Science Year Overviews 2023-2024

If circumstances change due to COVID-19/other emergencies, lessons will be live-streamed via Google Classroom with resources uploaded there also.

P4A Objectives: Each part of the curriculum has a P4A skill that is linked to it. This will maximise the employability of our pupils whether they pursue a career linked explicitly to Science or not.



7A

7A													
		Autumn 1		Autumn 2	1	Spring 1		Spring 2		Summer 2	1	Summer 2	
Торіс	BASELINE TESTING	Lab safety, prior learning check and movement (3.8.1) (total 2 weeks)	Human reproduction and variation (3.10.1 - 3.10.2)(4 weeks)	Particle model (3 weeks)	Metals and non- metals (2 weeks)	Acids and alkalis (2.5 weeks)	Earth structure and climate (2 weeks total)	Speed (2 weeks)	Simple circuits (2 weeks)	Energy costs (2 weeks)	Sound and light (3.5 weeks)	Interdepend ence (2 weeks)	Plant reproduction (1 week) Revision- use this time to go over topics of difficulty
Assessment		Teacher assessme topic test	ent and end of	End of top	bic test	End of to	pic test	End of top	bic test	End of top	bic test	End of topic t	est
P4A Objective		Listening		Problem s	olving	Creativity	1	Teamwor	k	Aiming hi	gh	Presenting	
Literacy and		Producing a lab r	eport, weighing	Calculatin	g density	Measurin	g out acids	Calculatin	g speed,	Calculatin	g the cost	Literacy task	on the effect of
numeracy		out, measuring or m		of metals metals.	and non-	and alkal about clir change.	is. Debating nate	distance a	and time.	of energy Comparin and sound	Ig light d	collapsing fo	od chains.

7B

7B]											
		Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
Торіс	BASELINE TESTING	Lab safety Movement and prior weeks) learning check (2 weeks max)		Human reproduction (dedicate more time to this up to 3 weeks)	Particle model (2 weeks)	Metals and non- metals (3 weeks)	Acids and alkalis (3 weeks +1)	Earth structure and climate (3 weeks)	Speed (2 weeks)	Simple circuits (2 week)	Sound (2 week)	Interdepen dence (focus on food chains) 2	Plant reproduction and revision (1 week)
		,		,			-,					week	
Assessment		Teacher assessment and I end of topic test		End of topic test		End of to	pic test	End of topic	test	End of top	ic test	End of topic	test
P4A Objective		Listening		Problem solving		Creativity	1	Teamwork		Aiming hig	;h	Presenting	
Literacy and numeracy		Producing a lab report, weighing out, measuring		Labelling diagram parts.	s of body	Measurin	g liquids.	Debating cli change. Spe calculations	mate ed	Labelling of circuits Of circuits Calculating speed of s	liagrams g the ound.	Creating foo webs. Poter and produce insect/wind plants.	od chains and ntial to count e surveys on pollinated

7C- Learning for Life

7C													
		Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1	L	Summer 2	2
Торіс	BASELINE TESTING	Lab safety)	Science skills "working scientifically"	Humans and other animals	Humans and other animals	Autumn and winter	Autumn and winter	Everyday materials	Everyday materials	Plants	Plants	Scientists and inventors	Scientists and inventors
Assessment		Teacher ass end of topic	essment and test	End of topic te	st	End of topi	test	End of topic	test	End of top	ic test	End of top	ic test
P4A Objective		Listening		Problem solvin	ng	Creativity		Teamwork		Aiming hi	gh	Presentin	g
Literacy and numeracy		Producing a weighing ou	l lab report, ut, measuring	Labelling diag body parts.	rams of	Measuring	liquids.	Debating cli change. Spe calculations	mate ed	Labelling of circuits Calculatin speed of s	diagrams g the sound.	Creating f webs. Pot and produ insect/win plants.	ood chains and ential to count ice surveys on nd pollinated

