

Name: _____

Date: _____

Notes: Historical Development of the Periodic Table

What have scientists known since they have been able to isolate pure elements?

What are common *physical properties* of lithium, sodium, and potassium?

What is a common *chemical property* of Li, Na, and K? _____

What property of elements is relatively easy to determine? _____

What other name is used to describe **atomic mass**? _____

What did scientists call groups of 3 similar elements? _____

What seemed significant about the average atomic masses of similar elements in a triad?

What did the Law of Triads imply? _____

What did scientists start to try and do once they realized there might be an order to elements?

John Newlands placed elements in what order? _____

How often did the pattern of elements seem to repeat? _____

What did Newlands call this pattern? _____

Why wasn't this taken seriously? _____

Were all of the elements discovered in John Newlands time? _____

Who created the first accepted Periodic Table? _____

How did placing gaps where undiscovered elements might go make Mendeleev's table more acceptable? _____

What did Mendeleev do for these undiscovered elements that later validated his ideas?

What correction to the order of elements did Henry Moseley make to the Periodic Table?

What do we now know is the reason for the repeating pattern of elements?

Define **periodic**: _____

Where are the **metals** on the periodic table? _____

Where are the **nonmetals** on the periodic table? _____

Name of elements along the dark, jagged line: _____

Name of elements in the middle of the periodic table: _____

What do we call columns on the periodic table? _____

Why do these elements have similar properties? _____

Where are valence electrons in an atom? _____

How many valence electrons are in each of the elements below?

Oxygen has ____ valence electrons.

Argon has ____ valence electrons.

Chlorine has ____ valence electrons.

Silver has ____ valence electrons.

Silicon has ____ valence electrons.

Magnesium has ____ valence electrons.

Which Lewis diagrams are correct:



Group names:

Group 1: _____

Group 17: _____

Group 2: _____

Group 18: _____

Write the group number that applies to the groups below:

Oxygen Group: _____

Boron Group: _____

Carbon Group: _____

Nitrogen Group: _____

What do we call a row on the Periodic Table? _____

What do the elements in a row have in common? _____

Which elements are filling their **s** and **p** sublevels? _____

Which elements are filling their **d** and **f** sublevels? _____

Iron, cobalt and nickel are known as what? _____

Which group on the periodic table undergoes the fewest reactions? _____

What is this group's name? _____

Why are they so unreactive? _____