

**Year 9
Chemistry**

	Advent 1	Advent 2	Lent 1	Lent 2	Penetcost 1	Pentecost 2
Topics	Chemical equations and separating techniques	History and structure of the atom	Development of the Periodic Table	Reactions of the alkali metals and halogens	Chemical calculations	How science works
Skills	Understanding how atoms are rearranged in a chemical reaction. Naming and engaging with practical skills scientifically.	Using models to understand how the sub atomic particles are arranged	Using old scientific journals to investigate the development of the Periodic Table	Using scientific practical methods to identify signs of a reaction	How to use chemical equations to calculate theoretical mass of products in simple examples	Plan and carry out scientific enquiries to test predictions.
Key Questions	Why is mass the same before and after a reaction in a closed system.	Can we see an atom?	How invented the Periodic Table and how long ago?	Which metal is most reactive?	How do you weigh an atom?	How can I keep safe in a practical?

Assessment	Non- this term	End sticky knowledge assessment and an end of topic written assessment	Non-this term	End sticky knowledge assessment and an end of topic written assessment	Non- this term	End sticky knowledge assessment and an end of topic written assessment
------------	----------------	--	---------------	--	----------------	--

	Advent 1	Advent 2	Lent 1	Lent 2	Penetcost 1	Pentecost 2
Topics	Digestion	Respiration	Photosynthesis	The detailed structure of specialised cells	Diffusion, osmosis and active transport in cells	Photosynthesis
Skills	Using chemicals to show digestion by enzymes.	Observations on how our bodies react during exercise and at rest	Using scientific equipment precisely to show photosynthesis in action.	Using microscopes and making your own microscope slide	Using scientific investigation to demonstrate diffusion and osmosis	Measuring the rate of photosynthesis in a lab
Key Questions	Do we have bacteria in our digestive systems like cows?	Why does my heart carry on beating fast when I stop exercising?	Why do plants leaves go yellow?	Are all cells the same?	How do plant roots absorb water from the soil?	Why is photosynthesis important to us?
Assessment	End of unit learning checkpoints and sticky knowledge assessment	End of unit learning checkpoints and sticky knowledge assessment	End of unit learning checkpoints and sticky knowledge assessment	Non-this term	End of unit learning checkpoints and sticky knowledge assessment	End sticky knowledge assessment and an end of topic written assessment

Year 9 Physics

	Advent 1	Advent 2	Lent 1	Lent 2	Penetcost 1	Pentecost 2
--	-----------------	-----------------	---------------	---------------	--------------------	--------------------

Topics	Heating and cooling and another look at electrical circuits	Conservation of energy and work	Kinetic energy and elastic potential energy	Energy, efficiency and power	Density and states of matter	Internal heat and pressure
Skills	How to identify properties of insulators and conductors	Using scientific skills to measure work done and identify energy transfers	Using scientific measurements to calculate energy transfers	Using scientific measurements to calculate energy transfers	Using scientific measurements to calculate energy transfers	Using scientific measurements to calculate energy transfers
Key Questions	Can energy be created and destroyed?	How many types of energy do we have?	How is energy transferred from one type to another?	What makes an energy transfer inefficient?	What is density?	What is internal energy?
Assessment	End of unit learning checkpoints and sticky knowledge assessment	Non this term	End of unit learning checkpoints and sticky knowledge assessment	End of unit learning checkpoints and sticky knowledge assessment	End of unit learning checkpoints and sticky knowledge assessment	End of unit learning checkpoints and sticky knowledge assessment