8A

8A]											
Торіс	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
	Cells (3.8.2) (3 weeks)	Evolution (3.10.3) (2 weeks + 1)	Inheritance (3.10.4) (2 weeks)	Separating mixtures (3.5.2) (3 weeks)	Elements (3.5.3-4) and earth's resources (3.7.4)(addi tional lesson on rocks) (4 weeks)	Chemical energy (3.6.3) (2 weeks)	Gravity forces and pressure (3 weeks including extra lessons on speed)	The Universe (3.7.2) (2 weeks)	Voltage and resistance (3.2.1) (2 weeks)	Electromagnetism and magnets (3.2.3- 4) (2 weeks)	Energy transfer and costs (3.3.1-2) (2 weeks)-	Respiration and photosynthesis and then recap/revision(3.9.3- 4)
Assessment	End of topic test		End of topic te	st	End of topic	test	End of topic t	est	End of topic	c test	End of topic	: test
P4A Objective	Aiming high		Listening		Problem solv	ving	Staying posit	ive	Problem so	lving	Team work	
Literacy and numeracy	Labelling the body. Using terms.	organs of the the scientific	Looking at the masses and nu able to measu during filtratio	atomic umbers. Being re volumes on.	Spelling of n elements, lo efficiency	ames of oking at %	Calculating p calculating gr other planets	ressure, ravity on S	V=IR calcula Internet res electromag	ations search on the uses of mets	Conducting of respiration	experiments into rate on and photosynthesis

8B

8B												
Торіс	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
	Cells (3.8.2) (3 weeks)	Evolution (3.10.3) (2 weeks + 1)	Inheritance (3.10.4) (2 weeks)	Separating mixtures (3.5.2) (3 weeks)	Elements (3.5.3-4) (2 weeks)	Chemical energy (3.6.3) (2 weeks)	Gravity and contact forces (3 weeks incl extra lesson on speed and pressure)	The universe (3.1.2) 2 weeks	Voltage and resistance (3.2.1) (2 weeks incl lessons on types of circuit)	Light (3.4.2) (2 weeks)	Energy costs (3.3.1) For these pupils focus on renewable and non-renewables; less emphasis on calculating kWh (2 weeks)	Respiration (3.9.3) (2 weeks) + revision/recap
Assessment	End of topic	test	End of topic to	est	End of topic te	st	End of topic test	I	End of topic tes	t	End of topic test	
P4A Objective	Aiming high		Listening		Problem solvir	ng	Staying positive		Problem solving	3	Team work	
Literacy and numeracy	Labelling the the body. Us scientific ter	e organs of sing the rms.	Being able to volumes duri	measure ng filtration.	Spelling of nar elements, look efficiency (sim	nes of king at % ple)	Calculating pressur calculating gravity planets	re, on other	V=IR calculation Internet researc uses of electron	ns ch on the nagnets	Conducting experin respiration and pho	nents into rate of otosynthesis

8C- Learning for Life

8C	1											
Торіс	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
	Recap and science safety	Forces and magnets	Living things and habitats	Animals including humans	Rocks	Sound and light	Electricity	Electricity	Life cycle	States of matter	Ecology- "the environment"	Spring and Summer
	Baseline assessmen t											
Assessment	End of topic test		End of topic t	est	End of topic te	l est	End of topic test		End of topic t	est	End of topic test	<u> </u>
P4A Objective	Aiming high	1	Listening		Problem solvi	ng	Staying positive		Problem solv	ving	Team work	
Literacy and numeracy	Labelling the the body. U scientific terms	e organs of sing the rms.	Being able to volumes duri	measure	Spelling of nar elements, lool efficiency (sim	mes of king at % uple)	Calculating press calculating gravit planets	ure, sy on other	V=IR calculat Internet rese uses of elect	ions earch on the romagnets	Conducting experi respiration and ph	ments into rate of otosynthesis

9A

9A	7					
Торіс	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Energy, forces and matter	Electricity, magnetism and waves	Elements, mixtures and compounds	Chemical reactions and Earth's resources	Cells and organs	Environment, evolution and inheritance
Assessment	End of topic test	End of topic test	End of topic test	End of topic test	End of topic test	End of topic test
P4A Objective	Aiming high	Teamwork	Staying Positive	Listening	Problem solving	Presenting
Literacy and Numeracy	Calculating magnification	Learning scientific vocabulary of cells, tissues, organs organelles etc	Naming elements	Debating the use of fossil fuels and nuclear power	Measuring forces with a newton metre	Producing posters on the EM spectrum.

