



**CARDINAL
NEWMAN**
SCIENCE DEPARTMENT

Weekly Bulletin

This weeks extra tutoring:

Monday:

Wednesday: Any subject (VWi) 8am - 8:30am in S1, Chemistry (NLa) Lunchtime in S5, Physics (D6a) 3-4pm in S4

Thursday: Required Practicals (NLA) 3-4pm in S5

Friday: Most Able workshop (VWi) 3-4pm in G3

Other information:

What's in a cell?

Cells are the basic building blocks of all animals and plants.

Inside cells are various structures that are specialised to carry out a particular function. Both animal and plant cells have these components:

Cell membrane - this surrounds the cell and allows nutrients to enter and waste to leave it.

Nucleus - this controls what happens in the cell. It contains DNA, the genetic information that cells need to grow and reproduce.

Cytoplasm - this is a jelly-like substance in which chemical reactions happen.

Mitochondria - these are the powerhouse of the cell. They are structures where respiration takes place.

How are plant and animal cells different?

Plant cells have all the parts in the list above, plus a few extra structures:

Cell wall - this is an outer structure that surrounds the cell and gives it support.

Vacuole - this is a space within the cytoplasm of plant cells that contains sap.

Chloroplasts - these contain chlorophyll and are the site of photosynthesis.

This weeks equation:

$$W = mg$$

weight = mass x
gravitational field
strength (g)

In The News:

Rosalind Franklin: Mars rover named after DNA pioneer

The UK-assembled rover that will be sent to Mars in 2020 will bear the name of DNA pioneer Rosalind Franklin.

The honour follows a public call for suggestions that drew nearly 36,000 responses from right across Europe.

Astronaut Tim Peake unveiled the name at the Airbus factory in Stevenage where the robot is being put together.

The six-wheeled vehicle will be equipped with instruments and a drill to search for evidence of past or present life on the Red Planet.

The unveiling of the name was orchestrated by UK astronaut Tim Peake

Giving the rover a name associated with a molecule fundamental to biology seems therefore to be wholly appropriate.

Rosalind Franklin played an integral role in the discovery of the structure of deoxyribonucleic acid.

It was her X-ray images that allowed James Watson and Francis Crick to decipher its double-helix shape.

Star Learners

Isabelle Byrne (Y7)
Jacob Spolny (Y7)