

Department Curriculum and Assessment Outline

Department: Science Year Group: 7 Teaching, learning and assessment during the course:

Timing (Weeks, half terms)	Unit Title (as applicable)	Key Question(s) e.g. Why do we need maps and how do we use them? How do quest stories work?	How will we know that pupils can answer the key question(s)? Data that will inform attainment grade	Key Themes of the unit e.g. grammar, processes, events, styles
Autumn 1	7A – Cells, tissues, organs and systems. 7I – Energy	How do cells, tissues and organs work together? How is energy stored and used?	End of topic review. End of unit test. Activelearn assessment. Key practical write-up.	Using microscopes to view cells. Explore the organisation of organs and tissues in the human body. Investigate energy in fuels and foods through burning. Draw energy transfer diagrams.
Autumn 2	7B – Sexual reproduction in animals. 7J – Current electricity.	How do animals reproduce? How do we model an electric current?	End of topic review. End of unit test. Activelearn assessment. Key practical write-up.	Male and female reproductive organs. Fertilisation. Giving birth. Building circuits. Modelling electric current.
Spring 1	7E – Mixtures and separation. 7F – Acids and alkalis.	How can we separate different mixtures? How are acids and alkalis different?	End of topic review. End of unit test. Activelearn assessment. Key practical write-up.	Practical skills to separate mixtures. pH scale and indicators.
Spring 2	7C – Muscles and bones. 7K - Forces	How do muscles and bones work together in the body? What are some different forces and their effects?	End of topic review. End of unit test. Activelearn assessment. Key practical write-up.	The skeleton. Muscles and moving. Force diagrams. Balanced and unbalanced forces
Summer 1	7D – Ecosystems 7L -Sound	What is the importance of ecosystems to each type of organism? What is sound and how can it be heard?	End of topic review. End of unit test. Activelearn assessment. Key practical write-up.	Variation and adaptations. Food chains Making and detecting different sounds. Sound waves. Animal sounds.
Summer 2	7G – The particle model. 7H – Atoms, elements and molecules.	How are particles used to model Solids, liquids and gases. How are atoms, elements and molecules different?	End of topic review. End of unit test. Activelearn assessment. Key practical write-up.	Particle diagrams. Diffusion and Brownian motion. Air composition Metals and non-metals. Chemical reactions.

Department Curriculum and Assessment Outline

Department: **Science** Year Group: **8** Teaching, learning and assessment during the course:

Timing (Weeks, half terms)	Unit Title (as applicable)	Key Question(s) e.g. Why do we need maps and how do we use them? How do quest stories work?	How will we know that pupils can answer the key question(s)? Data that will inform attainment grade	Key Themes of the unit e.g. grammar, processes, events, styles
Autumn 1	8A Food and nutrition	Describe how the digestive system works and the importance of a balanced diet.	Key practical write up Active learn assessment End of topic review End of unit test	Balanced diets. Symptoms of deficiencies The different nutrients and their uses. Digestion Absorption
Autumn 1/2	8K Energy Transfer	Give examples of how energy is transferred and assess calculate the efficiency.	Key practical write up Active learn assessment End of topic review End of unit test	Internal energy and changes in temperature Transferring energy – conduction, convection and radiation Controlling energy transfer Power and efficiency Paying for energy
Autumn 2	8E Combustion	How do fuels and metals react with oxygen?	Key practical write up Active learn assessment End of topic review End of unit test	Burning fuels Oxidation Fire safety Air pollution and ways to reduce pollution Global warming
Autumn 2	8B Plants and their reproduction	How do plants reproduce?	Key practical write up Active learn assessment End of topic review End of unit test	Uses of plants Classification and biodiversity Types of reproduction Life cycle - Pollination, fertilisation , dispersal and germination.
Spring 1	8J Light	How light travels.	Key practical write up Active learn assessment End of topic review End of unit test	How we see Reflection and refraction of light Cameras and eyes Colour