9B

9B	1											
Торіс	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
	Breathing	Digestion	Elements	Types of	Climate	Earth's	Pressure	Current and	Wave effects	Work	Heating	Photosynthesis
	3.8.3 (2	3.8.4 (2	3.5.3-4 (2	reaction	(3 weeks)	resources	(2 weeks)	magnetism(3.	and wave	(3.3.3)	and	and
	weeks)	weeks)	weeks)	(3.6.4) (2		(2.5 weeks)		2.2) (3	properties		cooling	recap/revision
				weeks)				weeks)	3.3.3-3.3.4			(3.9.4) (2 weeks
									(2 weeks)			insert missing
												lesson on food
												chain)
		l of tonic test End of tonic test										
	End of topic	test	End of topic	c test	End of top	ic test	End of top	ic test	End of topic to	est	End of top	pic test
Assessment												
P4A Objective	Presenting		Aiming high	,	Problem s	olving	Staving no	sitive	Listening		Team wo	rk
	resenting			•		owing	Staying po	Sitive	Listening			I K
Literacy and	Producing a	nd	Determinin	g the	Discussing	and	Producing	simple	Calculating w	ork done	Producing	g a written report
Numeracy	presenting	oosters	atomic mas	s and	debating v	ways to	calculation	ns of pressure	using simple I	numbers	on the ef	fect of light on
	about the b	ody	number of	elements	combat cl	imate					photosyn	thesis
					change an	d pollution						

9C												
Горіс	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
	Lab safety and prior learning check	Movement	Human reproduction	Particle model	Metals and non-metals	Acids and alkalis	Earth structure	Climate	Simple circuits	Sound	Interdependence (focus on food chains)	Plant reproduction and revision
Assessment	End of topic	test	End of topic to	est	End of topic te	st	End of topic test		End of topic t	est	End of topic test	
P4A Objective	Aiming high		Listening		Problem solvin	Ig	Staying positive		Problem solv	ing	Team work	
Literacy and numeracy	Labelling the the body. U scientific ter	e organs of sing the rms.	Being able to volumes durii	measure ng filtration.	Spelling of nan elements, look efficiency (sim	nes of ing at % ple)	Being able to labe structure of the E	el the basic arth	Reading ammeter/vol readings	tmeter	Conducting experime respiration and photo	ents into rate of osynthesis

10A- GCSE

10A- GCSE

qualification

	Autumn 1		Autumn	2	Spring 1		Spring 2		Summer 1		Summer 2	
Торіс	Energy	Electricity	Particle model	Atomic structure and periodic table (with physics sections)	Bonding, structure, and properties of matter	Quantitative chemistry (higher tier only)	Chemical changes	Energy changes	Cell biology	Organisation	Infection and response-	Bioenergetics and recap/revision Insert AQA ELC practical on photosynthesis
Assessment	End of top ELC tests a required)	bic test-incl and TDAs (if	End of to ELC tests	ppic test incl and TDAs	End of topic tests and TE	test incl ELC DAs	End of top ELC tests a	ic test incl ind TDAs	End of topic tests and TD	test incl ELC As	End of topi tests and T	c test incl ELC DAs
P4A	Staying Po	ositive	Aiming h	nigh	Teamwork		Leadership	ว	Listening		Presenting	
Literacy and numeracy	Calculatin costs	g energy	Research periodic	ning the table	Calculating	moles	Writing ab energy tra occur in si	oout what nsfers tuations	Experimenta writing	al report	Calculating oxygen rel	g amount of eased by plants

