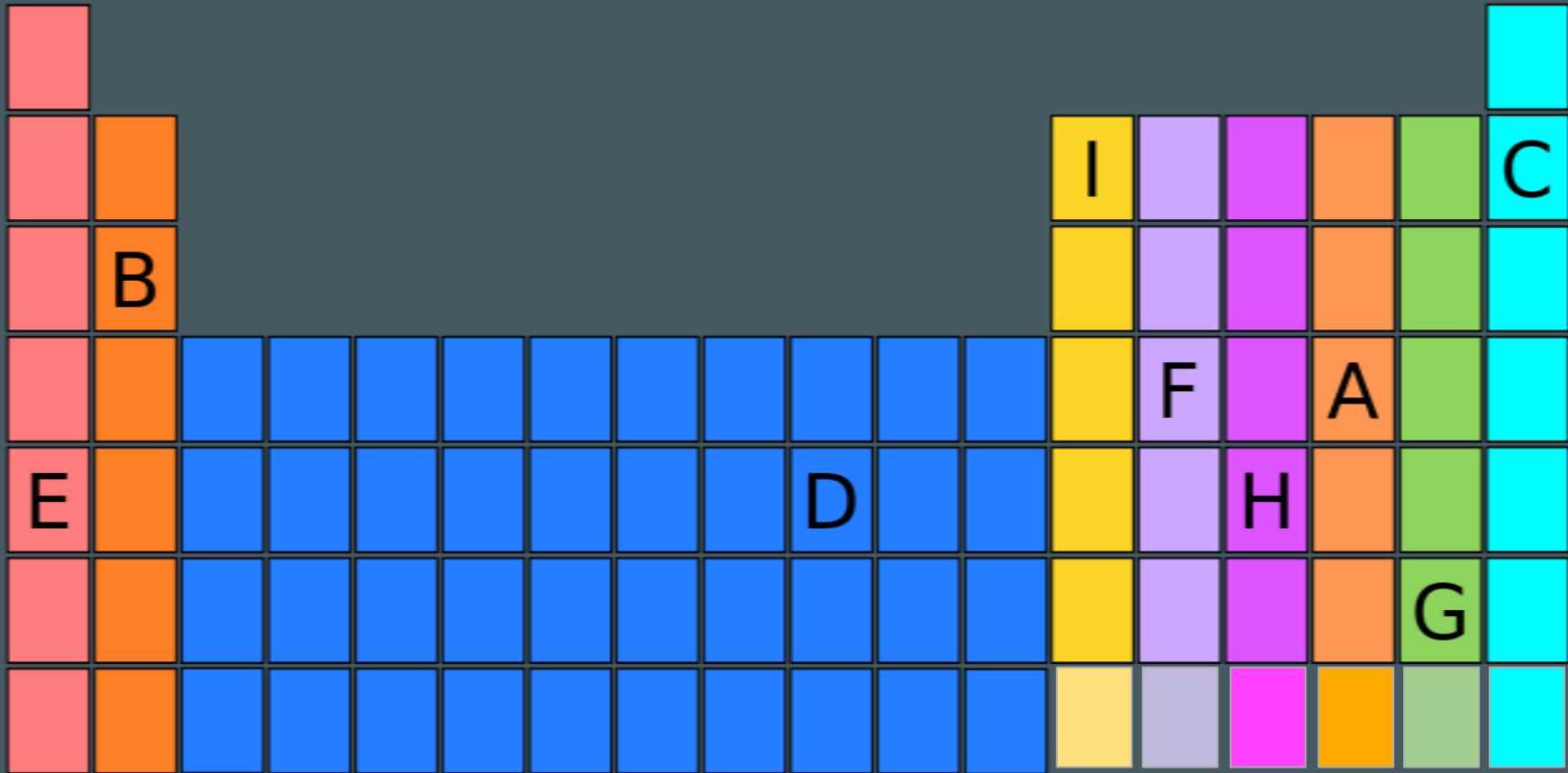
Iodine



Neon



Review: Name the families



J

Trends Math Lab

1. Identify the largest value of your trend (column)— We will make a ratio to convert the values on your table into centimeters. The largest value will be represented by the length of your paper, minus 10 cm (to leave room for labels/ titles on your graph).

2. Use the ratio below to solve for EACH of the other bar lengths

$$\text{Element Bar Length} = \frac{(\text{Max Value From Chart})}{30 \text{ cm}} = \frac{(\text{Element Value From Chart})}{?}$$

3. After calculating each bar length, create your bar graph IN PENCIL before adding color, titles and labels to your axis.

4. Attach your periodic table to the back of your poster and draw an arrow showing the direction of your trend.

5. Conduct research to explain the significance of this trend. Write a paragraph, in your own words, to explain what your trend means.

10/18/18

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Reflection:

*Draw the element square for
your chosen element*

*What are its defining
characteristics?*

14L

10/18/18

It's Elementary!

14R

The end

You may watch more videos about the elements at:

Learn about more elements on the periodic table

<http://www.periodicvideos.com/>