

# Curriculum Intent for Science

Our Science curriculum aims to deliver powerful knowledge and understanding that can change lives and is vital to the world's future prosperity. Students will develop their curiosity about the natural world, gain an insight into how science works and develop an appreciation of its relevance to their everyday lives.

The curriculum builds a strong, scientific understanding of key concepts whilst also incorporating the development of literacy and mathematical skills. Mathematical skills are developed by using a common approach in Maths and Science. Purposeful, safe practical work enhances students' knowledge of scientific ideas and engages them in the processes of science and how it is applied to their everyday lives. Core practicals in every KS3 topic develop 'working scientifically' skills and are used to prepare students for the skills and analysis they will need to access the more demanding aspects of KS4 practical work.

To enable our students to learn and remember more, we have produced a carefully sequenced spiral curriculum which revisits expected prior knowledge to develop deeper understanding. The curriculum sequence has been developed collaboratively by specialist subject teachers so that consistently high-quality lessons can be delivered by all teachers across the department.

The scientific requirements of the new GCSEs are to be integrated into KS3. Language and teaching approaches are consistent with those science topics, so they are familiar to students. At Todmorden High School, literacy is viewed as the key to all learners achieving their unique potential. Within the Science department, key scientific terms are explicitly taught to develop student understanding.







# Separate Science KS4 HT3

	School Week No.	16	17	18	19	20	21	Half-term
Year 10 biology	Topic	SB7 - Animal Coordination, control and homeostasis (17)						Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)			SL SB7 Control of Blood Glucose		SL SB7 Control of Water levels		Half-term
	Home-Learning Due in	Carroll15	Carroll16	Carroll17	Carroll18	Carroll19	Carroll20	Half-term
Year 10 chemistry	Topic					Topic 1- Calculations involving mozzar		Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)	SL - Topic 2 - Chemical change - Electrolytic cell		(SUM-2)				Half-term
	Home-Learning Due in	Carroll15	Carroll16	Carroll17	Carroll18	Carroll19	Carroll20	Half-term
Year 10 physics	Topic	CP Topic 6 Radioactivity (14)						Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)					SL Compare the processes of gamma decay and positron decay		Half-term
	Home-Learning Due in	Carroll15 Physics	Carroll16 Physics	Carroll17 Physics	Carroll18 Physics	IP speed distance Time	Carroll19 Physics	Half-term
Y11 biology	Topic	Review/Revise SB3 DNA, meiosis, genetic crosses, protein synthesis	Y11 Fall Mocks P1 Exam Paper			Review/Revise SB4 Natural selection/evolution, genetic engineering, population and agriculture	Review/Revise SB5 Communication, life cycle of viruses, Care Prac	Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)	Practice/revie w SL SB3 DNA	Y11 Fall Mocks P1 Exam Paper	Y11 Fall Mocks P1 Exam Paper	Growth Actions and feedback.	Practice/revie w SL SB4 Natural		Half-term
	Home-Learning Due in	Carroll15	Carroll16	Carroll17	Carroll18	Carroll19	Carroll20	Half-term
Y11 chemistry	Topic		Y11 Fall Mocks C2 Exam Paper	Y11 Fall Mocks C2 Exam Paper		Topic 9 - Qualitative analysis and materials		Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)		Y11 Fall Mocks C2 Exam Paper	Y11 Fall Mocks C2 Exam Paper	SL - Topic 9 - Separate Chemistry 2 - Polymers			Half-term
	Home-Learning Due in	Carroll15	Carroll16	Carroll17	Carroll18	Carroll19	Carroll20	Half-term
Y11 physics	Topic	Topic 14 Particle Model (10 lessons)	Y11 Fall Mocks P2 Exam Paper	Y11 Fall Mocks P2 Exam Paper	Topic 14 Particle Model (10 lessons)	Topic 14 Particle Model (10 lessons)	Topic 14 Particle Model (10 lessons)	Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)		Y11 Fall Mocks P2 Exam Paper	Y11 Fall Mocks P2 Exam Paper			SL SHC of liquids.	Half-term
	Home-Learning Due in	Carroll15 Physics	Carroll16 Physics	Carroll17 Physics	Carroll18 Physics	Carroll19 Physics	Carroll19 Physics	Half-term

