Year 8 Science

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

Core Knowledge

- **Human Body**
  Students will revisit the structure of the cell and learn how groups of cells work together in digestion, breathing and circulation.

- **Heating and cooling**
  Students will learn what happens to particles and the materials they form when they are heated or allowed to cool. They will learn about how heat energy is transferred. This unit builds on earlier learning on energy and particles.

- **Periodic table**
  Students will revisit the structure of the atom and learn about the different elements and how they are organized into the periodic table. They will investigate the reactions of some of the most common elements.

- **Staying alive**
  Students will revisit the structure of the cell again and learn about how cells divide through mitosis and meiosis. This leads to the development of the human body (puberty) and sexual reproduction.

- **Waves**
  Students are introduced to a new idea, the concept of how waves transfer energy (revisit) and the different ways waves impact every day life, from hearing to music and how we see.

- **Chemical reactions**
  Students revisit the structure of the atom and the periodic table to look at reactions between different elements. They investigate every day applications such as how to prevent rusting.

Core Skills

Students will develop their ability 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 to more independently record an investigation, each stage being treated separately, from hypothesis writing, method writing and production of tables and graphs.

Students will explore further 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 8 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?

Students will start their GCSE course in Year 9.