Y7 Science Learning Pathway

	Learning session 1	Learning session 2	Learning session 3	Learning session 4
Topic	Skills 7Z Particle & Atoms 7GH	Space 8L Cells 7A	Forces 7K Reproduction 7B Mixtures & Separation 7E Acids & Alkalis 7F	Energy & Combustion 7I8E Ecology 7D
Threshold concepts explored	Particles Reactions Devise Observe Evaluate Analyse	Forces Cells Genetics	Particles Energy Forces Cells Genetics Chemical Analysis Materials	Evolution Genetics Particles Energy Reactions Interdependence
Building on KS1&2 programme of study for Science	States of matter in primary	Living things & their environment Animals, including humans Earth & Space Properties and changes of materials	Uses of everyday materials Forces and Magnets Animals, including humans	Living things & their environment Animals, including humans Evolution & Inheritance Properties and changes of materials
Leading to	Hazards & Risks (Y9) Key Concepts in Chemistry (Y9)	Key Concepts in Biology (Y9) Astronomy (Y10S)	Forces & Motion (Y9) Key Concepts in Biology (Y9) Genetics (Y10) States of Matter & Separation (Y9) Acids (Y10) Forces & Motion (Y9)	Ecosystems & Material Cycles (Y10) Heat energy changes in Chemical Reactions (Y11) Fuels (Y11)
How will you know how you are doing and how to improve?	7GH end of topic test Progress Check 1 assessment	8L end of topic test 7A end of topic test Progress Check 2 assessment	7K end of topic test 7B end of topic test 7F end of topic test 7E end of topic test Progress Check 3 assessment	7I8E end of topic test 7D end of topic test Progress Check 1 assessment (Y8)
Experiences to look out for	How to use a Bunsen burner safely Burning magnesium	Looking at your own cheek cells under the microscope Chromatography	Making your own parachute Investigating Density using the Eureka cans Separating rock salt Firing your own rocket	Making your own indicator Investigating Hardenhuish's renewable energy sources Elephant's toothpaste Investigating Invertebrates

Links to useful resources	The particle model of matter - KS3 Chemistry - BBC Bitesize	Space - KS3 Physics - BBC Bitesize What are plant and animal cells? - BBC Bitesize	Introduction to forces Reproduction - KS3 Biology Acids and alkalis Separating solids from liquids	Energy stores Ecosystems and habitats

Year 7 **Language for Life** in Science

Term	Term 2	Term 3	Term 4	Term 5	Term 6
Building on From previous term	Backwards Forwards	Organisation	The Brain Wellbeing	Creative thinking Study skills	Tolerance Respect
Theme	Independence Resilience	Independence Success	Metacognition Mindset	Success Metacognition	Resilience Mindset
Tasks	Review of 7GH Set targets for next topic of work	Create a small revision timetable for an upcoming test	Use self assessment to inform a piece of targeted learning	Create a mind map for a piece of learning or upcoming assessment	Reflect on the content learnt over the course of year

Year 8 Learning Pathway

	Learning Session 1	Learning Session 2	Learning Session 3
Topic	8D Unicellular Organisms 7L8J Sound & Light 8G Metals & The Periodic Table	8A Food & Digestion 7J Electricity & Magnetism 8H The Rock Cycle 8K Thermal Energy	8F Applications of Chemistry Science Project
Threshold concepts explored	Cells Particles Energy Materials Reactions	Forces Energy Particles Materials Reactions	Particles Energy Cells Reactions
Building on KS1&2 programme of study for Science	Living things & their environment Uses of everyday materials Light Sound	Forces & Magnets Electricity Uses of everyday materials Rocks Properties and changes of materials	Uses of every day materials Properties and changed of materials
Leading to	Health & Disease (Y9) Electromagnetic Spectrum (Y9) Key Concepts in Chemistry (Y9) Metals (Y9)	Key Concepts in Biology (Y9) Heat Energy in Chemical reactions (Y10) Conservation of Energy (Y9) Electricity (Y10)	Key concepts Chemistry Y9 Rates of reaction & Energy Changes (Y10) Core Practical Skills (Y9-11)
How will you know how you are doing and how to improve?	Progress Check 1 (Y7 content) 8D end of topic test 7L8J end of topic test 8G end of topic test Y8 Exam Fortnight Progress Check 2	8A end of topic test 7J end of topic test 8K end of topic test 8H end of topic test Progress Check 3 assessment	8F end of topic test
Experiences to look out for	Growing your own bacteria Using rayboxes Chemical Testing	Modelling digestion Building circuits The starburst rock cycle	The Science Fair Making slime Elephants toothpaste
Links to useful resources	Health and disease - KS3 Biology - BBC Bitesize Properties of sound waves How light travels - Light waves - KS3 Physics Revision - BBC Bitesize Periodic table - KS3 Chemistry - BBC Bitesize	Nutrition, digestion and excretion Electricity - KS3 Physics - BBC Bitesize Bar magnets Heating and cooling The rock cycle	Catalysts guide for KS3 chemistry students - BBC Bitesize Periodic table - KS3 Chemistry - BBC Bitesize Atoms, elements and compounds - KS3 Chemistry - BBC Bitesize

Y8 **Language for Life** in Science

Term	Term 1	Term 2	Term 3	Term 4	Term 5
Topic	Communication Well being	Team working Revision skills	Exams review	Future planning Y9 Options	Personal Safety Tackling Prejudice
Theme	Resilience Mindset	Success	Resilience Mindset	Independence Mindset	Independence Success
Tasks	Identify science goals for the year – what do you want to improve on?	Identify which revision strategies have been useful and select one to create a piece of revision for Y8 exams	Identify areas of achievement from science exams. Identify which revision method was successful for you	Set targets for an upcoming assessment	Allow opportunity some collaborative learning e.g. a learning expert in a information circus