# Separate Science KS4 HT4

	School Week No.	22	23	24	25	26	27	Exeter
Year 10 biology	Topic	STOP WEEK - PHYSICS	SB6 – Plant Structure and function (12)				Consolidation/Revision	Exeter
	Resources Scientific Literacy (SL) Calculations (Calc) Summaries (Sum)			SL SB6 Limiting Factors			Summative Assessment 2 - SB7 and SB6 (45 min)	Exeter
	Home-Learning Due in	Carawol21	Carawol22	Carawol23	Carawol24	Carawol25	Carawol26	Exeter
Year 10 chemistry	Topic				Topic 4 - Reversible reactions and equilibria - Dynamic			Exeter
	Resources Scientific Literacy (SL) Calculations (Calc) Summaries (Sum)						(SUM-3)	Exeter
	Home-Learning Due in	Carawol21	Carawol22	Carawol23	Carawol24	Carawol25	Carawol26	Exeter
Year 10 physics	Topic	PO Topic 7 Anatomy (6 lessons)			SP 9.9 Forces and their effects including moments (4)	SP 9.9 Forces and their effects including moments (4)	SP 9.9 Forces and their effects including moments (4)	Exeter
	Resources Scientific Literacy (SL) Calculations (Calc) Summaries (Sum)	STOP WEEK - PHYSICS	SL Life cycle of stars			SL Power and Energy	Color Arr No. 13	Exeter
	Home-Learning Due in	IP 10 Displacement-time graphs	Carawol21 Carawol22 Carawol23 Carawol24 Carawol25 Carawol26 Carawol27 Carawol28 Carawol29 Carawol30 Carawol31 Carawol32 Carawol33 Carawol34 Carawol35 Carawol36 Carawol37 Carawol38 Carawol39 Carawol40 Carawol41 Carawol42 Carawol43 Carawol44 Carawol45 Carawol46 Carawol47 Carawol48 Carawol49 Carawol50 Carawol51 Carawol52 Carawol53 Carawol54 Carawol55 Carawol56 Carawol57 Carawol58 Carawol59 Carawol60 Carawol61 Carawol62 Carawol63 Carawol64 Carawol65 Carawol66 Carawol67 Carawol68 Carawol69 Carawol70 Carawol71 Carawol72 Carawol73 Carawol74 Carawol75 Carawol76 Carawol77 Carawol78 Carawol79 Carawol80 Carawol81 Carawol82 Carawol83 Carawol84 Carawol85 Carawol86 Carawol87 Carawol88 Carawol89 Carawol90 Carawol91 Carawol92 Carawol93 Carawol94 Carawol95 Carawol96 Carawol97 Carawol98 Carawol99 Carawol100	IP 11 acceleration	Carawol21 Carawol22 Carawol23 Carawol24 Carawol25 Carawol26 Carawol27 Carawol28 Carawol29 Carawol30 Carawol31 Carawol32 Carawol33 Carawol34 Carawol35 Carawol36 Carawol37 Carawol38 Carawol39 Carawol40 Carawol41 Carawol42 Carawol43 Carawol44 Carawol45 Carawol46 Carawol47 Carawol48 Carawol49 Carawol50 Carawol51 Carawol52 Carawol53 Carawol54 Carawol55 Carawol56 Carawol57 Carawol58 Carawol59 Carawol60 Carawol61 Carawol62 Carawol63 Carawol64 Carawol65 Carawol66 Carawol67 Carawol68 Carawol69 Carawol70 Carawol71 Carawol72 Carawol73 Carawol74 Carawol75 Carawol76 Carawol77 Carawol78 Carawol79 Carawol80 Carawol81 Carawol82 Carawol83 Carawol84 Carawol85 Carawol86 Carawol87 Carawol88 Carawol89 Carawol90 Carawol91 Carawol92 Carawol93 Carawol94 Carawol95 Carawol96 Carawol97 Carawol98 Carawol99 Carawol100	IP 12 V-t graphs	Carawol21 Carawol22 Carawol23 Carawol24 Carawol25 Carawol26 Carawol27 Carawol28 Carawol29 Carawol30 Carawol31 Carawol32 Carawol33 Carawol34 Carawol35 Carawol36 Carawol37 Carawol38 Carawol39 Carawol40 Carawol41 Carawol42 Carawol43 Carawol44 Carawol45 Carawol46 Carawol47 Carawol48 Carawol49 Carawol50 Carawol51 Carawol52 Carawol53 Carawol54 Carawol55 Carawol56 Carawol57 Carawol58 Carawol59 Carawol60 Carawol61 Carawol62 Carawol63 Carawol64 Carawol65 Carawol66 Carawol67 Carawol68 Carawol69 Carawol70 Carawol71 Carawol72 Carawol73 Carawol74 Carawol75 Carawol76 Carawol77 Carawol78 Carawol79 Carawol80 Carawol81 Carawol82 Carawol83 Carawol84 Carawol85 Carawol86 Carawol87 Carawol88 Carawol89 Carawol90 Carawol91 Carawol92 Carawol93 Carawol94 Carawol95 Carawol96 Carawol97 Carawol98 Carawol99 Carawol100	Exeter