Department Curriculum and Assessment Outline

Spring 1	8F Periodic table	Describe the physical and chemical trends.	Key practical write up Active learn assessment End of topic review End of unit test	Atoms and chemical formulae Arrangement of elements in the periodic table The trends of physical properties – melting, boiling points. The trends in chemical properties.
Spring 1/2	8C Breathing and respiration	Give the equation for aerobic and anaerobic respiration	Key practical write up Active learn assessment End of topic review End of unit test	Aerobic respiration Gas exchange system Transport of oxygen around the body Anaerobic respiration Fitness training
Spring 2	8I Fluids	Describe the forces and pressure in liquids.	Key practical write up Active learn assessment End of topic review End of unit test	The particle model – solid, liquid, gases Changing states Pressure in fluids Floating and sinking Drag
Spring 2	8G Metals and their uses	Describe the properties and reactions of metals	Key practical write up Active learn assessment End of topic review End of unit test	Uses of metals Rusting and corrosion How metals react with water and acid.
Summer 1	8D Unicellular organisms	Describe the different microbes – their uses and diseases.	Key practical write up Active learn assessment End of topic review End of unit test	The black death Unicellular or multicellular Microscopic fungi Bacteria Protoctists
Summer 1	8L Earth and Space	What is the Earth's position in space	Key practical write up Active learn assessment End of topic review End of unit test	Causes of the seasons Earth's magnetic field Gravity in space Beyond our solar system
Summer 2	8H Rocks	Describe the 3 different rock types and how they are	Key practical write up Active learn assessment End of topic review	Rocks and their uses Igneous and metamorphic rocks Weathering and erosion Sedimentary rocks



Department Curriculum and Assessment Outline

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Department Curriculum and Assessment Outline

Department: **Science** Year Group: **9** Teaching, learning and assessment during the course:

Timing (Weeks, half terms)	Unit Title (as applicable)	Key Question(s) e.g. Why do we need maps and how do we use them? How do quest stories work?	How will we know that pupils can answer the key question(s)? Data that will inform attainment grade	Key Themes of the unit e.g. grammar, processes, events, styles
Autumn 1	9A – Genetics and evolution. 9E – Making materials 9I – Forces and motion	9A-Describe variation in a population 9E-Production and use of synthetic materials 9I-How and why do things move	End of unit review End of unit test Activelearn homework Key Practical Write-up	9A Inheritance, natural selection, mutation, environmental variation. 9E Composites, Polymers and recycling 9I Scalars, vectors, speed and acceleration.
Autumn 2	9A – Genetics and evolution. 9E – Making materials 9I – Forces and motion	9A-Describe variation in a population 9E-Production and use of synthetic material 9I-How and why do things move	End of unit review End of unit test Activelearn homework Key Practical Write-up	9A Inheritance, natural selection, mutation, environmental variation. 9E Composites, Polymers and recycling 9I Scalars, vectors, speed and acceleration.
Spring 1	9B – Plant growth 9F – Reactivity 9J - Force fields and electromagnets.	9B-How do plants grow and why are certain plants produced. 9F-Reactants, how they react and what they produce.	End of unit review End of unit test Activelearn homework Key Practical Write-up	9B Farming, growing and use of plants 9F Endothermic, exothermic, reactivity and industrial processes 9J Gravity, magnetism and electricity.

Department Curriculum and Assessment Outline

		9J-What are fields and how do they produce forces?		
Spring 2	9D Biology GCSE transition 9H Chemistry GCSE transition 9L Physics GCSE transition	9D- How are populations of organisms arranged? 9H – How and why do chemicals react? 9L – How is matter and energy arranged?	End of unit review End of unit test Activelearn homework Key Practical Write-up	9D Ecology, Disease and Statistics 9H Reactivity, Ions and Equilibrium 9L Fields, Effects and Energy.
Summer 1+2	Biology project Physics project Chemistry project			

What is each attainment grade based on?

	7	8	9	10	11	12	13
Mid Term Autumn							
Report Autumn							
Mid Term Spring							
Report Spring							
Mid Term Summer							
Report Summer							