**1.1 – Living Things and Cell Theory**

Living things are scientifically referred to as organisms.

Cellular respiration is the process of breaking down food in the presence of oxygen to produce water, carbon dioxide and energy.

Light microscopes use light passing through the sample and lenses.

Electron microscopes use beams of electrons, electromagnets, electronic equipment and photographic film.

Resolving Power is the ability to see two adjacent points as two separate points.

Magnification is how large an object appears.

Compound microscope is made up of a series of lenses which increase the magnifying power of the device.

Spontaneous generation theory suggested that living things could arise spontaneously from non-living things (ex. Maggots appearing on a piece of meat).

Organisms (living things) come in all shapes & sizes, can live in a variety of habitats, have common basic needs and are made up of cells.

Cell theory

1. *Cell is the smallest (basic) unit of life.* It is the smallest living organism that shows the characteristics of living organisms.
2. *An organism can be made up of one or more cells*. It can be as simple as one cell (unicellular) (like paramecium) or it can be made up of trillions of cells (multicellular) (like an elephant).
3. *All cells are created from existing cells through a process called cell division* (by which a cell divides into two new cells).