

WHAT ARE THE BIG AIMS OF YEAR 8?

We will develop the ideas pupils learnt in year 7 and explore complex processes in Organisms, Matter and Reactions. Pupils will be introduced to the concept of Electromagnets, Waves and Ecosystems.

WHAT WILL EXCELLENCE LOOK LIKE IN YEAR 8?

- We use knowledge to explain how scientific development has benefited society.
- Understand and appreciate the development and implications of science and technology in the past, present and future (development of periodic table, evidence for our understanding of space) and consider the role and responsibility it has within society (theories of the solar system, element symbols)

WHAT KNOWLEDGE DO THE PUPILS NEED TO ACQUIRE?

Pupils will study the following units in Y8:

8.1 Electromagnets 1 - Current and resistance, 8.2 Organisms 2 - Organ Systems (Digestive System & Circulatory System), 8.3 Matter Periodic Table and Elements, 8.4 Waves Light and Sound Waves & Wave Properties, 8.5 Reactions - Chemical Energy and Types of Reaction (Displacement, combustion and thermal decomposition), 8.6 Earth and space, 8.7 Ecosystems - Independence and Plant Reproduction.

In Biology we will look at key processes such as digestion, respiration and breathing and the effect our everyday choices can have on these, both positively and negatively. We also explore interdependence in an ecosystem and plant reproduction and how plant structures are adapted to increase the likelihood of successful offspring.

In Chemistry we identify elements and different types of reactions that can happen. We look at metals and non-metals and understand how the periodic table is designed so scientists can share information.

In Physics we start to look at the phenomenon of electricity and wave transmissions in the form of light and sound, we will then explore the Earth and universe.

WHAT SKILLS DO THE PUPILS NEED TO DEVELOP?

- Planning methods
- Drawing conclusions
- Decimal places
- Describing trends and drawing conclusions
- Unit conversions
- Trendlines, anomalies and correlation
- Random errors
- Choosing charts
- Calculating median and mode

WHAT MISCONCEPTIONS MAY THEY HAVE FROM PREVIOUS LEARNING?

Mass and weight are the same thing, heat and temperature are the same, breathing and respiration are the same, energy can be created or destroyed.