

Sir Thomas Boughey Academy 2018/19

Faculty Area: Science.

Curriculum Map. Key Stage 3 : 2 Year delivery

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y7 Content and Topics	<p><b>Introduction to Science</b>                      Safety                      Apparatus                      Measuring                      Observing                      Analysing                      Evaluating</p> <p><b>Biology 1</b>  <b>1.Cells</b>                      Plant and Animal cells                      Specialised cells                      Unicellular organisms                      Movement of substances</p>	<p><b>Biology 1</b>  <b>2.Structure and function of body cells</b>                      Levels of organisation                      Gas exchange                      Breathing                      Skeleton                      Movement of joints                      Movement of muscles</p> <p><b>3.Reproduction</b>                      Adolescence                      Reproductive systems                      Fertilisation and implantation                      Development of a foetus                      The menstrual cycle                      Flowers and pollination                      Fertilisation and germination                      Seed dispersal</p>	<p><b>Chemistry 1</b>  <b>1.Particles and their behaviour</b>                      Particle model                      States of matter                      Melting and freezing                      Boiling                      Changes of state                      Diffusion                      Gas pressure</p> <p><b>2.Elements, atoms and compounds</b>                      Elements                      Atoms                      Compounds                      Chemical formulae</p>	<p><b>Chemistry 1</b>  <b>3.Reactions</b>                      Chemical reactions                      Word equations                      Burning fuels                      Thermal decomposition                      Conservation of mass                      Exothermic and endothermic</p> <p><b>4.Acids and Alkalis</b>                      Acids and Alkalis                      Indicators and pH                      Neutralisation                      Making salts</p>	<p><b>Physics 1</b>  <b>1.Forces</b>                      Forces                      Squashing and stretching                      Drag forces and friction                      Forces at a distance                      Balanced and unbalanced</p> <p><b>2.Sound</b>                      Waves                      Sound and energy                      Loudness and pitch                      Detecting sound                      Echoes and ultrasound</p>	<p><b>Physics 1</b>  <b>3.Light</b>                      Light                      Reflection                      Refraction                      The eye and the camera                      Colour</p> <p><b>4.Space</b>                      The night sky                      Solar system                      Earth                      Moon</p>
Y7 Skills	Introduction to basic skills Analysing data Constructing graphs	Investigating rate of ventilation Analysing data Constructing graphs	Analysing and interpreting data Constructing graphs	Measuring and calculating mass Completing and evaluating a scientific plan	Investigating stretching elastic bands Investigating friction Calculating resultant forces Interpreting data and graphs	Investigating the properties of light Analysing data to identify trends and patterns Constructing graphs

Y7 Assessments/PPEs	Baseline test 1 Baseline test 2 Cells test	Structure and function of body cells test Reproduction test <b>BIOLOGY 1 TEST</b>	Particles and their behaviour test Elements, atoms and compounds test	Reactions test Acids and Alkalis test <b>CHEMISTRY 1 TEST</b>	Forces test Sound test	Light test Space test <b>PHYSICS 1 TEST</b>
Y8 Content and Topics	<b>Biology 2</b> <b>1.Health and Lifestyle</b> Nutrients Food tests Unhealthy diet Digestive system Bacteria and enzymes Drugs Alcohol Smoking <b>2.Ecosystem Processes</b> Photosynthesis Leaves Plant minerals Chemosynthesis Aerobic respiration Anaerobic respiration Food chains and webs Disruption to food chains Ecosystems	<b>Biology 2</b> <b>3.Adaptation and Inheritance</b> Competition and adaptation Adapting to change Variation Continuous and discontinuous variation Inheritance Natural selection Extinction	<b>Chemistry 2</b> <b>1.The periodic table</b> Metals and non-metals Groups and periods Elements of group 1 Elements of group 7 Elements of group 0 <b>2. Separation techniques</b> Mixtures Solutions Solubility Filtration Evaporation and distillation Chromatography	<b>Chemistry 2</b> <b>3.Metals and Acids</b> Acids and metals Metals and oxygen Metals and water Metal displacement reactions Extracting metals Ceramics Polymers Composites <b>4.The Earth</b> The Earth and its atmosphere Sedimentary rocks Igneous and metamorphic rocks The rock cycle The carbon cycle Climate change Recycling	<b>Physics 2</b> <b>1.Electricity and Magnetism</b> Charging up Circuits and current Potential difference Series and parallel Resistance Magnets and magnetic fields Electromagnets Using electromagnets <b>Physics 2</b> <b>2.Energy</b> Food and fuels Energy adds up Energy and temperature Energy transfer particles Energy transfer radiation Energy resources Energy and power Work, energy and machines	<b>3.Motion and Pressure</b> Speed Motion graphs Pressure in gases Pressure in liquids Pressure in solids Turning forces

Y8 Skills	Investigating rate of enzyme action Investigating rate of photosynthesis Investigating rate of respiration Evaluating impact	Analysing data Constructing graphs Evaluating	Investigating the rate of evaporation Analysing and interpreting results and evaluating validity	Investigating reactivity Analysing data Constructing graphs Evaluating human impact	Investigating resistance Investigating electromagnets Investigating rate of thermal energy transfer Calculations	Analysing data Constructing graphs Calculation work Investigating moments
Y8 Assessments/PPEs	Health and Lifestyle test  Ecosystem Processes test	Adaptation and Inheritance test  <b>BIOLOGY 2 TEST</b>	The periodic table test  Separation techniques test	Metals and acids test  The Earth test  <b>CHEMISTRY 2 TEST</b>	Electricity and magnetism test  Energy test	Motion and pressure test  <b>PHYSICS 2 TEST</b>