Y11 biology	Topic	Review/Revise SB6 Photosynthesis, transport, Care Prac	Review/Revise SB7 Homeostasis, Blood sugar, menstrual cycle, metabolism	Review/Revise SB8 Circulatory and respiratory system - Care Prac	Review/Revise SB9 Enzymes, cycles, mapping techniques	Summative Ass 1B2 Part Paper (in lesson)	Growth Actions and feedback.	Exeter
	Resources Scientific Literacy (SL) Calculations (Calc) Summaries (Sum)	Carawol21	Carawol22	Carawol23	Carawol24	Carawol25	Carawol26	Exeter
	Home-Learning Due in	Carawol21	Carawol22	Carawol23	Carawol24	Carawol25	Carawol26	Exeter
Y11 chemistry	Topic		Topic 9 - Bulk and surface properties of matter including nanoparticles					Exeter
	Resources Scientific Literacy (SL) Calculations (Calc) Summaries (Sum)	SL - Topic 9 - Separate Chemistry 2 - Text revision					(SUM-3)	Exeter
	Home-Learning Due in	Carawol21	Carawol22	Carawol23	Carawol24	Carawol25	Carawol26	Exeter
Y11 physics	Topic	Program Topic A	Program Topic B	Program Topic C	Program Topic D	Program Topic E	Program Topic F TEST (Electricity, Magnetism and ...)	Exeter
	Resources Scientific Literacy (SL) Calculations (Calc) Summaries (Sum)							Exeter
	Home-Learning Due in	Carawol21 Carawol22 Carawol23 Carawol24 Carawol25 Carawol26 Carawol27 Carawol28 Carawol29 Carawol30 Carawol31 Carawol32 Carawol33 Carawol34 Carawol35 Carawol36 Carawol37 Carawol38 Carawol39 Carawol40 Carawol41 Carawol42 Carawol43 Carawol44 Carawol45 Carawol46 Carawol47 Carawol48 Carawol49 Carawol50 Carawol51 Carawol52 Carawol53 Carawol54 Carawol55 Carawol56 Carawol57 Carawol58 Carawol59 Carawol60 Carawol61 Carawol62 Carawol63 Carawol64 Carawol65 Carawol66 Carawol67 Carawol68 Carawol69 Carawol70 Carawol71 Carawol72 Carawol73 Carawol74 Carawol75 Carawol76 Carawol77 Carawol78 Carawol79 Carawol80 Carawol81 Carawol82 Carawol83 Carawol84 Carawol85 Carawol86 Carawol87 Carawol88 Carawol89 Carawol90 Carawol91 Carawol92 Carawol93 Carawol94 Carawol95 Carawol96 Carawol97 Carawol98 Carawol99 Carawol100	Carawol21 Carawol22 Carawol23 Carawol24 Carawol25 Carawol26 Carawol27 Carawol28 Carawol29 Carawol30 Carawol31 Carawol32 Carawol33 Carawol34 Carawol35 Carawol36 Carawol37 Carawol38 Carawol39 Carawol40 Carawol41 Carawol42 Carawol43 Carawol44 Carawol45 Carawol46 Carawol47 Carawol48 Carawol49 Carawol50 Carawol51 Carawol52 Carawol53 Carawol54 Carawol55 Carawol56 Carawol57 Carawol58 Carawol59 Carawol60 Carawol61 Carawol62 Carawol63 Carawol64 Carawol65 Carawol66 Carawol67 Carawol68 Carawol69 Carawol70 Carawol71 Carawol72 Carawol73 Carawol74 Carawol75 Carawol76 Carawol77 Carawol78 Carawol79 Carawol80 Carawol81 Carawol82 Carawol83 Carawol84 Carawol85 Carawol86 Carawol87 Carawol88 Carawol89 Carawol90 Carawol91 Carawol92 Carawol93 Carawol94 Carawol95 Carawol96 Carawol97 Carawol98 Carawol99 Carawol100	Carawol21 Carawol22 Carawol23 Carawol24 Carawol25 Carawol26 Carawol27 Carawol28 Carawol29 Carawol30 Carawol31 Carawol32 Carawol33 Carawol34 Carawol35 Carawol36 Carawol37 Carawol38 Carawol39 Carawol40 Carawol41 Carawol42 Carawol43 Carawol44 Carawol45 Carawol46 Carawol47 Carawol48 Carawol49 Carawol50 Carawol51 Carawol52 Carawol53 Carawol54 Carawol55 Carawol56 Carawol57 Carawol58 Carawol59 Carawol60 Carawol61 Carawol62 Carawol63 Carawol64 Carawol65 Carawol66 Carawol67 Carawol68 Carawol69 Carawol70 Carawol71 Carawol72 Carawol73 Carawol74 Carawol75 Carawol76 Carawol77 Carawol78 Carawol79 Carawol80 Carawol81 Carawol82 Carawol83 Carawol84 Carawol85 Carawol86 Carawol87 Carawol88 Carawol89 Carawol90 Carawol91 Carawol92 Carawol93 Carawol94 Carawol95 Carawol96 Carawol97 Carawol98 Carawol99 Carawol100	Exeter			

