

Name: _____

Date: _____ Core: _____

Guided Notes- The Periodic Table

The periodic table of.....

- Elements!
- An **element** is a substance made of _____
this means it _____ be broken down into more substances
(think prime number in math)

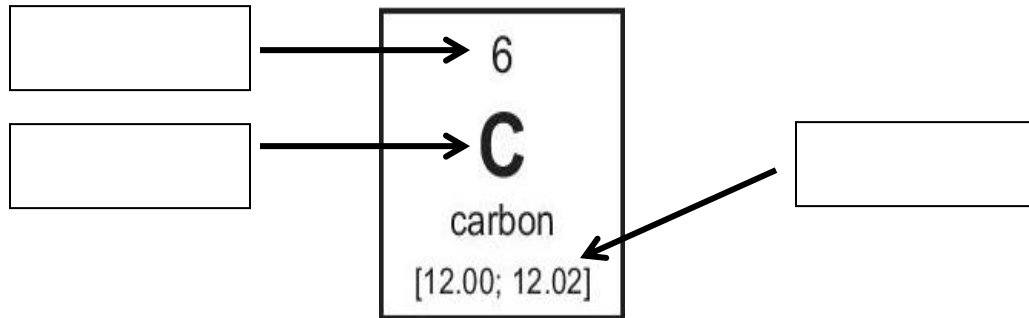
Mendeleev

- Dimitri Mendeleev was one of the first scientists to notice that some elements seemed to _____
- In 1869 Mendeleev created the first periodic table with the _____ we had discovered at the time
- Mendeleev said properties of unknown elements could be _____ based on the properties of elements _____ in the periodic table

Our Modern Periodic Table

- The periodic table is an _____ that arranges all the elements we have created or discovered by _____ and _____
- Each element has its own one or two letter symbol based on its English or Latin name (the first letter is always capitalized)
- The table is designed to show patterns in the properties of elements

Looking at individual elements



- **Atomic Number**- # of _____ in **ONE** atom of an element, same as # of _____ if atom is _____
- **Atomic Mass** - The mass of _____ of the element.
- **Symbol**- _____ the element

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Atomic Mass and Number

- **Atomic Number**- the number of _____ (+), will also equal the number of _____ (-) **in a _____ atom.**
 - This is true because in a neutral atom the charge is _____ and protons and electrons will cancel out
- **Atomic mass**- the mass of _____ of an element. Can be used to find the number of _____ (0).
 - **Atomic mass- atomic number = # of neutrons. ROUND TO THE NEAREST WHOLE NUMBER**
 - This is true because the mass of an electron is _____ so the mass is entirely made up of the mass of _____ (+) and _____ (0)

Periods

- Each _____ **row** of the periodic table is called a _____.
- The atomic number, atomic mass, and the number of valence electrons all _____ from left to right.
- The transition metals are an exception because they have a _____ of valence electrons

Groups

- Each _____ of the periodic table is called a _____ or **family**
- Each one is given a name that shows that the elements in the column have the _____ and _____ the same way
- Elements of the same group have the _____ of valence electrons (except transition metals)