

## UXBRIDGE HIGH SCHOOL

## YEAR 9 – BIOLOGY CURRICULUM MAP

Autumn Term (14 weeks)	Spring Term (12 weeks)	Summer Term ( 13 weeks)
Themes covered:	Themes covered:	Theme covered:
B8.5: Cell structure and transport	Topic B8.6: cell division	Topic 3: Organisation and digestive system
	Key Concepts:	Key Concepts: Chemistry of food, Catalysts and Enzymes, Factors Affecting
Key Concepts: microscopy, cell Structure, cell Differentiation, animal and plant	- growth and differentiation, potential uses of stem cells, as well as the disadvantages	enzyme action, How the digestive system works, Making Digestion Efficient.
Cells, eukaryotic and prokaryotic cells, specialised animal and plant cells, transport in	and objections to the use of stem cells	KS3 NC Content links:
cells by diffusion, osmosis, and active transport.		-B8.3 - B8,4 – Breathing, Digestion (KS3 NC: Nutrition and digestion, Gas
	- B8.7: Organisation and digestive system	exchange systems, Health)
KS3 NC Content links:	Key Concepts:	exchange systems, nearing
<ul> <li>B8 Organisms Part 1 – Cells (KS3 NC: Structure and function of living organisms)</li> </ul>	<ul> <li>principles of organisation: tissue, organ, and organ system,</li> </ul>	
	principles of organisation. Issue, organ, and organ system,	Enrichment/life and work skills: Group work/Collaboration /
Enrichment/life and work skills: Group work/Collaboration / Practical Work, Research	KS3 Content links:	Practical Work, Research skills, Public speaking , Empathy. Science trip :Big
skills, Public speaking, Empathy. Science week activities exploring cutting edge	B8.1 - 8.2 Cell structure and transport -cell differentiation, specialised cells and	Bang Science Fair gives students to see research presentations
advances in Biology plus exciting activities to engage and motivate the students.	adaptations, diffusion and exchange surfaces	from universities and tech companies as well as job opportunities in Science.
	adaptations, diffusion and exchange surfaces	<u>DPR -</u> KO 7 – 9 formatively assessed throughout term as well as End
DPR - KO 1 - 4 formatively assessed throughout term as well as End point assessment.	Freichen unt (life and words skiller, Graum words (Callabarration ( Drastical	point assessment.
Homowork	Enrichment/life and work skills: Group work/Collaboration / Practical	Homework:
<ul> <li><u>Homework:</u></li> <li>Assigned tasks as per SOW and Seneca and kerboodle.</li> </ul>	Work, Research skills, Public speaking , Empathy. Science week activities exploring	Assigned tasks as per SOW and Seneca and kerboodle.
End of topic exam style questions	cutting edge advances in Biology plus exciting activities to engage and motivate	End of topic exam style questions     Revisiting, revising, remembering opportunities
	the students.	•Assigned tasks on kerboodle
Revisiting, revising, remembering opportunities		•Regular interleaving tasks during lessons.
•Assigned tasks on kerboodle	DPR - KO 5 – 6 formatively assessed throughout term as well as End point	•Exam practice questions
•Regular interleaving tasks during lessons.	assessment. Homework:	
•Exam practice questions	Assigned tasks as per SOW and Seneca and kerboodle.	Assessment Asses
	End of topic exam style questions	Exam h.w. Questions
Assessments:	· · · · · · · · · · · · · · · · · · ·	End of topic Test based on KOs of B8.7 Organisation
• Exam h.w. Questions	Revisiting, revising, remembering opportunities	• End of Year exam to cover all the KO's from C3.5, C3.6, C3.7.
End of topic Exam based on KOs from Topic B8.5	<ul> <li>Assigned tasks on kerboodle</li> </ul>	Literacy Foci:
Literature Facili	•Regular interleaving tasks during lessons.	Working scientifically and topic specific Key Vocabulary and
<ul> <li><u>Literacy Foci:</u></li> <li>Working scientifically and topic specific Key Vocabulary and nomenclature</li> </ul>	•Exam practice questions	nomenclature
<ul> <li>Working scientifically and topic specific key vocabulary and nomenciature</li> <li>Key exam command words</li> </ul>		Key exam command words
6 mark extended writing questions	Assessments:	6 mark extended writing questions
	• Exam h.w. Questions	Numeracy Foci:
Numeracy Foci:	End of topic Exam based on KOs of B8.5 and B8.6 (Cell Biology and Cell	Graphical skills – Drawing and Interpretation
Graphical skills – Drawing and Interpretation	Division).	<ul> <li>using an appropriate number of significant figures in calculations</li> <li>SI units and IUPAC chemical nomenclature</li> </ul>
using an appropriate number of significant figures in calculations		<ul> <li>SI units and IOPAC chemical nomenclature</li> <li>using prefixes and powers of ten for orders of magnitude (e.g. tera, giga,</li> </ul>
SI units and IUPAC chemical nomenclature		mega, kilo, centi, milli, micro and nano)
• using prefixes and powers of ten for orders of magnitude (e.g. tera, giga, mega, kilo,	Literacy Foci:	Unit conversions
and a start start and search and	<ul> <li>Working scientifically and tonic specific Key Vocabulary, and nomenclature</li> </ul>	Unit conversions





