Subject Area:	*Science – Year 10 TRILOGY*

Term 1A	Term 1B	Term 2A
GCSE AQA Combined Science Trilogy **Biology unit 1- Cell Biology** **Content** • Cell organelles • Microscopes and the magnification equation • DNA, Chromosomes and cell division. • Cell transport **Chemistry unit 1- Atomic structure/periodic table** **Content** • Structure of the atom • The development of the periodic table • Patterns and trends within the periodic table. Techniques for separating mixtures	**GCSE AQA Combined Science Trilogy** **Physics unit 1 - Energy** **Content** • Energy stores and systems • Calculating kinetic, gravitational, elastic • Conservation and dissipation of energy	**GCSE AQA Combined Science Trilogy** **Biology Unit 2- Organisation** **Content** • The Organisation and the digestive system • The circulatory system • The respiratory system • Lifestyle and disease. • Enzymes • The organisation of plants.
Assessment Objectives This is the knowledge, application and skills assessed by the end of topic test: • Describe how cells are organised. • Explain how to make a slide and how to use the magnification equation. (RP) • Use, apply and re-arrange the magnification equation. • Convert between different units of measurement. • Compare and contrast light and electron microscopes. • Describe the genetic makeup of a cell. • Describe how substances are transported in cells. • Describe how an atom is organised. • Explain how different techniques can be used to separate mixtures. • Demonstrate an awareness of how the periodic table was developed and how it is organised Explain the trends found within the periodic table.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Demonstrate a knowledge of the different energy stores and the 4 methods of transfer between the stores. • Use, apply and rearrange equations. • Convert between different units.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Successful labelling of diagrams (heart, digestive system, Xylem, phloem, leaf, lungs). • Demonstrate a knowledge of two required practical's (food tests and enzymes). • Explain the difference between malignant and benign tumours. • Explain the effects of evaporation on the transpiration stream. • Explain how different factors affect transpiration.
KAT - Week 7	KAT - Week 15	KAT - No KAT

Term 2B	Term 3A	Term 3B
GCSE AQA Combined Science Trilogy **Chemistry Unit 2- Bonding, structure and properties** **Content** • Ionic and covalent bonding • Allotropes of carbon • Metallic bonding **Physics unit 2- Electricity** **Content** • Electrical circuits • Electricity in the home **Biology Unit 3- Infection and response** **Content** • Communicable diseases • Preventing and treating disease	**GCSE AQA Combined Trilogy** **Biology Unit 3- Infection and response** **Content** • Non-communicable disease • Drug testing • Antibiotics and painkillers **Chemistry unit 3 – Quantitative chemistry** **Content** • Conservation of mass • Relative atomic/formula mass/%mass • Calculating moles • Calculating reacting masses • Calculating concentrations **Physics unit 3 – particle model of matter** **Content** • Density • Changing state • Specific heat capacity • Internal energy • Latent heat • Pressure in gases **Biology Unit 4- Bioenergetics** **Content** • Photosynthesis • Respiration	**GCSE AQA Combined Trilogy** **Chemistry unit 4 – Chemical changes** **Content** • Reactivity series • Metal extraction and displacement • Reactions of acids • Weak and strong acids • Electrolysis **Chemistry Unit 5 – Energy changes** **Content** • Endothermic and exothermic reactions • RP – investigate the variables that affect temperature changes in reacting solutions • Calculation of bond energies **Physics unit 4- Atomic structure** **Content** • Atomic structure • Evolving models of the atom. • Radioactive decay • Half life
Assessment Objectives This is the knowledge, application and skills assessed by the end of topic test: • Show, using diagrams how elements can bond together. • Explain the properties of all allotropes. • Explain the properties of alloys compared to pure metals. • Demonstrate a knowledge of circuit symbols • Use, apply and rearrange equations. • Convert between different units.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Describe the process of vaccination. • Describe the different ways the body defends itself against disease. • Describe and explain the stages of drug testing • Describe the difference between antibiotics and painkillers. • Use, apply and rearrange equations. • Convert between different units. • Define a mole.	**Assessment Objectives** This is the knowledge, application and skills assessed by the end of topic test: • Construct word and balanced symbol equations for all chemical reactions. • Describe how to produce a salt (RP) • Determine the outcome of a chemical reaction using the reactivity series. • Predict products formed at the anode and cathode during electrolysis.

• Describe how to set up a test circuit to investigate VI relationships. (RP) • Label a diagram of a plug. • Compare and contrast DC and AC. • To be able to use a GCSE equation insert. • Define the national grid and the role of the transformer in the reduction of energy loss during transmission. • Demonstrate the knowledge of diseases specified in the syllabus. • Define pathogen and communicable disease • Explain how diseases can be transmitted and controlled.	• Describe different ways of calculating density (RP) • Describe the changes that occur when a substance changes state. • Define internal energy/ specific heat capacity and latent heat • Understand when to use latent heat of fusion/vaporisation. • Explain how the motion of the molecules in a gas is related to both its temperature and its pressure • Describe how to calculate SHC experimentally (RP) • Demonstrate how to measure the rate of photosynthesis (RP) • Interpret graphs identifying limiting factors. • Demonstrate knowledge of word and balanced symbol equations for photosynthesis and all forms of respiration. • Define metabolism and give examples.	• Explain the role of cryolite in aluminium extraction. • Define exothermic and endothermic • Draw and label a reaction profile. • Describe how to conduct a valid investigation to measure temperature of a solution when reactants are added. • Calculate bond energies. • Demonstrate an appreciation of the dimensions of the atom. • Comparison of the plum pudding model with the nuclear model. • Explain how Rutherford's scattering experiment led to the development of the atomic model. • Describe the properties of alpha, beta and gamma radiation and their properties. • Define and calculate half-life when given data. • Explain the difference between contamination and irradiation.
KAT - Week 27	KAT - Week 33	KAT - EXAM WEEK