10B Entry Level/GCSE

AQA Entry Level						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Торіс	Energy, forces and matter	Electricity, magnetism and waves	Elements, mixtures and compounds	Chemical reactions and Earth's resources	Cells and organs	Environment, evolution and inheritance
Assessment	TDAs and exam	TDAs and exam	TDAs and exam	TDAs and exam	TDAs and exam	TDAs and exam
P4A	Staying Positive	Aiming high	Teamwork	Leadership	Listening	Presenting
Literacy and numeracy	Producing Sankey diagrams	Being able to calculate resultant forces	Calculating no. of protons, neutrons and electrons.	Describing the structure of atoms	Producing scientific diagrams of cells	Producing methods for photosynthesis experiments

11 AQA GCSE

11A	1											
	Autumn 1		Autumn	2	Spring 1		Spring 2		Summer 1		Summer 2	
Торіс	Magnetism and electromagnetism	Waves	Forces	Rate and extent of chemical change	Organic chemistry	Chemical analysis	Chemistry of the atmosphere	Using resources	Homeostasia Organisation and bioenergetics catchup	Inheritance, variation and evolution	Ecology and any topics not covered in year 10	Exam revision
	End of topic test		End of to	opic test	End of topi	c test	End of topic t	est	End of topic tes	it	End of topic te	st
Assessment												
P4A	Staying positive		Aiming	high	Teamwork		Presenting		Problem solvin	g	Creativity	
Literacy and	Producing labelled diagrams Calculating resultant		Analysing o	data from	Debating hov	v to tackle	Writing scientif	fic experiments	Debate about	evolution		
numeracy	of magnets and		forces		experimen	ts	climate chan	ge				
	electromagnets											

11 AQA Entry Level

11 ELC	1											
	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
Торіс	Electricity magnetism and waves	Electricity magnetism and waves	Electricity magnetism and waves	Electricity magnetism and waves	Chemistry in our world	Chemistry in our world	Chemistry in our world	Chemistry in our world	Environment, evolution and inheritance	Environment, evolution and inheritance	Environmen t, evolution and inheritance	Environmen t, evolution and inheritance
	External IV ar	nd internal	External IV and internal		External IV and		External IV and internal teacher assessment		External IV and internal teacher assessment		External IV a	nd internal
Assessment					assessment							
P4A	Aiming high		Teamwork		Leadershi j	0	Presenting		Listening		Staying positive	
Literacy and numeracy	Completing practical write ups		Getting volt/ammeter Measuring readings and alka		Measuring and alkalis	g pH of acids Measuring the s temperature changes occurring during acid reactions		Writing opinion and natural sel	ns on evolution ection	Comparing r	eflex times	

MAP 1, 2, 3, 4 and 5

Yr 7 MAP- Higher													
		Autumn 1		Autumn 2	2	Spring 1		Spring 2		Summer	1	Summer 2	2
Торіс	NEW YEAR 7s BASELINE TEST	Lab safety and movement (3.8.1)	Human reproduction and variation (3.10.1 -3.10.2)	Particle model	Metals and non- metals	Acids and alkalis	Earth structure	Speed	Simple circuits	Energy costs	Sound	Food webs and chains	Revision
Assessment		End of topic t	test	End of top	bic test	End of to	pic test	End of to	pic test	End of to	pic test	End of top	vic test
P4A Objective		Listening		Problem so	olving	Creativity		Teamwor	k	Aiming hi	gh	Presenting	
Literacy and numeracy		Producing a la weighing out,	b report, measuring	Calculating metals and metals.	g density of I non-	Measuring and alkalis about clim	g out acids 5. Debating nate change.	Calculatin distance a	g speed, and time.	Calculatin of energy Comparin sound	g the cost g light and	Literacy tag effect of co food chain	sk on the Illapsing s.

