



Year 7 Science



What have students at St. Crispin's been taught to understand and be able to do?

Core Knowledge

- **Cells**
Students learn about the structure of the cell, how molecules move in and out of cells and how cells work together to form organs.
- **Energy**
Students learn about the types of energy stores and transfers, how different energy resources are used to generate electricity and how electrical circuits work.
- **Particles and mixtures**
Students learn about the different types of particles, atoms, molecules and how they can be separated.
- **Forces and Motion**
Students learn about forces and their interactions, from the launch of projectiles, collisions between objects and how they cause motion.
- **Interdependence**
Students learn about the interactions between organisms in an ecosystem and the factors that effect where organisms are able to live.
- **Human impact**
Students learn about the uses of acids and alkalis and how the production of chemicals can have an impact on the environment, from acid rain to global warming and pesticide use.

Core Skills

Students will learn how to use laboratory equipment including a range of glassware to carry out reactions and measure volumes, digital equipment such as ammeters and voltmeters, equipment to study animals such as microscopes and quadrats. They will also make use of our extensive wireless data loggers such as accelerometers, wireless thermometers and light gates.

Students will learn how to record an investigation, each stage being treated separately, from hypothesis writing, method writing and production of tables and graphs.

Students will learn about how scientific ideas are used in society and how ideas have been developed over time. They will discuss the impact of these developments on society, for example, what would the impact be of creating a portable device to clean dirty water?



Year 7 Science continued



How has learning been assessed?

Each half term, students will take a multiple choice assessment in class.

This assessment will provide rapid feedback to students helping them to identify their areas of weakness.

In class, students will also complete a written task based on key practical skills. For example, they may be shown equipment and asked to write a method to separate sand and water. This will develop their written skills and develop their disciplinary knowledge.

What is coming up in the following year?

Each of the above topics will be revisited at a higher level in Year 8 in order to continually boost memory.

The main units are the human body (cell), heating and cooling (particles and energy), periodic table (particles), staying alive (cell), waves (new idea), chemical reactions (particles).