

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
<b>Year 8 Science</b>	<b>Content delivered:</b> <b>Physics</b> Force diagrams Contact and non-contact forces Speed, distance and time Gravity <b>Chemistry</b> Elements Compounds Polymers	<b>Content delivered:</b> <b>Chemistry</b> Periodic table Group 1 Group 7 Group 0 <b>Content delivered:</b> <b>Biology</b> Gas exchange Breathing Drugs, alcohol & smoking Nutrients Digestive system Diets Bacteria and enzymes in digestion	<b>Content delivered:</b> <b>Physics</b> Soundwaves Frequency and pitch The ear Light Reflection Refraction The eye and vision Colour	<b>Content delivered:</b> <b>Chemistry</b> Structure of the Earth Rock cycle Global warming & climate change Carbon cycle Extracting metals Recycling	<b>Content delivered:</b> <b>Biology</b> Variation Human reproduction DNA <b>Physics</b> Work Machines	<b>Content delivered:</b> <b>End of year review and recap</b> <b>Physics</b> Conduction Convection Radiation <b>Physics</b> Electromagnets Circuit breakers
<b>Key Words</b> <b>Level 2</b> <b>Level 3</b>	Balanced, unbalanced, contact, non-contact, newton, speed, displacement, acceleration, gravity, mass, weight, elements, compound, mixture, atom, metal, non-metal, property, periodic table	Periodic Table, word equation, symbol equation, prefix, suffix, reactivity, alkali/alkaline, density, oxidation, halogen, noble gas, displacement, oxygen, carbon dioxide, lung, bronchi, trachea, alveoli, inhalation, exhalation, ventilation, breathing, medicinal, recreational, nicotine, depressant, deficiency, Benedict's reagent, biuret, ethanol, malnutrition, digestion, oesophagus, pancreas, intestine, enzyme, denature, amylase, protease, lipase, active site, combustion,	Wave, oscilloscope, frequency, amplitude, pitch, wavelength, ray, path, reflect, absorb, shadow, translucent, transparent, opaque, specular, diffuse, dispersion	Mantle, crust, inner/outer core, diameter, radius, crystal/crystallisation, grain size, layers, fossils, sedimentation, extrusive, intrusive, weathering, erosion, deposition, transportation. carbon dioxide, radiation, wavelength, pollution, renewable, non-renewable, oxidation, reduction, reduce, reuse, recycle, climate change, global warming.	Natural selection, continuous and non-continuous data, DNA, allele, gene, dominant, recessive, characteristic, inheritance, gamete, chromosome, probability, levers, work done	Attract, gravitational field, magnetic field, mass, non-contact, repel, weight, electric field, electrons, negative, positive, nucleus, static,
<b>Where previous knowledge has occurred and future development</b> <b>KS2 → KS3 → KS4 → KS5</b>	Physics KS2: Forces as pushes and pulls KS3: Year 9 Forces KS4: Year 10 Particle model (P4.3) KS4: Year 10 Atomic structure (P4.4) KS4: Year 11 Forces (P4.5) KS5: Year 12 Mechanics Chemistry KS2: Comparing and grouping together materials based on their properties KS3: Year 7 Elements KS3: Year 9 Conservation of mass KS4: Year 10 Atomic structure (C4.1) KS4: Year 10 Organisation (C4.2) KS5: Year 12 Mechanisms of breathing KS5: Year 12 Chemistry unit 3 KS2: How animals get nutrition from what they eat; parts of the digestive system and types of teeth KS3: Respiration KS4: Year 10 Organisation (B4.2) KS5: Year 12 The effects of substances on the brain	Chemistry KS2: Comparing and grouping together materials based on their properties KS3: Year 7 Elements KS3: Year 9 Conservation of mass KS4: Year 10 Atomic structure (C4.1) KS4: Year 10 Organisation (C4.2) KS5: Year 12 Mechanisms of breathing KS5: Year 12 Chemistry unit 3 KS2: How animals get nutrition from what they eat; parts of the digestive system and types of teeth KS3: Respiration KS4: Year 10 Organisation (B4.2) KS5: Year 12 The effects of substances on the brain	Physics KS2: Pitch and volume relate to vibrations KS2: Shadows are formed when light is blocked by solid objects, and we see objects because they give out or reflect light into the eye KS3: Year 9 Waves KS4: Year 11 Waves (P4.4) KS4: Year 11 The eye (B4.5) KS5: Waves and the particle nature of light	Chemistry KS2: What rocks are made of and comparing types of rocks KS3: Year 7 Elements KS4: Year 10 Chemical changes (C4.4) KS4: Year 11 Chemistry of the atmosphere (C4.9) KS4: Year 11 Ecology (B4.7) KS5: Year 13 Enthalpy of combustion, polymerisation KS4: Year 11 Chemistry and atmosphere (C4.9) KS4: Year 11 Using resources (C4.10)	Biology KS2: Fossils and variation in offspring KS3: Year 9 Inheritance & natural selection KS4: Year 11 Inheritance (B4.6) KS5: Year 13 Genetics Physics KS2: Forces as pushes and pulls KS3: Year 9 Forces KS4: Year 10 Particle model (P4.3) KS4: Year 10 Atomic structure (P4.4) KS4: Year 11 Forces (P4.5) KS5: Year 12 Mechanics	KS2: Magnets KS3: Year 7 Circuits KS3: Year 7 Energy KS4: Year 10 Energy (P4.1) KS5: Year 13 Evolution KS5: Year 12 Chemistry unit 2 KS5: Year 13 Electricity and magnetic fields KS5: Year 13 Thermodynamics
