



Brompton Hall School

Science Long Term Plan

KS2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3 and 4 Cycle A	Animals, inc. humans (NC. Yr.3)	Forces (NC. Yr.3)	Light (NC. Yr.3)	Rocks (NC. Yr.3)	Plants (NC. Yr.3)	Magnets (NC. Yr.3)
Year 3 and 4 Cycle B	States of matter (NC. Yr.4)	Sound (NC. Yr.4)	Humans (Teeth & Digestion) (NC. Yr.4)	Electricity (NC. Yr.4)	Animals (Food Chains) (NC. Yr.4)	Living things and their habitats (NC. Yr.4)
Year 5 and 6 Cycle A	Properties of materials (NC. Yr.5)	Earth and space (NC. Yr.5)	Living things and their habitats (NC. Yr.5)	Changes in materials (NC. Yr.5)	Forces (NC. Yr.5)	Animals including humans (NC. Yr.5)
Year 5 and 6 Cycle B	Evolution and Inheritance (NC. Yr.6)	Living things and their habitats (NC. Yr.6)	Light (NC. Yr.6)	Animals inc. humans: circulatory system (NC. Yr.6)	Electricity (NC. Yr.6)	Animals inc. humans: keeping healthy (NC. Yr.6)

KS3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	1. Forces 1.1 Speed 1.1.1 Introduction to forces 1.1.2 Balanced & unbalanced 1.1.3 Speed 1.1.4 Distance time graphs 1.2 Gravity 1.2.1 Gravity 1.3 Contact Forces (Part 2) 1.3.1 Friction & Drag 1.3.2 Squashing & Stretching 1.3.3 Turning Forces	5. Matter 5.1 Particle Model 5.1.1 Particle Model 5.1.2 States of matter 5.1.3 Melting & freezing 5.1.4 Boiling 5.1.5 More changes of state 5.1.6 Diffusion 5.1.7 Gas Pressure 5.1.8 Inside Particles 5.2 Separating Mixtures 5.2.1 Pure substances & mixtures 5.2.2 Solutions 5.2.3 Solubility 5.2.4 Filtration 5.2.5 Evaporation & distillation 5.2.6 Chromatography	1. Electromagnets 2.1 Potential Difference & Resistance 2.1.1 Potential Difference 2.1.2 Resistance 2.1.3 Series Parallel circuits 2.2 Current 2.2.1 Current 2.2.2 Charging up	8. Organisms 8.2 Cells 8.2.1 Observing cells 8.2.2 Plant & animal cells 8.2.3 Specialised cells 8.2.4 Movement of substances 8.2.5 Uni-cellular organisms 9.Ecosystems 9.2 Plant reproduction 9.2.1 Flowers & Pollination 9.2.2 Fertilisation & Germination 9.2.3 Seed dispersal	9. Ecosystems 9.1 Interdependence 9.1.1 Food chains & webs 9.1.2 Disruption to food chains and webs 9.1.3 Ecosystems 9.1.4 Competition 9.Ecosystems 9.4 Photosynthesis 9.4.1 Photosynthesis 9.4.2 Leaves 9.4.3 Investigating Photosynthesis 9.4.4 Plant minerals	10. Genes 10.1.1 Variation 10.1.2 Variation 10.1.3 Continuous & discontinuous 10.1.4 Adapting to change 10.3.1 Variation (Part 2) 10.3.1 Natural selection 10.3.2 Charles Darwin 10.3.3 Extinction 10.3.4 Preserving Biodiversity



