

CURRICULUM MAP – Year 7

Each topic will cover the key enquiry processes, relevant maths skills and cultural capital. See corresponding schemes of work for more detail



**ST JAMES'**  
CATHOLIC HIGH SCHOOL

KEY  
Biology  
Chemistry  
Physics

HT1:	HT2:	Assessment	HT3:	HT4:	Assessment	HT5:	HT6:	EOY Assessment
<p><b>INTENT</b> <u>Intro to science and Health and safety</u> CL – Health and Safety Advisor, Fire Safety Engineer.</p> <p><u>The particle model</u> Explain that the particle model is a concept that explains melting, freezing, boiling and condensing. Particles are always moving in some way depending on their kinetic energy. CL – Chocolatier</p> <p><u>Cells and organisation</u> Know the structure and function of cells. Explore how these cells were first discovered and described and be able to relate the structures to function. Enquiry – preparation of a</p>	<p><b>INTENT</b> <u>Energy Resources</u> Describe where our domestic energy supply comes from and compare different sources of energy.</p> <p>Enquiry – fuel comparison CL - Oil Rig Engineer, Environmental Scientist, Chemical Analyst, Climate Change Scientist, Renewable Energy Researcher</p> <p><u>Acids and alkalis</u> Explore everyday acids and alkalis and how to identify them. To use lab acids and bases and know their use in reactions.</p>	<p>Every two topics, students complete a synoptic, interleaved assessment which will assess content from the previous two topics and interleave questions from topics taught in the previous term or year, to promote long-term memory and retrieval.</p> <p>Assessments to assess the Enquiry Processes State what is meant by a risk assessment. List what should be included in a conclusion.</p>	<p><b>INTENT</b> <u>Sexual reproduction in animals</u> Learn about the reproductive systems in humans. Understand how the structure of the male and female reproductive organs are related to fertilisation, the development of a foetus and birth. CL – Midwife, Zookeeper, Zoologist, Vet</p> <p><u>Forces</u> Pupils will explore different forces and their effects.</p> <p>Enquiry – friction and surfaces CL – Racing engineer, Astronaut, Architect, Aerospace Engineer, Marine Engineer, Sports Equipment Designer</p>	<p><b>INTENT</b> <u>Metals and Non-Metals</u> Pupils will explore the properties of metals and non-metals and make observations of metals reacting in acids.</p> <p>Enquiry - exploring the properties of metals and non-metals CL – Metallurgist</p> <p><u>Muscle and Bones</u> Understand the effects of recreational drugs (including substance misuse) on behaviour, health and life processes. Disease and vaccination. <u>Muscles and the skeleton</u> CL – Sports Scientist, Physiotherapist</p>	<p>Every two topics, students complete a synoptic, interleaved assessment which will assess content from the previous two topics and interleave questions from topics taught in the previous term or year, to promote long-term memory and retrieval.</p> <p>Assessments to assess the Enquiry Processes Plan and investigation identifying the variables. Record data. State what is meant by a line of best fit.</p>	<p><b>INTENT</b> <u>Electricity</u> To introduce voltage, resistance and current within series and parallel circuits.</p> <p>Enquiry – modelling electric circuits CL – Electrical Engineer, Electrician.</p> <p><u>Mixtures and separations</u> Recap knowledge of solids, liquids and gases and apply this to separating techniques.</p> <p>Enquiry – separation of sand and salt CL – Alcohol Producer (Brewer), Forensic Scientist</p>	<p><b>INTENT</b> <u>Ecosystems</u> Investigate the impact of changes in a population of one organism on others in the ecosystem.</p> <p>Enquiry – population sampling CL – Ecologist, Ornithologist</p> <p><u>Sound</u> Describe how sound is produced and how a sound wave transfers energy. Understand how the structure of the ear allows sound to be heard. Enquiry – soundproofing CL – Sound and Acoustic Engineer</p>	<p>End of Year assessment – interleaved content from the whole Year 7</p> <p>Assessments to assess the Enquiry Processes With help, calculate a mean of two values. Add data to a graph or chart. State how to evaluate data and identify experimental errors. Suggest one improvement to an investigation.</p>



cheek cell and onion cell slide.  
CL – Microbiologist

Enquiry – antacid investigation  
CL – Forensic Scientist, Lab Technician

