

Year: 8
Subject: Science

Term	Week	Focus	Summary	Learning Outcomes	Parental Support	Independent Learning
1A	1	Health and lifestyle	In this unit you will compare the effects of health and unhealthy lifestyles on the body.	Nutrients Food tests Unhealthy diet	BBC Bitesize - Diet https://www.bbc.co.uk/bitesize/articles/zmwvvgdm#zyf4r2p	Talk to Frank https://www.talktofrank.com/
	2	Health and lifestyle		Digestive system Bacteria and enzymes in digestion Drugs	Seneca https://senecalearning.com/ Course: KS3 science Topic - 1 Biology Sections - 1.4.1-1.4.13	Careers - radiographer https://www.healthcareers.nhs.uk/explore-roles/allied-health-professionals/roles-allied-health-professions/roles-allied-health-professions/diagnostic-radiographer
	3	Health and lifestyle		Alcohol Smoking Practical/scientific skills	Drugs and alcohol https://www.bbc.co.uk/bitesize/articles/zrs44xs	Careers - dietician https://www.healthcareers.nhs.uk/explore-roles/allied-health-professionals/roles-allied-health-professions/dietitian
	4	Health and lifestyle		Practical/scientific skills Practical/scientific skills Assessment		
	5	Health and lifestyle The Periodic table	In this unit you will identify patterns in the properties of elements, and learn how to use the Periodic Table to predict properties.	Metals and non-metals Groups and periods	BBC Bitesize - covers the whole topic https://www.bbc.co.uk/bitesize/topics/zv9nhcw/articles/zf4pp4j	Explore the elements using the interactive periodic table https://www.rsc.org/periodic-table

	6	The Periodic table		The elements of group 1 The elements of group 7 The elements of group 0	Seneca https://senecalearning.com/ Course: KS3 Science Topic - 2 Chemistry Sections - All of section 2.4	How the periodic table gets new elements https://www.sciencenews.org/article/physics-chemistry-how-periodic-table-gets-new-elements
	7	The Periodic table		Practical/scientific skills Practical/scientific skills Practical/scientific skills		Careers in chemistry: Analytical chemistry https://edu.rsc.org/job-profiles/analytical-technician-plastics/4010921.article

Term	Week	Focus	Summary	Learning Outcomes	Parental Support	Independent Learning
1B	1	The Periodic table Electricity and magnetism	In this unit you will discover how circuits work.	Assessment Feedback Charging up	BBC Bitesize: Electricity: https://www.bbc.co.uk/bitesize/topics/zgy39j6/articles/z8mxgdm Magnetism: https://www.bbc.co.uk/bitesize/topics/zrvbkqt/articles/zh766g8 (cover the whole topic)	pHEt simulation https://phet.colorado.edu/en/simulations/circuit-construction-kit-dc
	2	Electricity and magnetism		Circuits and current Potential difference Series and parallel	Seneca - covers whole topic Course: KS3 science Topic - 3 Physics	Careers with physics - cybersecurity: https://www.iop.org/careers-p

					Sections: All of 3.4	https://www.bbc.com/physics/your-future-with-physics/career-paths/automated-test-engineer
3	Electricity and magnetism		Resistance Magnets and magnetic fields Electromagnets			What would the Earth be like if it wasn't magnetic? https://www.bbc.com/bitesize/articles/z94kcmn
4	Electricity and magnetism		Using electromagnets Practical/scientific skills Practical/scientific skills			Physics meets biology - the world's most electric animals: https://www.bbc.com/news/the-worlds-most-electric-animals
5	Electricity and magnetism		Practical/scientific skills Assessment Feedback			
6	Ecosystem processes	In this unit you will look at why organisms need energy to function.	Photosynthesis Leaves Plant minerals	BBC bitesize https://www.bbc.com/bitesize/topics/zxhhvcw		Marine food chains - https://education.nationalgeographic.org/resource/marine-food-chain/
7	Ecosystem processes		Chemosynthesis Aerobic respiration Anaerobic respiration	Respiration: https://www.bbc.com/bitesize/topics/zvrrd2p Aerobic vs. anaerobic respiration https://www.bbc.com/bitesize/articles/zdqx2v4		Chemosynthesis - https://oceanexplorer.noaa.gov/facts/photochemo.html

Term	Week	Focus	Summary	Learning Outcomes	Parental Support	Independent Learning
2A	1	Ecosystem processes		Food chains and webs Disruption to food chains Ecosystems	Seneca - covers whole topic https://senecalearning.com/ Course: KS3 science Topic - 1 Biology Sections: 1.3	Conservation - Marine Protected Areas https://education.nationalgeographic.org/resource/marine-protected-area/
	2	Ecosystem processes		Practical/scientific skills Practical/scientific skills Practical/scientific skills		
	3	Ecosystem processes Separation techniques	In this unit you will discover how we separate mixtures to obtain the materials we need from the Earth and it's atmosphere.	Assessment Feedback Mixtures	BBC Bitesize - covers the whole topic https://www.bbc.co.uk/bitesize/guides/zqc6w6f/revision/1	Separation techniques in real life - forensics https://science.howstuffworks.com/forensic-lab-technique.htm
	4	Separation techniques		Solutions Solubility Filtration	Seneca - covers whole topic https://senecalearning.com/ Course: KS3 science Topic - 2 Chemistry Sections: 2.1.13 - 2.1.16	Careers in chemistry - forensic science https://edu.rsc.org/job-profiles/forensic-scientist/4010920.article
	5	Separation techniques		Evaporation and distillation Chromatography Practical/scientific skills	Chromatography: https://www.bbc.co.uk/bitesize/articles/zkqjjsq	
	6	Separation techniques		Practical/scientific skills Practical/scientific skills Assessment		

