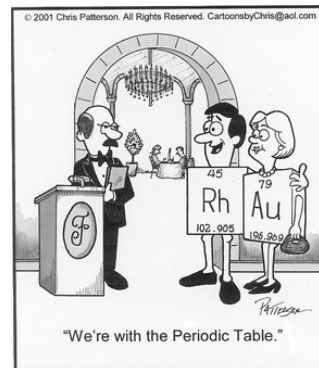


The Periodic Table: Families and Periods

- Periodic table was organized by _____.
- Elements go in order of their _____ number.
- Vertical columns are called _____. Families share similar chemical and physical properties.
- Horizontal rows are called _____. Each period represents an orbit or shell around the nucleus.
- We will be focusing on 5 main chemical **families**:
 - 1. Alkali Metals
 - 2. Alkaline Earth Metals
 - 3. Halogens
 - 4. Noble Gases
 - 5. Hydrogen.



THE FAMILIES:

1. Alkali Metals

Bohr Models

(1st three elements only)

Column	Name
Li	_____
Na	_____
K	_____
Rb	_____
Cs	_____
Fr	_____

Things to know about Alkali Metals:

- _____ reactive metals on the periodic table.
- The further down, the more reactive.
- Have _____ in their outer shell.
- They need to give away an electron to become stable. (In ion form they have a charge of +1)
- So reactive with air and water they need to be stored in _____.
- A common compound is _____ (sodium chloride) also known as table salt.
- Some properties of alkali metals are:
 - Very _____ and _____
 - Can cut with a knife

2. Alkaline Earth Metals

Bohr Models

(1st three elements only)

Column

Name

Be	_____
Mg	_____
Ca	_____
Sr	_____
Ba	_____
Ra	_____

Things to know about Alkaline Earth Metals:

- Alkaline earth metals are _____ reactive than the alkali metals.
- They have _____ in their outer shell.
- They need to give away _____ electrons to become stable. (In ion form they have a charge of +2)
- A common compound is CaCO₃ (calcium carbonate) also known as _____.
- Some properties of alkaline earth metals are:
 - _____ and _____
 - Can cut with a knife

3. Halogens

Bohr Models

(1st two elements only)

Column

Name

F	_____
Cl	_____
Br	_____
I	_____
At	_____

Things to know about Halogens:

- Most reactive _____ on the periodic table.
- The further up, the more reactive.
- They have _____ in their outer shell.
- They need to gain _____ electron to become stable. (In ion form they have a charge of -1)
- A common compound is HCl (hydrogen chloride or _____ acid).
- Some properties of Halogens are:
 - Poisonous
 - Mostly found as in a _____ state

4. Noble Gases

Bohr Models

(1st three elements only)

Column

Name

He	_____
Ne	_____
Ar	_____
Kr	_____
Xe	_____
Rn	_____

Things to know about Noble Gases:

- The _____ reactive elements on the periodic table. Under normal conditions, they will not react.
- They have a full _____, and are therefore very stable elements.
- No compounds with Noble Gases have been found in nature because they're not very reactive.
- The most common noble gas is Argon which makes up 0.93% of the air we breathe.

5. Hydrogen (A family of ONE)

Bohr Models

Column

Name

H	_____
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Things to know about Hydrogen:

- It can act as either a _____ (giving away an electron), or a _____ (receiving electrons)
- It is very reactive, therefore it is almost always found in the form of a _____.
- Have _____ electron in their outer shell. They need to get an electron or give away an electron to become stable.
- Some properties of Hydrogen are:
 - At room temperature, hydrogen is a gas.
 - Extremely flammable, and makes a good fuel source.
 - Hydrogen has three isotopes.

THE PERIODS:

- A period refers to the _____ rows on the periodic table.
- Neighbours have some _____.

Example: Period 2

Li	Be	B	C	N	O	F	Ne
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- To date there are _____ periods on the periodic table.
- As you move from left to right within a row, you will go from _____ to _____.
- What do you notice about the outer orbit of the elements in period 2? Is there a pattern you can find for all the periods?

