

## Testing for the Presence of Certain Chemicals :

1. Acids and bases - tested with “litmus paper” (which changes color at different pH levels)
  - red paper : turns blue in base, stays red in acid
  - blue paper - turns red in acid, stays blue in base
  - wide range litmus paper - turns 14 colors
  - digital pH meter
2. Conductivity - use a “dip in” tool called a “conductivity indicator”
  - electrolytes conduct electricity
  - non-electrolyte don't conduct
3. Testing for oxygen - a glowing splint continues to burn gradually
4. Hydrogen gas - a glowing splint will explode with a “pop”

5. Carbon dioxide - you take the gas you want to test and pass it through a sodium hydroxide solution
6. Water presence - use cobalt chloride test paper turns from blue to pink in water.

## ATOMS AND IONS :

Atoms are small particles of matter made up of protons and neutrons compacted in a central nucleus, surrounded by a number of electrons orbiting around the outside.

### Drawing Atoms (Bohr Diagrams)

1. Find the atoms atomic number on the PTOE, this is the number of protons in the nucleus, and also the number of electrons orbiting the nucleus.

2. Start by drawing the nucleus (circle) and write in the # of protons.
  
3. Draw in the electrons around the outside
  - electrons must be grouped in a particular way though !
  - The first group of electrons can only hold a maximum of 2 electrons, then it is full
  - after that, any other group of electrons can hold up to eight
  - one group must be completely full before you add the next group.

