

St Cuthbert Mayne School Curriculum Map



Department: Science

Year 8

Department Intent and overview

Developing Scientists of the future

Key Stage 3 Curriculum Summary

Exploring the fundamental concepts of Science

NOTE: Science groups may have more than one teacher. In these cases students will be taught two units simultaneously, one by each teacher, so as not to disrupt learning and ensure continuity.

Autumn Term 1

Topic/Unit	Space Science	How do living things work?
Knowledge (Content covered)	• The universe and our solar system • Rotation of the planets • The moon • Satellites • Light Years • Gravity	• Photosynthesis • Respiration • Respiratory system • The impact of drugs and exercise on the human body • The skeleton • Muscles • DNA and inheritance
Skills	Investigating the unknown Modelling theoretical science Exploring wider concepts	Deepening understanding of key biological concepts Following experimental methods safely Understanding the variables in scientific investigation
Assessment	Pre-and Post progress check multiple choice, end of unit assessment	Pre-and Post progress check multiple choice, end of unit assessment
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	Astronaut Physicist	Biochemist Doctor Nurse

Autumn Term 2

Topic/Unit	How do living things work?
Knowledge (Content covered)	• Photosynthesis • Respiration • Respiratory system • The impact of drugs and exercise on the human body • The skeleton • Muscles • DNA and inheritance

Skills	Deepening understanding of key biological concepts Following experimental methods safely Understanding the variables in scientific investigation
Assessment	Pre-and Post progress check multiple choice, end of unit assessment
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	Biochemist , Doctor, Nurse

Spring Term 1

Topic/Unit	Structure and bonding
Knowledge (Content covered)	• Ionic Bonding • Covalent Bonding • Conservation of mass • The reactivity series • Displacement reactions • Acids and Alkalis
Skills	Following experimental methods safely Understanding the variables in scientific investigation Grasping scientific concepts which we cannot see
Assessment	Pre-and Post progress check multiple choice, end of unit assessment
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	Pharmacist

Spring Term 2

Topic/Unit	Energy 2
Knowledge (Content covered)	• Waves • Static Electricity • Magnetism
Skills	Applying basic scientific theories to new ideas Developing understanding of the fundamentals of science
Assessment	Pre-and Post progress check multiple choice, end of unit assessment
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	Optician

Summer Term 1

Topic/Unit	My Eco Project
Knowledge (Content covered)	• Ecosystems • Food security • Recycling • The rock cycle • The atmosphere
Skills	Applying basic scientific theories to new ideas Developing understanding of the fundamentals of science
Assessment	Pre-and Post progress check multiple choice, end of unit assessment
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	Environmental scientist

Summer Term 2

Topic/Unit	Advanced Fundamentals
Knowledge (Content covered)	• National grid • The heart • Blood vessels • Series and parallel circuits • Relative formula mass
Skills	Applying basic scientific theories to new ideas Developing understanding of the fundamentals of science
Assessment	End of year Examination
Gatsby 4 (Linking curriculum learning to careers) GATSBY BENCHMARK 4	