<b>Common Misconceptions</b>	Confusing weight and mass Describing the differences between compounds and mixtures. Miss-use of super and subscripts	Breathing and respiration are the same Malnutrition means you are underweight All deafness is the same	Describing the differences between compounds and mixtures. That objects give off colour	Global warming and climate change are the same	Not using correct terminology for reproductive body parts. Confusing the menstrual cycle with a period	The direction of energy flow with insulation
<b>Literacy</b>	Scientific writing (HSW): speed investigations. Rearranging formulae Drawing and interpreting graphs	Scientific writing (HSW): lung capacity NHTW reviews as starter activities	Scientific writing (HSW): reflection and refraction. NHTW reviews as starter activities	NHTW reviews as starter activities Descriptive describing the sequences within the rock cycle. Writing to argue: the impact of recycling	Scientific writing (HSW): levers NHTW reviews as starter activities	Scientific writing (HSW): conduction through metals & drawing magnetic field lines.
<b>Numeracy</b>	Drawing appropriate graphs Rearranging formulae	Calculating percentages	Calculating angles	Working with percentages	Using formulas	Calculating means
<b>Homework</b>	Completion of Kerboodle/Seneca/Carousel quizzes	Completion of Kerboodle/Seneca/Carousel quizzes	Completion of Kerboodle/Seneca/Carousel quizzes	Completion of Kerboodle/Seneca/Carousel quizzes	Completion of Kerboodle/Seneca/Carousel quizzes	Completion of Kerboodle/Seneca/Carousel quizzes
<b>Assessment this half-term</b>	Unit test for physics	Unit test for chemistry	Unit test for biology	Unit test for chemistry	Unit test for biology	Unit test for physics GL Assessment

<b>Career opportunities Employment Links</b>	LIFE SKILLS: Understanding the factors affecting braking distances EMPLOYMENT: Forensic investigator	LIFE SKILLS: Understanding the impact of climate change EMPLOYMENT: Archaeologist	LIFE SKILLS: Understanding how hearing can be damaged EMPLOYMENT: Sound Engineer	LIFE SKILLS: Understanding how global warming is caused EMPLOYMENT: Geologist	LIFE SKILLS: Understanding the effects and impacts of different drugs EMPLOYMENT: Asthma nurse	LIFE SKILLS: Understanding how energy can be lost in the home EMPLOYMENT: Heating engineer
<b>Enrichment</b>	REACT roadshow			Nancy Rothwell Award	STEM Week Activities	Geography/Biology Field Trip St Bees Forensics Workshop
<b>Practical activities/HSW</b>	Forces Trolleys on ramps	Lung/gill dissection Lung volume Group 1 metals Group 7 displacement Food tests Enzymes	Spectrum of light Reflection Refraction Oscilloscope/microphone	Rock samples Extracting metals	Continuous variation Levers	Insulation Metal conductivity Electromagnets
<b>Employability Skills</b>	<b>Aiming high</b> Creativity Leadership Listening Presenting Problem solving Staying positive <b>Literacy</b> <b>Numeracy</b> Independence <b>Communication</b> Teamwork	<b>Aiming high</b> Creativity Leadership Listening Presenting Problem solving Staying positive <b>Literacy</b> Numeracy Independence Communication Teamwork	<b>Aiming high</b> Creativity Leadership Listening Presenting Problem solving Staying positive <b>Literacy</b> <b>Numeracy</b> Independence <b>Communication</b> Teamwork	<b>Aiming high</b> Creativity Leadership Listening Presenting Problem solving Staying positive <b>Literacy</b> <b>Numeracy</b> Independence <b>Communication</b> Teamwork	<b>Aiming high</b> Creativity Leadership Listening Presenting Problem solving Staying positive <b>Literacy</b> <b>Numeracy</b> Independence Communication Teamwork	<b>Aiming high</b> Creativity <b>Leadership</b> Listening Presenting Problem solving Staying positive <b>Literacy</b> <b>Numeracy</b> Independence Communication <b>Teamwork</b>
<b>IT Skills</b>	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes
<b>Notes/developments /standardisation comments</b>						