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Year 8 MAP												
Торіс	Autumn 1		Autumn	2	Spring 1		Spring 2		Summer 1		Summer 2	
	Cells (3.8.2) (3 weeks)	Evolution (3.10.3) (2 weeks + 1)	Inheritan ce (3.10.4) (2 weeks)	Separating mixtures (3.5.2) (3 weeks)	Elements (3.5.3-4) and earth's resources (3.7.4)(additi onal lesson on rocks) (4 weeks)	Chemical energy (3.6.3) (2 weeks)	Gravity forces and pressure (3 weeks including extra lessons on speed)	The Universe (3.7.2) (2 weeks)	Voltage and resistance (3.2.1)-insert lesson on types of circuit (2 weeks)	Electromagnetism and magnets (3.2.3-4) (2 weeks)	Energy transfer and costs (3.3.1-2)- insert lesson on sound (2 weeks)	Respiration and photosynthesis and then recap/revision(3.9.3 -4)-food chains to be taught as part of this (respiration 2 weeks, photosynthesis 2 weeks + 1 lesson on food chains)
Assessment	End of topic test End of topic test		pic test	End of topic test End of topic test		test	End of topic test		End of topic test			
P4A Objective	Aiming high		Listening		Problem solv	ving	Staying pos	itive	Problem solvi	ng	Team work	
Literacy and Numeracy	Ind Labelling the organs of y the body. Using the scientific terms.		Looking at the atomic masses and numbers. Being able to measure volumes during filtration.		Spelling of names of elements, looking at % efficiency		Calculating pressure, calculating gravity on other planets		V=IR calculations Internet research on the uses of electromagnets		Conducting experiments into rate of respiration and photosynthesis	

Year 9 MAP: Higher						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Торіс	Energy, forces and matter	Electricity, magnetism and waves	Elements, mixtures and compounds	Chemical reactions and Earth's resources	Cell structure	Environment, evolution and inheritance
Assessment	End of topic test- Entry level ESAs and TDAs	End of topic test Entry level ESAs and TDAs	'End of topic test Entry level ESAs and TDAs	End of topic test Entry level ESAs and TDAs	End of topic test Entry level ESAs and TDAs	'Mock exam
P4A	Aiming high	Teamwork	Staying Positive	Listening	Problem solving	Presenting
Literacy and Numeracy	Calculating magnification	Learning scientific vocabulary of cells, tissues, organs organelles etc	Naming elements	Debating the use of fossil fuels and nuclear power	Measuring forces with newton metres	Producing posters on the EM spectrum.

MAP Yr 10 Higher GCSE content

						1						
	Autumn 1		Autumn	Autumn 2			Spring 2		Summer 1		Summer 2	
	Energy	Electricity	Particle	Atomic	Bonding,	Quantitative	Chemical	Energy	Cell biology	Organisation	Infection and	Bioenergetics
Торіс			model	structure and periodic table	structure, and properties of matter	chemistry	changes	changes			response	
Assessment	End of topic test- use ELC tests for LA essment students and TDAs when appropriate		End of to ELC tests students when ap	pic test use for LA and TDAs propriate	End of topic tests for LA TDAs when	End of topic test use ELC tests for LA students and TDAs when appropriate		c test use or LA nd TDAs opriate	End of topic te tests for LA st TDAs when ap	est use ELC udents and ppropriate	End of topic test use ELC tests for LA students and TDAs when appropriate	
P4A	Staying Po	sitive	Aiming h	igh	Teamwork		Leadership)	Listening		Presenting	
Literacy and numeracy	nd Calculating energy costs		Researching the periodic table		Calculating moles		Writing about what energy transfers occur in situations		Experimental report writing		Calculating amount of oxygen released by plants	

