CURRICULUM MAP – Year 9
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
INTENT Reactions of metals *Recap Y7 metals and non-metals.* Determine the reactivity of metals and use the reactivity series to predict the outcome of their reactions. Enquiry – reactions of metals Growing Our Food *Recap Y8 repro in plants*. Know the structure and adaptations of a plant. Understand photosynthesis and the nutrients needed for growth and how these processes link in with the carbon cycle Enquiry – Starch test	**INTENT** Forces and Motion *Recap Y7 Forces.* How forces can affect motion (Speed and acceleration) Pupils will also investigate forces and moments and be introduced to the concept of 'work' Enquiry – pivots investigation Genetics and Evolution *Recap Year 7 cells.* Understanding inheritance, chromosomes, DNA and genes Enquiry - extracting DNA from fruit	**Pupils will be assessed on interleaved content and the following enquiry processes.** Explain how and why some questions can be investigated and some cannot. Suggest examples of independent, dependent, and control variables in an unfamiliar situation. Explain in detail why a specific question cannot be investigated, suggesting alternative questions that can be investigated.	**INTENT** Electricity and Magnetism *Recap Y7 Electricity.* Pupils will understand magnets, magnetism and the interactions between magnetism and electricity. Enquiry – strength of electromagnets Materials and their uses *Recap Y8 rocks.* Understand how ceramics, polymers and composites are made and used. Life cycle assessments and potable water. Enquiry – making slime	**INTENT** Body Systems *Recap Year 7 cells.* Know how tissues and organs interact to form the major body systems. Energy *Recap Y8 energy resources.* Pupils learn how to calculate fuel uses and costs in the domestic context e.g. comparing power ratings of different appliances Enquiry – interpreting graphs of domestic fuel use	**Pupils will be assessed on interleaved content and the following enquiry processes.** Explain the effect of experimental error, and of not controlling all the variables Identify risks in an experiment and write a risk assessment for an investigation. Explain how to collect and record accurate and precise data. Calculate a mean for repeat readings Explain the choice of graph or chart for different types of data, and plot them.	**INTENT** Chemical Energy Changes *Recap atoms, elements, molecules, and the atmosphere.* Pupils recognise chemical and physical reactions and classify reactions as exothermic or endothermic. Apply the conservation of mass and relate it to balancing equations and RFM Fluids *Recap Y7 particles.* How pressure affects solids, liquids and gases. Investigate changes of state and resistive forces in fluids. Understand the anomaly of ice-water transition. Explain energy in matter Enquiry –floating and sinking	**INTENT** Mastery of Investigations Project Variables Units Data Manipulation Estimation Planning an investigation Carrying out scientific investigations	**Pupils will be assessed on interleaved content and the following enquiry processes.** Plot data on a graph and draw the line of best fit. Analyse data from an investigation to draw up a detailed conclusion, describe relationships, and suggest alternative explanations where appropriate. Compare and contrast data, suggesting reasons why the data may be different. Explain ways of improving data in a practical investigation. Write a detailed plan for a hypothetical investigation.