Science Curriculum:

Purpose of our study

The study of Science gives students a knowledge and understanding of the world around them and the development of investigative skills. Our curriculum covers all three Sciences; Biology, to give a greater awareness of the human body and the natural world; Chemistry, to recognise how atoms and molecules interact and relate to everyday life and the material world; and Physics, to explore the nature and properties of matter and energy, the mechanics of science in action and how the universe behaves.

Aims

Our aim is to deliver an extensive and diverse science curriculum which prepares our students for their transition to either the world of work or further education. At St Clement's, we deliver interactive knowledge-rich lessons which allow all students to be stretched yet feel able to achieve. Our lessons not only develop our students' investigative skills but also generate real interest in the scientific world and a lifelong love of learning. This creates a culture of high aspirations at St Clement's High School.

Our curriculum for science aims to ensure that all students:

- acquire core knowledge across Biology, Chemistry and Physics
- feel confident to take risks and work independently in the pursuit of excellence
- gain an understanding of scientific theories and discoveries, past and present
- are equipped with the scientific knowledge required to understand the uses and implications of science today and for the future

Subject content

Students are taught:

- a balanced curriculum across all three science from Year 7 to Year 11, with all students working towards at least two GCSE grades in Science
- to develop confidence in planning and undertaking an investigation
- to interpret and present data in an appropriate context
- to use scientific evidence to formulate a conclusion

ST CLEMENT'S HIGH SCHOOL

Science Curriculum Plan

ST CLEMENT'S HIGH SCHOOL

	Half Term	Year 7	Year 8	Year 9	Year 10	Year 11
Autumn Term	**1**	Lab Safety Cells and Reproduction Particles and Elements	Solutions Drawing Separation Techniques Pressure	Particle Model of Matter Elements, Compounds and The Periodic Table	**Biology** Cells Structure and Transport Cell division Organisation and the Digestive System Organising Animals and Plants Communicable Diseases Preventing and Treating Disease Non-Communicable Diseases Photosynthesis Respiration	**Biology** Human Nervous System Hormonal Coordination Homeostasis in Action (Triple) Reproduction Variation and Evolution Genetics and Evolution Adaptation, Interdependence and Competition Organising and Ecosystem Biodiversity and Ecosystems
	2	Introduction to Separation Techniques Introduction to Electricity	Light and Sound Energy Science of Farming	Cells and Transport		
Spring Term	**3**	Forces Chemical Reactions	Organ Systems Current and Electricity Magnetism	Energy and Energy Stores Introduction to Structure and Bonding	**Chemistry** Atomic Structure Periodic Table Structure and Bonding Chemical Calculations Chemical Changes Electrolysis Energy Changes	**Chemistry** Rates and Equilibrium Crude Oil and Fuels Organic Reactions (Triple) Polymers (Triple) Chemical Analysis The Earth's Atmosphere The Earth's Resources Using our Resources (Triple)
	4	Acids and Alkalis The Skeleton	Reactions of Metals Reactivity Series	Microbes and Diseases		
Summer Term	**5**	Ecosystems Plant Reproduction and Photosynthesis Solar System	Immune System Evolution Energy in Chemistry	Electric circuits and Mains Electricity Earth and the Atmosphere	**Physics** Conservation and Dissipation of Energy Energy Transfer by Heating Energy Resources Electric Circuits Electricity in the Home Molecules and Matter Radioactivity	**Physics** Forces in Balance Motion Force and Motion Force and Pressure (Triple) Wave Properties Electromagnetic Waves Light (Triple) Electromagnetism Space (Triple)
	6	Particle Model Rocks	Forces and Pressure	Biodiversity and Human Impact		