	7	Separation techniques Energy	In this unit you will discover how the electricity in your house is generated. You will learn why it is important to insulate a house in cold places and learn what you pay for when you pay your electricity bill.	Feedback Food and fuels Energy adds up	Energy: https://www.bbc.co.uk/bitesize/topics/zc3g87h/articles/z7xfsk7	Energy sources of the future: https://www.bbc.com/reel/vid/eo/p0b0w3b0/the-energy-sources-of-the-future Can the world rely on renewable energy? https://www.youtube.com/watch?v=gLvKWpnzba8 Careers in physics - climate science: https://www.iop.org/careers-physics/your-future-with-physics/career-paths/geospatial-modelling-lead https://www.iop.org/careers-physics/your-future-with-physics/career-paths/policy-advice/

Term	Week	Focus	Summary	Learning Outcomes	Parental Support	Independent Learning
2B	1	Energy		Energy and temperature Energy transfer - particles Energy transfer - radiation	Heat transfer: https://www.bbc.co.uk/programmes/p019bpl1	
	2	Energy		Energy resources Energy and power Work, energy and machines	BBc Bitesize - covers the whole topic	

					https://www.bbc.co.uk/bitesize/topics/zc3g87h	
3	Energy		Practical/scientific skills Practical/scientific skills Practical/scientific skills		Seneca - covers whole topic https://senecalearning.com/ Course: KS3 science Topic - 3 Physics Sections: All of 3.1	
4	Energy Adaptation and inheritance	In this unit, you will investigate the differences that exist between organisms, and why this is important for their survival.	Assessment Feedback Competition and adaptation	David Attenborough documentaries e.g. Galapagos A Perfect Planet show - https://www.bbcearth.com/shows/a-perfect-planet BBC Bitesize - covers the whole topic https://www.bbc.co.uk/bitesize/topics/zpffr82	David Attenborough documentaries e.g. Galapagos Reading - https://www.bbcearth.com/news/these-extraordinary-plants-are-the-ultimate-survivors	
5	Adaptation and inheritance		Adapting to change Variation Continuous and discontinuous			A Perfect Planet show - https://www.bbcearth.com/shows/a-perfect-planet
6	Adaptation and inheritance		Inheritance Natural selection Extinction		Extinction: https://www.bbc.co.uk/bitesize/articles/zwb3f82	TED Talk - https://www.ted.com/talks/david_gallo_underwater_astonishments?referrer=playlist-talks_to_watch_with_kids&auto_play=true
7	Adaptation and inheritance		Practical/scientific skills		Seneca - covers whole topic	

				Practical/scientific skills Practical/scientific skills	https://senecalearning.com/ Course: KS3 science Topic - 1 Biology Sections: 1.3.14-1.3.19	

Term	Week	Focus	Summary	Learning Outcomes	Parental Support	Independent Learning
3A	1	Adaptation and inheritance The Earth	In this unit you will learn about the structure of the Earth, and the rocks of its crust.	Assessment Feedback The Earth and it's atmosphere	BBC Bitesize: https://www.bbc.co.uk/bitesize/topics/z3fv4wx/articles/z9gpsk7	Links to physics - the Earth's magnetic field https://spacemath.gsfc.nasa.gov/magnetism/magnetism.html
	2	The Earth		Sedimentary rocks Igneous and metamorphic rocks The rock cycle		Careers in chemistry: wind turbines https://edu.rsc.org/job-profiles/section-leader-wind/4013830.article
	3	The Earth		The carbon cycle Climate change Recycling	The carbon cycle: https://www.bbc.co.uk/bitesize/guides/z9nwtv4/revision/7 Climate change: https://www.bbc.co.uk/bitesize/articles/zq2m2v4	
	4	The Earth		Practical/scientific skills Practical/scientific skills Practical/scientific skills	Seneca - covers whole topic https://senecalearning.com/ Course: KS3 science Topic - 2 Chemistry	

					Sections - 2.5.1-2.5.20	
	5	The Earth Motion and Pressure	In this unit you will find out how to use graphs to tell a story, and how forces explain gas and air pressure.	Assessment Feedback Speed	Motion: https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/zw9qwnb	Pressure at the edge of our Solar system: https://www.nasa.gov/solar-system/pressure-runs-high-at-edge-of-solar-system/
	6	Motion and Pressure		Motion graphs Pressure in gases Pressure in liquids	Pressure: https://www.bbc.co.uk/bitesize/topics/z4brd2p/articles/zvdpf82	Careers with physics - apprenticeships explained: https://www.iop.org/careers-physics/your-future-with-physics/apprentice/apprenticeships-explained

Term	Week	Focus	Summary	Learning Outcomes	Parental Support	Independent Learning
3B	1	Motion and Pressure		Pressure on solids Turning forces Practical/scientific skills	Seneca - covers whole topic https://senecalearning.com/ Course: KS3 science Topic - 3 Physics Sections: 3.2.9-3.2.23	
	2	Motion and Pressure		Practical/scientific skills Practical/scientific skills Assessment		
	3	Working scientifically		Feedback		

	4	Working scientifically				
	5	Working scientifically				
	6	End of year assessments	All of year 7 and year 8 content			