

## YEAR 8 PHYSICS

### Curriculum Content

Five topics are taught in this year.

The topics are:

- Magnetism – methods of magnetising and demagnetising, magnetic fields, theory of magnetism magnetic effects of an electric current, electromagnets their uses, strength of an electromagnet computer simulation
- Sound – sound as a transfer of energy through a medium by a longitudinal wave motion. Definitions of the terms frequency, wavelength and amplitude. The ear, how we hear and our range of hearing.
- Electricity – series and parallel circuits. Circuit symbols and their use. Voltage, current and resistance. Use of variable resistors in everyday life. Cells and batteries.
- Mechanics – pressure as force/area and simple calculations involving this equation. Pressure in liquids and gases. Relationship between stretching force and total extension for a spring. Bridge investigation.
- Space and the solar system. Artificial and natural satellites. The planets. Exploring the solar system from the ground and with spacecraft. Outside the solar system.

### Knowledge, skills and understanding

#### *Experimental skills*

Practical work is designed to develop the following practical skills:

- *Variables*: being able to recognise the differences between catagoric, discrete or continuous variables, understand the need for control variables and what they are in specific experiments.
- *Obtaining and presenting evidence*: following written instructions, working safely and using equipment to measure and observe results. Recording results in labelled tables and drawing line graphs of the results. Recognising the sensitivity of the instruments used and how this affects on the precision of the readings.
- *Analysing results*: using tables and graphs to find patterns in the results and draw a conclusion for an investigation.

## **Assessment opportunities**

The experimental skills are developed and assessed by practical work including practical investigations.

Knowledge and recall are assessed by tests at the end of each topic and by the examination at the end of the year.

Understanding and the ability to process information are assessed by homework exercises and by the examination at the end of the year.