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Year 8	Lab safety and skills	<p>2. Energy 3.1 Energy Costs 3.1.1 Food & Fuels 3.1.2 Energy Resources 3.1.3 Energy & Power</p> <p>3.2 Energy Transfer 3.2.1 Energy adds up 3.2.2 Energy dissipation</p>	<p>7. Earth 7.1 Earth Structure 7.1.1 The structure of the earth 7.1.2 Sedimentary Rocks 7.1.3 Igneous & metamorphic rocks 7.1.4 The rock cycle 7.1.5 Ceramics</p> <p>7.2 Universe 7.2.1 The night sky 7.2.2 The solar system 7.2.3 The earth 7.2.4 The moon and changing Ideas</p>	<p>8. Organisms 8.1 Movement 8.1.1 Levels of organisation 8.1.2 The skeleton 8.1.3 Movement: Joints 8.1.4 Movement: Muscles</p> <p>10. Genes 10.2 Human Reproduction 10.2.1 Adolescence 10.2.2 Reproductive systems 10.2.3 Fertilisation and implantation 10.2.4 Development of the foetus 10.2.5 The menstrual cycle</p>	<p>4. Waves 4.1 Sound 4.1.1 Sound waves & speed 4.1.2 Loudness & amplitude 4.1.3 Frequency & Pitch 4.1.4 The ear & hearing</p> <p>4.3 Wave Effects 4.3.1 Sound waves, water waves and Energy 4.3.2 Radiation and Energy</p> <p>4.4 Wave properties 4.4.1 Modelling waves</p>	<p>6. Reactions 6.1 Acids & Alkalis 6.1.1 Chemical Reactions 6.1.2 Acids & Alkalis 6.1.3 Indicator & pH 6.1.4 Acid strength 6.1.5 Neutralisation 6.1.6 Making salts</p> <p>6.2 Metals and non-metals 6.2.1 More about elements 6.2.2 Chemical reactions of metals and non-metals 6.2.3 Metals and acids 6.2.4 Metals and oxygen 6.2.5 Metals and water 6.2.6 Metal displacement reactions</p>	<p>8. Organisms 8.3 Breathing 8.3.1 Gas Exchange 8.3.2 Breathing 8.2.3 Drugs 8.2.4 Alcohol 8.2.5 Smoking</p> <p>8.4 Digestion 8.4.1 Nutrients 8.4.2 Food Tests 8.4.3 Unhealthy diet 8.4.4 Digestive system 8.4.5 Bacteria and enzymes in digestion.</p>
Year 9	Lab safety and skills	<p>10. Genes 10.3 Human Reproduction 10.4.1 Inheritance 10.4.2 DNA 10.4.3 Genetics 10.4.4 Genetic Modification</p> <p>9. Ecosystems 9.3 Interdependence 9.3.1 Aerobic respiration 9.3.2 Anaerobic respiration 9.3.3 Biotechnology</p>	<p>5. Matter 5.3 Elements 5.3.1 Elements 5.3.2 Atoms 5.3.3 Compounds 5.3.4 Chemical Formula 5.3.5 Polymers</p> <p>5.4 Periodic Table 5.4.1 The periodic Table 5.4.2 Elements of Group 1 5.4.3 Elements of Group 7 5.4.4 Elements of Group 0</p>	<p>1. Forces 1.4 Pressure 1.4.1 Pressure in gases 1.4.2 Pressure in liquids 1.4.3 Stress on solids</p> <p>2. Electromagnetics 2.3 magnetism 2.3.1 Magnets and magnetic fields</p> <p>2.4 Electromagnets 2.4.1 Electromagnets 2.4.2 Using electromagnets</p>	<p>6. Reactions 6.3 Types of reaction 6.3.1 Atoms in Chemical reactions 6.3.2 Combustion 6.3.3 Thermal decomposition 6.3.4 Conservation of mass.</p> <p>6.4 chemical Energy 6.4.1 Exothermic and endothermic 6.4.2 Energy level diagrams Bond energies</p>	<p>3. Energy 3.3 Work 3.3.1 Work, energy and machines</p> <p>3.4. Heating and cooling 3.4.1 Energy and temperature 3.4.2 Energy transfer particles 3.4.3 Energy transfer radiation and insulation</p>	<p>7. Earth 7.3. Climate 7.3.1 Global warming 7.3.2 The carbon cycle 7.3.3 Climate Change</p> <p>7.4 Earth Resources 7.4.1 Extracting metals 7.4.2 Recycling</p>