Y7 Science at Great Wyrley Academy

During Y7 you will be taught Science by a specialist science teacher with 3 lessons a week. You will do a term of Chemistry, a term of Biology and a term of Physics so you will get a chance to do practical work (experiments), work in groups and develop your investigative skills. Alongside this, we hope you will develop the confidence and skills to question and understand the world around you.

The topics we will study are:

Biology
Structure and function of cells
Body systems
Reproduction
Skeleton and muscles

Chemistry
States of matter
Physical changes in state and the kinetic model
Chemical reactions
Atoms, elements, compounds, mixtures
Equations, symbols and formulae
Acids and alkalis

Physics
Forces
The Earth, Moon and Solar System
Spacecraft
Light and sound

Activity 1: Your favourite scientist

Tell us a little about your favourite scientist. Produce a poster to introduce your favourite scientist. Feel free to use a picture. We have included one for you on the next page as an example.

Name of Scientist: Stephen Hawkings

What they did: Amazing amount of work on the Big Bang Theory.

Why are they your favourite scientist?

Stephen Hawkings is not only an amazing Scientist, but amazing Human. He has shown that anything is possible for people with disabilities. Hawkings spoke for a lot of his later life through a computer generated voice. He also had a film made about his life 'The Theory of Everything'.

Activity 2: Water clocks

A **water clock** or **clepsydra** is a device for measuring time by letting water regularly flow out of a container, usually through a tiny hole.

Water clocks were important time keeping devices of the ancient world. Clepsydras were water clocks that relied on a steadily rising or falling water level in a container to indicate the passing of periods of time. Unlike sundials, clepsydras worked in cloudy weather and in the dark.

Here is a simple water clock. It works by water falling through a hole in the bottom of the beaker. The level of water relates to the time which is written on the side of the beaker.

Can you build this simple cleps

You will need the following materials:

- 1-litre plastic soft drink bottle with the label removed
- pin
- timer or watch that can be read to seconds
- ruler
- marking pen
- plastic measuring jug

Draw your diagrams on some paper and explain how your clepsydra works. Use the internet to help you get some ideas, there is plenty of information out there!

Good luck and I look forward to seeing your clocks in September.

Mr Tindall