

# St Cuthbert Mayne School Curriculum Map 2021-2022



**Department: Science**

**Year 8**

**Department Intent and overview**

Developing Scientists of the future

**Key Stage 3 Curriculum Summary**

Exploring the fundamental concepts of Science

***Autumn Term 1***

<b>Topic/Unit</b>	Space Science	How do living things work?
<b>Knowledge (Content covered)</b>	<ul style="list-style-type: none"><li>• The universe and our solar system</li><li>• Rotation of the planets</li><li>• The moon</li><li>• Satellites</li><li>• Light Years</li><li>• Gravity</li></ul>	<ul style="list-style-type: none"><li>• Photosynthesis</li><li>• Respiration</li><li>• Respiratory system</li><li>• The impact of drugs and exercise on the human body</li><li>• The skeleton</li><li>• Muscles</li><li>• DNA and inheritance</li></ul>
<b>Skills</b>	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

<b>Assessment</b>	Re-and Post progress check multiple choice, 2x DIRT tasks	Re-and Post progress check multiple choice, 2x DIRT tasks
<b>Gatsby 4 (Linking curriculum learning to careers)</b> <a href="#">GATSBY BENCHMARK 4</a>	Astronaut Physicist	Biochemist Doctor Nurse

### *Autumn Term 2*

<b>Topic/Unit</b>	How do living things work?	
<b>Knowledge (Content covered)</b>	<ul style="list-style-type: none"> <li>● Photosynthesis Respiration</li> <li>● Respiratory system</li> <li>● The impact of drugs and exercise on the human body</li> <li>● The skeleton</li> <li>● Muscles</li> <li>● DNA and inheritance</li> </ul>	
<b>Skills</b>	Deepening understanding of key biological concepts Following experimental methods safely Understanding the variables in scientific investigation	
<b>Assessment</b>	Pre-and Post progress check multiple choice, 2x DIRT , end of unit assessment	
<b>Gatsby 4 (Linking curriculum learning to careers)</b> <a href="#">GATSBY BENCHMARK 4</a>	Biochemist , Doctor, Nurse	

### *Spring Term 1*

<b>Topic/Unit</b>	Structure and bonding
<b>Knowledge (Content covered)</b>	<ul style="list-style-type: none"> <li>● Ionic Bonding</li> <li>● Covalent Bonding</li> <li>● Conservation of mass</li> <li>● The reactivity series</li> <li>● Displacement reactions</li> <li>● Acids and Alkalis</li> </ul>
<b>Skills</b>	Following experimental methods safely Understanding the variables in scientific investigation Grasping scientific concepts which we cannot see
<b>Assessment</b>	Pre-and Post progress check multiple choice, 2x DIRT , end of unit assessment
<b>Gatsby 4 (Linking curriculum learning to careers)</b> <a href="#">GATSBY BENCHMARK 4</a>	Pharmacist

### *Spring Term 2*

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

[GATSBY BENCHMARK 4](#)

**Summer Term 1**

<b>Topic/Unit</b>	My Eco Project
<b>Knowledge (Content covered)</b>	Ecosystems Food security Purifying water Life Cycle Assessments Recycling The rock cycle The atmosphere
<b>Skills</b>	Applying basic scientific theories to new ideas Developing understanding of the fundamentals of science
<b>Assessment</b>	Pre-and Post progress check multiple choice, 2x DIRT , end of unit assessment
<b>Gatsby 4 (Linking curriculum learning to careers)</b> <a href="#">GATSBY BENCHMARK 4</a>	Environmental scientist

**Summer Term 2**

<b>Topic/Unit</b>	My Eco Project
<b>Knowledge (Content covered)</b>	Ecosystems Food security Purifying water Life Cycle Assessments Recycling The rock cycle The atmosphere
<b>Skills</b>	Applying basic scientific theories to new ideas Developing understanding of the fundamentals of science
<b>Assessment</b>	Pre-and Post progress check multiple choice, 2x DIRT , end of unit assessment
<b>Gatsby 4 (Linking curriculum learning to careers)</b> <a href="#">GATSBY BENCHMARK 4</a>	Environmental scientist