# Separate Science KS4 HT5

	School Week No.	28	29	30	31	32	Half-term
Year 10 biology	Topic	<b>SB8 – Exchange and transport in animals (11)</b>					Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)				<b>SL SB8 Circulatory System</b>		Half-term
	Home-Learning Due in	Carawool27	Carawool28	Carawool29	Carawool30	Carawool31	
Year 10 chemistry	Topic		Topic 5 – Separate chemistry 1- Transition metals,		Topic 5 – Separate chemistry 1- Quantitative		
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)	SL - Topic 4 – Reversible reactions and equilibria				SL - Topic 5 – Separate Chemistry 1 – Quantitative analysis (QP)	
	Home-Learning Due in	Carawool27	Carawool28	Carawool29	Carawool30	Carawool31	
Year 10 physics	Topic	SP 3-9 Forces and their effects including moments (24)	SP 3-9 Forces and their effects including moments (24)	Summative Assess 2 Forces, energy, nuclear	Topic 10 Electricity		Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)			Summative Assess 2 Forces, Energy, Radioactivity		Calculations Na 8 VI and R	
	Home-Learning Due in	IP 13 F-Ma	Carawoolar base Physics	IP 33 Work Energy and Power	Carawoolar base Physics	IP 34 KE	Half-term
Y11 biology	Topic	<b>Revision</b>	<b>Revision</b>	<b>GCSE Exam Week 1</b>	<b>GCSE Exam Week 2</b>	<b>GCSE Exam Week 3</b>	Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)			Exam dates are provisional	Exam dates are provisional	Exam dates are provisional	Exam dates are provisional
	Home-Learning Due in	Carawool27					
Y11 chemistry	Topic			<b>GCSE Exam Week 1</b>	<b>GCSE Exam Week 2</b>	<b>GCSE Exam Week 3</b>	Half-term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)			Exam dates are provisional	Exam dates are provisional	Exam dates are provisional	Exam dates are provisional
	Home-Learning Due in						
Y11 physics	Topic	<b>Practical Topic H (EMI and Static)</b>	<b>Revision</b>	<b>GCSE Exam START</b>	<b>GCSE Exam START</b>	<b>GCSE Exam Week 3</b>	Half-Term
	Resources Scientific Literacy (SL) Calculative (Calc) Summative (Sum)			Exam dates are provisional	Exam dates are provisional	Exam dates are provisional	Exam dates are provisional
	Home-Learning Due in	Carawoolar base Physics					