## YEAR 9 – CHEMISTRY CURRICULUM MAP

Autumn Term (14 weeks)	Spring Term (12 weeks)	Summer Term ( 13 weeks)
Themes covered:	Themes covered:	Theme covered:
C5.5: Atomic structure	C5.6 Periodic Table	Topic C5.7: Structure and Bonding
Key Concepts: separation and purification techniques for mixtures (filtration,	Key Concepts: Development of the periodic table, Electronic structures and the	Key Concepts: Giant ionic structures, Covalent Bonding, Structure of simple
crystallisation, and simple distillation), structure of the atom, atoms, ions, and isotopes,	periodic table, Group 0, Group 1, and Group 7 elements,	molecules, Giant covalent structures, Fullerenes and graphene, bonding in
electronic structure, symbol equations including state symbols.	Group 7-the halogens, Explaining trends.	metals, Giant metallic structures, nanoparticles
KS3 NC Content links:	Higher-tier students should also be able to identify trends in properties and reactivity	KS3 Content links:
-C5.1 - C5.2 – Particle model, separating mixtures (KS3 NC: The particulate nature of	in terms of the electronic structure of the elements.	KS3 knowledge of the law of the states of matter
matter and Pure and impure substances)	GCSE chemistry students should be able to compare the properties and reactions of	C5.3 -5.4 – Periodic table, Elements (KS3 NC: Atoms, elements and
-KS3 knowledge of the law of the conservation of mass	the transition elements with the elements of Group 1, identify that some transition	compounds, The periodic table)
Enrichment/life and work skills: Group work/Collaboration/Practical Work, Research	elements can form many different ions, and recognise that they are used as catalysts.	Enrichment/life and work skills: Group
skills, Public speaking , Empathy	Topic 5.7: Structure and Bonding	work/Collaboration / Practical Work, Research skills, Public speaking,
<b>DPR</b> - KO1 - 3 formatively assessed throughout term as well as End point assessment.	Key Concepts: States of matter, Atoms into ions, Ionic Bonding	Empathy
Homework:		<b>DPR</b> - KO6 - 10 formatively assessed throughout term as well as End point
•Assigned tasks as per SOW and Seneca and kerboodle.	KS3 Content links:	assessment.
•End of topic exam style questions	C5.3 -5.4 – Periodic table, Elements (KS3 NC: Atoms, elements and compounds, The	Homework:     Assigned tasks as per SOW and Seneca and kerboodle.
Revisiting, revising, remembering opportunities		<ul> <li>End of topic exam style questions</li> </ul>
<ul> <li>Assigned tasks on kerboodle</li> </ul>	periodic table) <u>DPR -</u> KO4 - 5 formatively assessed throughout term as well as End point assessment.	Revisiting, revising, remembering opportunities
•Regular interleaving tasks during lessons.	Enrichment/life and work skills: Group work/Collaboration / Practical Work,	•Assigned tasks on kerboodle
•Exam practice questions	Research skills, Public speaking , Empathy	•Regular interleaving tasks during lessons.
Literacy Foci:	Homework:	•Exam practice questions
<ul> <li>Working scientifically and topic specific Key Vocabulary and nomenclature</li> <li>Key exam command words</li> </ul>	•Assigned tasks as per SOW, Kerboodle and Seneca	Assessment_
<ul> <li>6 mark extended writing questions</li> </ul>	•End of topic exam style questions	Exam h.w. Questions
Numeracy Foci:	Revisiting, revising, remembering opportunities	End of topic Exam based on KO's for C5.7: Structure and Bonding
Graphical skills – Drawing and Interpretation	•Assigned tasks on Kerboodle	End of Year exam to cover all the KO's from C5.5, C5.6, C5.7.
Using an appropriate number of significant figures in calculations	•Regular interleaving tasks during lessons.	Literacy/ numeracy foci:
SI units and IUPAC chemical nomenclature	•Exam practice questions	•Reading skills/ Terminology and vocabulary /Writing skills /Analytical Skills
Unit conversions	Assessments:	Working scientifically:
Working scientifically:	Exam h.w. Questions	<ul> <li>Investigating properties of ionic and covalent compouinds.</li> </ul>
Separating mixtures practical. Opportunities to plan investigations, to obtain	End of topic Exam based on KOs from Topic C5.5 and C5.6.	Opportunities to plan investigations, to obtain evidence and to analyse
evidence and to analyse data.	Literacy Foci:	data.
Extra -Curricular opportunities and Trips: • Virtual science club –via TEAMS Aspiring Scientist	Working scientifically and topic specific Key Vocabulary and nomenclature	Extra -Curricular opportunities and Trips:
Inter-house and Inter school competitions	Key exam command words,	Virtual science club –via TEAMS -Aspiring Scientist
	6 mark extended writing questions	Science trip : Big Bang Science Fair
	Numeracy Foci:	
	<ul> <li>Graphical skills – Drawing and Interpretation</li> <li>Using an appropriate number of significant figures in calculations</li> </ul>	
	<ul> <li>Balancing equations (use of ratios)</li> </ul>	
	Balancing equations (use of ratios)	

