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 a 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.

Curriculum Pathway – Combined Science

					Scier	ntific En	quiry		Biolo	gy		Physics	5		С	hemist	ry		As	sessm	ent					
Year 10	CC5-7 Bonding, CB5 Health, Disease and Drug development				ity CP6 R	CP6 Radioactivity, CC10-12 Electrolytic Processes		CP2 Forces and Motion		CP10 Electricity			CB6 Plant Structure and Function													
Teal 10																										
Year 11	CB9 Ecosystems and Meterial cycles, CB8 Exchange and transport in animals			CP8-9 Forces and Effects, CC13-15 Groups, rates and energy changes		cC1	CC16-17 Fuels, Earth and Atmospheric Science		CB7 Animal co-ordination, homeostasis, CP12-13 Particle Model, Foces and Matter				Consolidation, Exams			Consolidation, Exams										

	School Week No.	1	2	3	4	5	6	7	8	Half-Term
combined science	Topic	Introduction to GCSE Science	CC5-7 E	Bonding and types of sub	ostance	CB5 - Heal	th, Disease and drug de	velopment	Consolidation Week (complete B1 at home and mark in class?)	Half-Term
10	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)				SL ionic and covalent bonding			SL Physical and chemical barriers to disease.		Half-Term
Year	Home-Learning Due in		Carousel 1	Carousel 2	Carousel 3	Carousel 4	Carousel 5	Carousel 6	Carousel 7	Half-Term
combined science	Topic	CB9 - Ecos	systems and Material Cycle	•s (10 plus 2)	CB8 - Exch	ange and transport in anima	ıls (6 plus 2))	B1Exam paper (N	lot done B7 topic)	Half-Term
Y11 combi	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)			SL Sampling Methods			CB8 Circulatory Question	Y11 CORE MOCKS		Half-Term
~	Home-Learning Due in		Carousel 1	Carousel 2	Carousel 3	Carousel 4	Carousel 5	Carousel 6	Carousel 7	Half-Term

	School Week No.	Half-Term	9	10	11	12	13	14	15	Christmas		
combined science	Topic	Half-Term	Consolidation/Revisi on	PLUS some Physic	paper in 2 halves alculations (energy, ,waves)	CC3	Chemical calculation	CP Topic 6 Radioactivity (10)	Christmas			
10	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)	Half-Term		Summative Ass 1B1 Past Paper (1st half)	Summative Ass 1B1 Past Paper (2nd half)			Chemical Calculations Assessment1		Christmas		
Year	Home-Learning Due in	Half-Term	Carousel 8	Carousel 9	Carousel 10	Carousel 11	velocity-time	Carousel 13	IP Quick Quiz KE A	Christmas		
ined science	Topic	Half-Term	Consolidation/gap closing	CP8-3 Forces	and Effects (8)		CC13-15 - Groups, rates and energy changes (14)					
Y11 combined	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)	Half-Term			Calo No 13 Resultant Force		SL Group 1 with group 7			Christmas		
~	Home-Learning Due in	Half-Term	Carousel 8	Carousel 9	Carousel 10	Carousel 11	Carousel 12	Carousel 13	Carousel 14	Christmas		

	School Week No.	16	17	18	19	20	21	Half-term
ibined science	Topic CP Topic 6 R		adioactivity (10)	CC10-1	Half-term			
r 10 combined	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)	SL Structure of the atom.				SL Electrolysis of molten sodium chloride.		Half-term
Year	Home-Learning Due in	SU2GCSE 25 GPE	IP SU2GCSE 27 Efficiency	Carousel 17	IP SU2GCSE 36 wave equation	Carousel 18	Carousel 20	Half-term
combined science	Topic Revision for mocks		Y11 Full Mocks	Y11 Full Mocks	CC16-17 - Fuels	Half-term		
Y11 comb	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)		Y11 Full Mocks	Y11 Full Mocks		SL CC16 Crude Oil		Half-term
	Home-Learning Due in	Carousel 15	Carousel 16	Carousel 17	Carousel 18	Carousel 19	Carousel 20	Half-term

	School Week No.	21	22	23	24	25	Easter
Year 10 combined science	Topic	Consolidation Week Complete and Mark C1 paper at home and mark in class?)	Summative Ass 2 C1 I	Past paper in 2 halves	CP topic	Easter	
ır 10 com	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)		Summative Ass 2 c1 Past paper in first half	Summative Ass 2 C Past paper 2nd Half			Easter
Yea	Home-Learning Due in	Carousel 20		Carousel 22	IP 8 speed distance Time	Carousel 24 CP Topic 2 QQ1	Easter CP Topic 2 QQ2
Y11 combined science	Торіс	CB7 Animal	Co-ordination and Home	eostasis (12)	CP12-13 Particle Model	Easter	
(11 comb	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)			SL CB7 Control of Blood Sugar		Calculations No 5 SHC and Power	Easter
	Home-Learning Due in	Carousel 20	Carousel 21	Carousel 22	Carousel 23	Carousel 24	Easter

	School Week No.	26	27	28	29	30	31	32	Half-term
bined science	Topic	CP topic 2 part 2		CP10 - Electric	ity and Circuits	Consolida			
ır 10 combined	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)	SL Topic 2 Stopping Distances			SL CP10 Electricity and circuits	Calc Ass No 7 V I and R			
Year	Home-Learning Due in	IP 11 acceleration	Carousel 26 CP Topic 4 QQ	IP 12 V-t graphs	Carousel 28 CP Topic5 QQ	IP 13 F=Ma	Carousel 30 CP Topic 6 QQ	IP 33 Work Energy and Power	
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combined science	Topic	CP12-13 Particle Model, Forces and Matter (10)	Topic 10 Magnetism and E (i	Electromagnetic induction 5)	Consolidation	GCSE Exams START			Half-term
Y11 comb	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)	SL Describe how to determine the SHC of oil.				Exam dates are provisional	Exam dates are provisional	Exam dates are provisional	Exam dates are provisional
	Home-Learning Due in	Carousel 25	Carousel 26	Carousel 27					

	School Week No.	33	34	35	36	37	38	39	Summer
bined science	Topic	Revision	PLUS CH	Y10 Mock Exam P1 EMISTRY ONS SHEET	CB 6 Pla	ant Structure and Fur	GAP CLOSING 10- ->11		
r 10 com	Assessments Scientific Literacy (SL) Calculation (Calc) Summative (Sum)		Summative Ass 3 Y10 Mock Exam P1	Y10 Mock Exams week P1			SL CB6 Limiting Factors		
Yea	Home-Learning Due in	Carousel 32	IP53 Half-life	Carousel 34	Carousel 35	Carousel 36	Carousel 37		