

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.

CC = Cultural Capital examples



ST JAMES'
CATHOLIC HIGH SCHOOL

KEY

Biology

Chemistry

Physics

Cultural Capital

HT1:	HT2:	Assessment	HT3:	HT4:	Assessment	HT5:	HT6:	EOY Assessment
INTENT <u>Introduction to science</u> Health and safety <u>The particle model</u> 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. CC - Engineering – Use of nanoparticles when designing new technology. <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. CC Medicine – Research using cellular tissue for treatment of disease. <u>Enquiry – preparation of a cheek cell and onion cell slide.</u>	INTENT <u>Energy Resources</u> Describe where our domestic energy supply comes from and compare different sources of energy. CC Development of future technology to allow Government carbon emission targets to be met. <u>Enquiry – fuel comparison</u> <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. CC - Acid rain, bee and wasp stings, household chemicals <u>Enquiry – antacid investigation</u>	HT1 & HT2 Assessment 1 – interleaved content from HT1 and HT2 <u>Formative Assessments to assess the Enquiry Processes</u> - State what is meant by a risk assessment. - List what should be included in a conclusion.	INTENT <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. CC – understanding puberty <u>Forces</u> Pupils will explore different forces and their effects. <u>Enquiry – friction and surfaces</u> CC Engineering design of new construction techniques eg new sewer system and transport tube in expanding London; new buildings to withstand earthquakes. Use of blades for athlete performance in the para Olympics.	INTENT <u>Metals and Non-Metals</u> Pupils will explore the properties of metals and non-metals and the chemical properties of metal and non-metal oxides with respect to acidity. CC – Everyday uses of metals e.g. fridge magnets <u>Fit and healthy</u> Understand the effects of recreational drugs (including substance misuse) on behaviour, health and life processes. Disease and vaccination. Muscles and the skeleton CC - Public Health advice – improve knowledge of importance of personal fitness on long term health benefits.	HT3 and HT4 Assessment – interleaved with content from HT1-4 <u>Formative Assessments to assess the Enquiry Processes</u> - State some questions that can be investigated. - Identify different types of variables and experimental errors. - Plan and investigation - State what is meant by a line of best fit. - Suggest one improvement to an investigation.	INTENT <u>Electricity</u> To introduce voltage, resistance and current within series and parallel circuits CC – Electrical safety in the home. <u>Enquiry – modelling electric circuits</u> <u>Mixtures and separations</u> Build on their knowledge of solids, liquids, gases and apply this to separating techniques. CC - Potable water – methods to improve water standards in developing countries. <u>Enquiry – separation of sand and salt</u>	INTENT <u>Ecosystems</u> Investigate the impact of changes in a population of one organism on others in the ecosystem. CC – Explain issues with human food supplies in terms of insect pollinators <u>Enquiry – population sampling</u> <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. CC Audio engineers -designing better sound delivery systems for public events and noise reduction for local transport systems. <u>Enquiry – soundproofing</u>	HT1 – HT6 End of Year assessment – interleaved content from the whole Year 7 <u>Formative Assessments to assess the Enquiry Processes</u> - Name some types of enquiry question. - State an example of how data can be recorded. - With help, calculate a mean of two values. - Add data to a graph or chart. - State how to evaluate data.