Yr 11 MAP-Yr 11 GCSE

content

									T	1		
	Autumn 1		Autumn 2		Spring 1	Spring 1			Summer 1		Summer 2	
	Magnetism and	Waves	Forces	Rate and	Organic	Chemical	Chemistry of	Using	Bioenergetics	Homeostasis	Inheritance,	Ecology
Торіс	electromagnetism			extent of	chemistry	analysis	the	resources	Lungs, CHD,	and response	variation and	and exam
				chemical			atmosphere		lifestyle,		evolution	revision
				change					disease and			
									cancer catchup			
	End of topic test use ELC		topic test use ELC End of topic test		End of topic	End of topic test		End of topic test		st	End of topic te	est
	tests for LA student	s and										
Assessment	TDAs when approp	riate										
P4A	Staying positive		Aiming	high	Teamwork		Presenting		Problem solvin	g	Creativity	
Literacy and	Producing labelled	diagrams	Calculat	ing	Analysing d	lata from	Debating how	v to tackle	Writing scienti	fic experiments	Debate about	evolution
numeracy	of magnets and		resultan	t forces	experiment	ts	climate chang	ge				
	electromagnets											

KS4 Nurture Group- year 1

WJEC ELC						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Торіс	WJEC Entry Level- Science and our Universe (3 credits)	WJEC Entry Level- Science: Health and Safety (3 credits)	WJEC Entry Level- Science and the Human Body (3 credits)	WJEC Entry Level- Science and the Human Body (3 credits)	WJEC Entry Level- Intro to plant care (3 credits)	Intro to Plant Care (practical aspect)
	In class assessment	In class assessment and	In class assessment	In class assessment	In class assessment	In class assessment and
•	and teacher feedback	teacher feedback via	and teacher feedback	and teacher feedback	and teacher feedback	teacher feedback via
Assessment		ואוט				ואוס
Р4А	Aiming high	Problem solving	Creativity	Staying positive	Listening	Presenting
Literacy and numeracy	Pupils will be producing diagrams of the solar system. Pupils should be able to count the number of planets.	Pupils will understand and be able to label safety symbols in science	Pupils will be able to label diagrams of the organs.	Pupils will be able to label diagrams of the organs.	Pupils will be able to identify continuous and discontinuous variation	Pupils will be able to measure the growth of plants

KS4 Nurture Group- year 2

WJEC ELC						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Торіс	WJEC Entry Level- Working with electrical circuits (3 credits)	WJEC Entry Level- Working with electrical circuits (3 credits)	WJEC Entry Level- chemical products used in their home and their environmental impact (2 credits)	WJEC Entry Level- chemical products used in their home and their environmental impact (2 credits)	WJEC - Variation and adaptation)	WJEC - Variation and adaptation)
Assessment	In class assessment and teacher feedback via DIRT	In class assessment and teacher feedback via DIRT	In class assessment and teacher feedback via DIRT	In class assessment and teacher feedback via DIRT	In class assessment and teacher feedback via DIRT	In class assessment and teacher feedback via DIRT
P4A	Aiming high	Problem solving	Creativity	Staying positive	Listening	Presenting
Literacy and numeracy	Pupils will be able to construct, label and draw basic circuits. More able can measure ammeter and voltmeter readings		Pupils will recognise and read a variety of hazard symbols and be able to draw them		Pupils will be able to list variations found in humans and produce tally charts from class data.	

KS4 Single Biology- Year 11SS

WJEC ELC						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Торіс	Cell biology and organisation	Cell biology and organisation	Infection and response and bioenergetics	Bioenergetics and homeostasis	Homeostasis and Inheritance, variation and evolution	Finish evolution and begin ecology
Assessment	End of unit tests	End of unit test	End of unit tests	End of unit test	End of unit tests	End of unit test
Ρ4Α	Aiming high	Problem solving	Creativity	Staying positive	Listening	Presenting
Literacy and numeracy	Calculating cost of energy in homes	Researching space	Producing graphs of variation amongst peers	Researching the speed of sound and light	Debating evolution	Using quadrats to count numbers of organisms