



















Topic 4 - Classifying Elements

1.  Early chemists used the planets to identify the elements known to them. This later was a problem, when more elements were discovered, because they ran out of planets. This symbol represent the planet and element ...
- Mars - iron
 - Venus - copper
 - Mercury - mercury
 - Jupiter - tin

2. *Dalton's 1808AD symbols and formulae.*

 Hydrogen	 Soda	 Ammonia
 Nitrogen	 Pot Ash	 Olefiant
 Carbon	 Oxygen	 Carbonic Oxide
 Sulphur	 Copper	 Carbonic Acid
 Phosphorus	 Lead	 Sulphuric Acid
 Alumina	 Water	

- The purpose for developing a new set of chemical symbols was that Dalton wanted to ...
- become rich and famous
 - win a Nobel Prize in Chemistry
 - earn bragging rights with other scientists
 - streamline communication with other scientists
3. Berzelius later revised Dalton's symbols by replacing the pictures with ...
- letters
 - names
 - shapes
 - numbers
4. John Newland's "*law of octaves*" identified the pattern in which the properties of the elements seemed to repeat at regular intervals, they were similar to the ...
- base ten number system
 - suits of playing cards
 - heartbeats of different animals
 - octave scale in music
5. These elements have both metal and non-metal properties. Some of them are semi-conductors, which means, they can carry an electrical charge under special conditions. Making them great for computers and calculators. They are the ...
- Transition Metals
 - Rare Earth Elements
 - Metalloids
 - Other Metals
6. The 6 elements in this group all have the maximum number of electrons possible in their outer shell which makes them stable. They are known as the ...
- Halogens
 - Alkali Metals
 - Noble Gases
 - Alkaline Earth Metals
7. Demitri Mendeleev wanted to find a pattern that would allow him to predict the properties of elements not yet discovered. By using information cards he charted the pattern that seemed to work. The characteristic that showed that the properties of elements vary periodically was the ...
- atomic number
 - atomic mass
 - symbol
 - density