### Working scientifically:



# UXBRIDGE HIGH SCHOOL

### YEAR 9 – PHYSICS CURRICULUM MAP

## Proud to make success happen

• Graphical skills – Drawing and Interpretation

Autumn Term (14 weeks)	Spring Term (12 weeks)	Summer Term ( 13 weeks)
Themes covered:	Themes covered:	Summer 1 -Theme covered:
P3.5 : Conservation and Dissipation of Energy	P3.6: Energy transfer by heating	Topic 3.7: Energy Resources Key Concepts: Energy demands,
Key Concepts: Changes in energy stores, Conservation of energy, Energy	Key Concepts: Energy transfer by conduction, Infrared Radiation, Specific	Energy from wind and water, Power from the sun and Earth,
and work, Gravitational potential energy stores, Kinetic energy and elastic	Heat capacity, Heating and insulating buildings.	Energy and the environment, Big energy issues
energy stores, Energy dissipation, Energy and efficiency, Energy and Power	Higher-tier only: More about infrared radiation	
KS3 Content links: energy transfer in Key Stage 3	Higher-tier GCSE Physics students : will need to apply the concept of the	Enrichment/life and work skills: Group
P3.3 - P3.4 – Work, Heating and cooling (KS3 NC: Energy and changes in	Greenhouse Effect and its relationship to the wavelength of the radiation	work/collaboration/Practical Work, Research skills, Public
systems)	penetrating or being absorbed by Earth's atmosphere	speaking , Empathy. Science trip :Big Bang Science Fair gives
Enrichment/life and work skills: Group work/collaboration/Practical Work,	KS3 Content links: energy transfer in Key Stage 3	students to see research presentations from universities and
, Research skills, Public speaking , Empathy	P3.4 – conduction, convection and infra-red radiation. (KS3 NC: Energy	tech companies as well as job opportunities in Science.
Science trip : STEM trip to Brunel University	and changes in systems)	<u>DPR -</u> KO8-9 formatively assessed throughout term as well as
<b>DPR</b> - KO1 - 4 formatively assessed throughout term as well as End point	Enrichment/life and work skills: Group work/collaboration/Practical	
assessment.	Work, , Research skills, Public speaking , Empathy. Science week activities	End point assessment. Homework:
Homework:	exploring cutting edge advances in Physics plus exciting activities to	Assigned tasks as per SOW and Seneca and kerboodle.
Assigned tasks as per SOW and Seneca and kerboodle.		<ul> <li>End of topic exam style questions</li> </ul>
End of topic exam style questions	engage and motivate the students.	
Revisiting, revising, remembering opportunities	DPR - KO5 - 7 formatively assessed throughout term as well as End	Revisiting, revising, remembering opportunities
•Assigned tasks on kerboodle	point assessment.	•Assigned tasks on kerboodle
•Regular interleaving tasks during lessons.	Homework:	•Regular interleaving tasks during lessons.
•Exam practice questions	<ul> <li>Assigned tasks as per SOW and Seneca and kerboodle.</li> <li>End of topic exam style questions</li> </ul>	•Exam practice questions
Literacy Foci:	Revisiting, revising, remembering opportunities	
Working scientifically and topic specific Key Vocabulary	•Assigned tasks on kerboodle	Assessment
<ul> <li>Scientific Writing: Writing a plan, drawing a conclusion, evaluating</li> </ul>	•Regular interleaving tasks during lessons.	Exam h.w. Questions
method and presenting findings.	•Exam practice questions	End of topic Exam based on KO's for P3.7: Emergy resources
Numeracy Foci:	Assessments:	End of Year exam to cover all the KO's from P3.5, P3.6, P3.7.
Graphical skills – Drawing and Interpretation	Exam h.w. Questions	
using an appropriate number of significant figures in calculations	• End of topic Exam based on KOs from <b>Topic P3.5 and P3.6.</b>	Literacy Foci:
SI units/Unit conversions	Literacy Foci:	Working scientifically and topic specific Key
• Use of formulae:	Working scientifically and topic specific Key Vocabulary and	Vocabulary and nomenclature, Key exam command words,
<ul> <li>work done = force × distance (moved along the line of action of the force)</li> </ul>	nomenclature, Key exam command words,	6 mark extended writing questions
<ul> <li>force)</li> <li>g.p.e. = mass × gravitational field strength × height [E<sub>n</sub> = m q h]</li> </ul>	6 mark extended writing questions	Numeracy Foci:
$g_{1}$ , $p_{2}$ , $-$ mass $\sim$ gravitational netu strength $\sim$ neight $ E_{1} - m   q   n $	and the second se	Craphical skills Drawing and Interpretation

Numeracy Foci:

• g.p.e. = mass × gravitational field strength × height  $[E_p = m g h]$