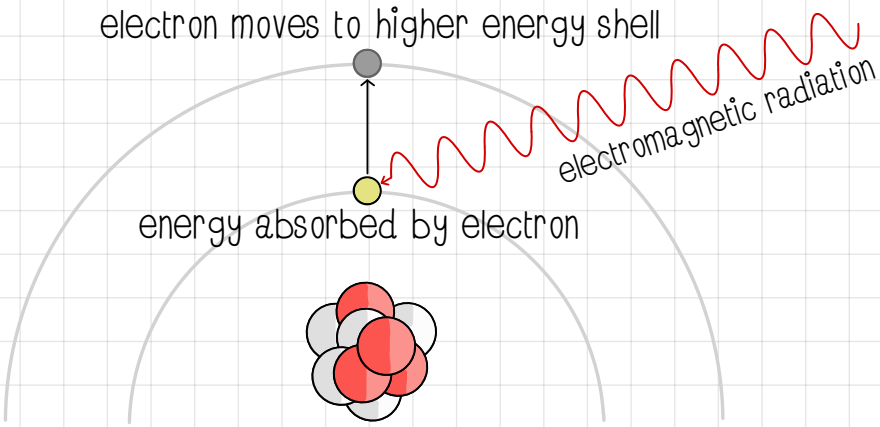
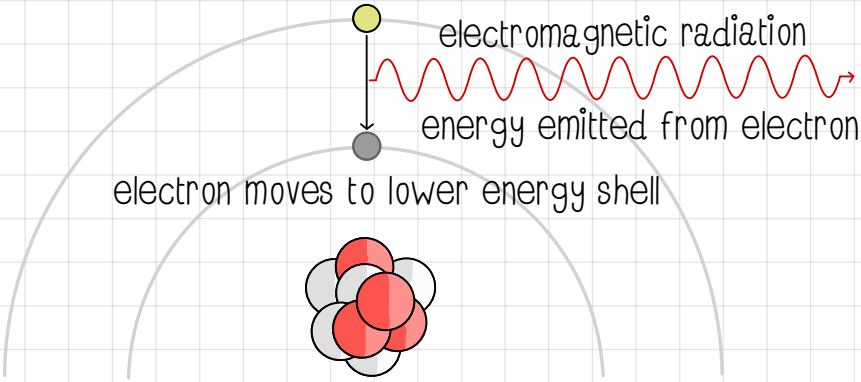
Electronic arrangement

- The electrons are arranged in shells around the nucleus. These shells represent different energy levels.
- The electron position may change with the absorption of electromagnetic radiation and move further from the nucleus to a higher energy level.



- The electron position may also change by the emission of electromagnetic radiation and move closer to the nucleus to a lower energy level.



- When an electron is at its normal energy level it is said to be in its "ground state". When the electron absorbs energy and moves to a higher energy level it is said to be in its "excited state".
- Light emitting diodes work using this principle. When excited electrons drop back to their ground state, light is emitted. By using different materials different colours of LEDs can be made. By combining red, green and blue LEDs, white light can be produced.