

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 and baseline assessment</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.</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><b>CST – Option for the poor – Cheaper methods of energy production. Solidarity – Sustainable resources for the future. Creation and the environment –</b></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><b>CST – Dignity of work and participation – fertility treatment. Common good – Increasing population issues. Dignity – right to life.</b></p> <p><u>Forces</u>                      Pupils will explore different forces and their effects.</p> <p>Enquiry – friction and surfaces</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. Muscles and the skeleton                      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><b>CST – Creation and environment – safe disposal of batteries. Solidarity – reducing reliance of fossil fuels.</b></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</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><b>CST – Dignity – use of DDT and animal rights.</b></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</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>



<p>Enquiry – preparation of a cheek cell and onion cell slide. CL – Microbiologist CST – Life begins from a fertilized egg cell</p>	<p><b>reducing carbon footprint</b></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>Enquiry – antacid investigation CL – Forensic Scientist, Lab Technician CST – Peace – acid attacks damage society. Creation and the environment – incorrect pH reduces biodiversity.</p>		<p>CL – Racing engineer, Astronaut, Architect, Aerospace Engineer, Marine Engineer, Sports Equipment Designer</p>			<p>and salt CL – Alcohol Producer (Brewer), Forensic Scientist CST – Solidarity – production of clean drinking water.</p>	<p>CL – Sound and Acoustic Engineer CST – Creation and the environment – sound pollution.</p>	
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