Subject Area: *Science – Year 11 TRILOGY*

Term 1A	Term 1B	Term 2A
GCSE AQA Combined Science Trilogy **Biology unit 5- Homeostasis and response** **Content** • Homeostasis • The nervous system • The endocrine system **Chemistry unit 6- The rate and extent of chemical change** **Content** • Calculating rate of reaction • Factors that affect rate of reaction • Catalysts • Reversible reactions and dynamic equilibrium	**GCSE AQA Combined Science Trilogy** **Physics unit 5 - Forces** **Content** • Scalar and vector quantities • Contact and non- contact forces • Gravity • Resultant forces • Work done • Elasticity • Motion • Momentum	**GCSE AQA Combined Science Trilogy** **Biology Unit 6- Inheritance, variation and evolution** **Content** • Sexual and asexual reproduction • Meiosis • DNA and the genome • Genetic inheritance and inherited disorders • Variation • Evolution and evidence for evolution • Selective breeding and genetic engineering • Extinction and classification **Chemistry Unit 7- Organic chemistry** **Content** • Crude oil and separation of its fractions. • Alkanes and their properties • Cracking **Chemistry Unit 8- Chemical analysis** **Content** • Purity and formulations • Chromatography • Tests for common gases
Assessment Objectives This is the knowledge, application and skills assessed by the end of topic test: • Define homeostasis and identify conditions that must be controlled. • Identify the pathway taken following a stimulus. • plan and carry out an investigation into the effect of a factor on human reaction time (RP) • Identify glands on a diagram. • Explain how insulin controls blood sugar levels. • Explain the role of hormones in the menstrual cycle. And how fertility can be controlled/supported. • Calculate the rate of reaction from graphs and numerical data. • Convert between different units. • Explain how different factors affect equilibrium and use le Chatelier's principle.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Define the terms scalar and vector • Use, apply and rearrange equations. • Convert between different units. • Draw accurate line graphs from given data and analyse them correctly. • Conduct an investigation into how mass/force affects acceleration (RP) • Apply the principle of the conservation of momentum.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Apply knowledge of meiosis to diagrams and given data. • Construct punnet square diagrams and use it to calculate percentage and probability of inherited characteristics. • Use the terms genotype, phenotype, homozygous and heterozygous confidently. • Evaluate the use of genetic engineering. • Use classification trees and the correct nomenclature for classification. • Explain how crude oil is formed and separated. • Draw the structural formulae of alkanes • Explain using diagrams how large alkanes can be cracked into smaller alkanes and alkenes. • Describe tests for hydrogen, oxygen, carbon dioxide and chlorine. • Define purity and formulation. • Calculate Rf values, identify the mobile and stationary phase. • Describe how to run a chromatogram (RP)
KAT - Week 7	MOCKS - Week 15	KAT - No KAT

Term 2B	Term 3A	Term 3B
GCSE AQA Combined Science Trilogy **Physics Unit 6 - Waves** **Content** • Longitudinal and transverse waves • Properties of waves • Electromagnetic waves **Biology Unit 7- Ecology** **Content** • Communities • Abiotic and biotic factors • Adaptations • Sampling techniques • Natural cycles • Biodiversity	**GCSE AQA Combined Trilogy** **Chemistry Unit 9 – Chemistry of the atmosphere** **Content** • Composition and evolution of the Earth's atmosphere • The greenhouse effect. • Global warming and climate change • Air pollution **Chemistry Unit 10 – Using resources** **Content** • Sustainable development • Potable water • Carry out a practical to demonstrate the purity of water (RP) • Water treatment • Alternative methods of metal extraction • Life cycle assessments **Physics Unit 7 – Magnetism and electromagnetism** **Content** • Permanent and induced magnetism • Magnetic fields • Electromagnetism • Motors	**Revision**
Assessment Objectives This is the knowledge, application and skills assessed by the end of topic test: • Define Transverse and longitudinal waves and identify wavelength and amplitude on a diagram. • Calculate wave speed using the wave equation. • Calculate the time period • Describe how to use a ripple tank to calculate frequency, speed and wavelength accurately. • Convert between different units. • Recall the order of the electromagnetic waves in terms of wavelength and frequency. • Recall uses and hazards of the electromagnetic waves. • Define the terms community, ecosystem, interdependence, population, abiotic and biotic. • Describe how adaptations can be structural, functional and behavioural. • Describe how a habitat can be sampled to determine the abundance of an organism (RP) • Calculate mode, median and mean. • Describe the carbon and the water cycle. • Describe factors that can reduce biodiversity and demonstrate an awareness of strategies used to increase biodiversity.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Recall the gases abundant in the early atmosphere and the values of the gases present today. • Explain why the composition of the atmosphere has changed. • Explain how the greenhouse effect causes global warming in terms of radiation. • Identify consequences of global warming. • Recall the gases that cause acid rain and the processes responsible. • Describe the processes involved in water treatment to make it potable. • Analyse data • Describe how bacteria and plants can be used to extract low grade copper. • Describe a LCA. • Demonstrate how to show the magnetic field around a bar magnet, a current carrying wire and a solenoid. • Recall the direction of the magnetic field around a bar magnet, a current carrying wire and a solenoid. • Use and manipulate the equation B=IL • Use Flemings left hand rule to determine the direction of force, current and magnetic field. • Describe how the magnetic field can be increased in a current carrying wire.	
MOCKS - Week 27	KAT - Week 33	KAT - EXAM WEEK