YEAR 8 CURRICULUM INFORMATION – KS3 Science		
	Spring 1	Spring 2
What will students be learning?	**Biology:** Complete the unit of **Digestion** • Nutrients • Food tests • Unhealthy diets • Digestive system • Bacteria and enzymes in digestion **Chemistry:** **Types of chemical reactions** • Atoms and chemical reactions • Combustion • Thermal decomposition • Conservation of mass • Exothermic and endothermic reactions • Energy level diagrams • Bond energies **Physics:** **Sound, wave effects and properties** • Sound waves and speed • Loudness and amplitude • Frequency and pitch • The ear and hearing • Sound waves, water waves and energy • Radiation and energy • Modelling waves **Fourth Science lesson:** **Evolution** • Natural selection • Charles Darwin • Extinction • Preserving biodiversity	**Biology:** Complete the unit of **Respiration** • Aerobic respiration • Anaerobic respiration • Biotechnology Begin the unit of **Photosynthesis** • Photosynthesis • Leaves • Investigating photosynthesis • Plant minerals **Chemistry:** **Earth's climate and resources** • Global warming • The carbon cycle • Climate change • Extracting metals • Recycling **Physics:** **Sound, wave effects and properties** • Sound waves and speed • Loudness and amplitude • Frequency and pitch • The ear and hearing • Sound waves, water waves and energy • Radiation and energy • Modelling waves **Fourth Science lesson:** **Earth Structure** • The structure of the Earth • Sedimentary rocks • Igneous and metamorphic rocks

		• The rock cycle • Ceramics
How will students be assessed?	Milestone assessments In lesson interim knowledge checks Independent homework tasks	Milestone assessments In lesson interim knowledge checks Independent homework tasks
Literacy – What keywords will be taught?	**Biology:** nutrient, carbohydrate, lipid, protein, vitamin, mineral, dietary fibre, balanced diet, food test, hypothesis, malnourishment, starvation, obese, deficiency, digestive system. digestion, gullet, stomach, small intestine, large intestine, rectum, anus. villi, gut bacteria, enzyme, catalyst, carbohydrase, protease, lipase, bile **Chemistry:** chemical reaction, reactants, products, conserved, fuel, combustion, fossil fuel, non-renewable, renewable, decomposition, thermal decomposition, conservation of mass, physical change, balanced symbol equation, endothermic change, endothermic reaction, exothermic change, exothermic reaction, energy level diagram, chemical bond, catalytic converter, catalyst **Physics:** vibration, medium, vacuum, speed of sound, speed of light, amplitude, frequency, wavelength, longitudinal wave, oscilloscope, absorption, echo, pitch, hertz, kilohertz, auditory range, infrasound, ultrasound, ear, pinna, auditory canal, eardrum, outer ear, ossicle, middle ear, amplify, oval window, cochlea, auditory nerve, inner ear, volume, decibel, compression. rarefaction, pressure wave, microphone, loudspeaker, ultrasound, visible light, electromagnetic spectrum. ionisation, radio waves, microwaves, infrared (IR), ultraviolet (UV), X-rags, gamma rays, transverse wave, wave, longitudinal wave, transmission, superpose **Fourth Science lesson:** evolution, fossil, natural selection, peer review, extinct, competition, biodiversity, population, endangered species, conservation, captive breeding, gene bank	**Biology:** aerobic respiration, plasma, haemoglobin, anaerobic respiration, oxygen debt, fermentation, biotechnology, algae, producer, photosynthesis, chlorophyll, stomata, iodine, nitrates, phosphates, potassium, magnesium, deficiency, fertiliser **Chemistry:** atmosphere, greenhouse effect, greenhouse gas, global warming, respiration, combustion, fossil fuel, photosynthesis, carbon cycle, carbon sink, climate change, natural resources, mineral, ore, extraction, electrolysis, recycling **Physics:** vibration, medium, vacuum, speed of sound, speed of light, amplitude, frequency, wavelength, longitudinal wave, oscilloscope, absorption, echo, pitch, hertz, kilohertz, auditory range, infrasound, ultrasound, ear, pinna, auditory canal, eardrum, outer ear, ossicle, middle ear, amplify, oval window, cochlea, auditory nerve, inner ear, volume, decibel, compression. rarefaction, pressure wave, microphone, loudspeaker, ultrasound, visible light, electromagnetic spectrum. ionisation, radio waves, microwaves, infrared (IR), ultraviolet (UV), X-rags, gamma rays, transverse wave, wave, longitudinal wave, transmission, superpose **Fourth Science lesson:** crust, mantle, core, mineral, sedimentary rock, igneous rock, metamorphic rock, porous, weathering, sediment, erosion, transport, deposition, strata, igneous, durable, magma, lava, metamorphic, rock cycle, uplift, ceramic,

What employability skills are being developed?	Interpersonal skills Group work Logical and lateral thinking Developing links between topics and ideas Investigative skills Analytical skills	Interpersonal skills Group work Logical and lateral thinking Developing links between topics and ideas Investigative skills Analytical skills
Wider Curriculum Links?	Maths: measuring angles Food/gardening/horticulture Links with other STEM subjects	Maths: measuring angles Food/gardening/horticulture Links with other STEM subjects
What useful websites are there for this topic?	BBC Bitesize KS3 Science KS3 Science - BBC Bitesize	BBC Bitesize KS3 Science KS3 Science - BBC Bitesize
What wider reading could be done for this topic?	There are a selection of KS3 revision guides available online such as: CGP KS3 Science | CGP Books Oxford University Press: Activate KS3 Science	There are a selection of KS3 revision guides available online such as: CGP KS3 Science | CGP Books Oxford University Press: Activate KS3 Science
What else can students be doing independently to develop their understanding of this topic?	Regularly reviewing work and topics completed in lessons Completing further reading around the topics covered Revise for milestone assessments Practice mathematical skills such as range, mean, percentages and graph skills etc	Regularly reviewing work and topics completed in lessons Completing further reading around the topics covered Revise for milestone assessments Practice mathematical skills such as range, mean, percentages and graph skills etc