Curriculum Overview – SCIENCE Autumn Term

Etone College
Progress For All

YEAR 7

This term, your child will be developing their working scientifically skills, building their knowledge of matter in chemistry, forces in physics and organisms in biology.
Over the course of the term, your child will learn how to:

- Collect valid data from scientific experiments.
- Consider the variables that need to be controlled, changed and measured in an experiment.
- Analyse collected data, including the drawing of the correct graph for the data they have.
- Separate different substances, choosing the appropriate equipment and technique for the mixture that they have.
- Calculate the speed of objects, calculate the resultant force acting on an object and describe the effect that a resultant force has on an object's motion.

YEAR 8

In science in year 8 we begin by revisiting the key working scientifically skills in our Olympics themed unit. Students will then study physics, specifically forces focusing on contact forces and pressure. Following this they move onto a chemistry unit studying matter. In this unit they will learn about atoms, elements and compounds and the periodic table. Rounding off the autumn term is a biology unit on the topic of organisms. Here pupils will learn about breathing, the effects of smoking and alcohol on the human body, the digestive system and balanced diets.

YEAR 9

This term, your child will be further developing their working scientifically skills, deepening their knowledge of energy transfers, the periodic table, electrical circuits and cells.
Over the course of the term, your child will learn how to:

- Explain how energy transfers from one energy store to another.
- Reduce unwanted energy transfers.
- Explain how the periodic table has developed over time.
- Explain the trends in the periodic table focusing on group 1 and group 7 specifically.
- Set up series and parallel circuits and apply the theory of how these circuits work to predict the potential difference across components in a circuit.
- Explain how substances move in and out of cells.
- Explain how specialist cells are adapted to their functions.
- Complete calculations that use numbers that a very large or very small (using standard form).
- Identify errors in experimental data and how to minimise these.