


Year 7 Overview			Pupils in year 7 build upon the key scientific concepts they completed at KS2. This is achieved through a sequenced curriculum delivered through the 10 big ideas of science which are introduced in year 7 and developed further through to year 11.								
	Trinity 2		Michaelmas 1		Michaelmas 2		Lent 1		Lent 2		Trinity 1
	June	July	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Topic/Big Question			Skills in Science	Particle Model	Movement and Cells	Speed and Gravity	Separating Mixtures	Energy Costs and Transfers	Acids and Alkalis	Interdependence	Earth Structure and Universe
Theme(s)			Working Scientifically	Matter	Organisms	Forces	Matter	Energy Costs and Transfers	Reactions	Organisms	Earth
Key Knowledge			<ul style="list-style-type: none"> recognising rules for working safely in the lab different pieces of apparatus for their uses lighting and using a Bunsen burner 	<ul style="list-style-type: none"> the particle model states of matter and properties changes of state including melting, freezing, boiling and evaporation, diffusion and gas pressure 	<ul style="list-style-type: none"> the levels of organisation in organisms the structure and function of the skeleton the role of joints and muscles plant and animal cells specialised cells diffusion of substances in cells unicellular organisms 	<ul style="list-style-type: none"> types of forces, balanced and unbalanced forces resultant forces. speed, distance time graphs mass, weight and gravity. 	<ul style="list-style-type: none"> how solutions are produced solubility of solutions and saturated solutions. how to separate solutions using filtration, crystallisation, distillation and chromatography 	<ul style="list-style-type: none"> different energy stores how energy can be transferred via different pathways dissipation of energy energy efficiency. energy resources food as a fuel the ways that energy use can be calculated in homes. 	<ul style="list-style-type: none"> how to identify that a chemical reaction has taken place properties of acids and alkalis the pH scale neutralisation and making salts properties of metals and non-metals the reactions of metals with oxygen, acids and water the reactivity series displacement reactions 	<ul style="list-style-type: none"> food chains, webs and what happens when they are disrupted ecosystems and competition within the ecosystem the structure and function of the parts of a flower pollination plant fertilisation, germination and seed dispersal. 	<ul style="list-style-type: none"> the structure of the earth the formation of sedimentary, igneous and metamorphic rocks leading on to the rock cycle the solar system and our place in the universe day, night, seasons the phases of the moon.
Key Skills			Use scientific vocabulary and selection of suitable apparatus.	Use scientific models, diagrams and key vocabulary to explain scientific concepts. They should also analyse data to determine when a change of state has taken place.	How to use a microscope, make observations and draw conclusions from observations. They should also use scientific diagrams and key vocabulary to explain scientific concepts.	Identify variables, collect and analyse data. They should also use scientific models, diagrams and key vocabulary to explain scientific concepts.	Identify variables, collect and analyse data to allow them to draw suitable conclusions. They should also use scientific diagrams, models and vocabulary to explain scientific concepts.	Identify variables, collect and analyse data to allow them to draw suitable conclusions. They should also be able to compare and evaluate the different energy resources available.	Use scientific models and key vocabulary to explain scientific concepts, collect data from an experiment, analyse and use it to draw scientific conclusions from their investigation.	Recognise, interpret and construct scientific diagrams and models. They should also use scientific diagrams, models and key vocabulary to explain scientific concepts.	Use scientific models, diagrams and key vocabulary to explain key vocabulary. They should also explain how models and theories change over time with new evidence
Assessment			Practical to assess skills - Bunsen burner licence.	End of unit learning checkpoint. Extended answer on changes of state	End of unit learning checkpoint. Extended answer on action of muscles.	End of unit learning checkpoint. Extended answer on investigating speed.	End of unit learning checkpoint. Extended answer on solubility curves.	End of unit learning checkpoint. Extended answer on investigating energy content in food.	End of unit learning checkpoint. Extended answer on the uses of neutralisation	End of unit learning checkpoint. Extended answer on predator prey relationships.	End of unit learning checkpoint. Extended answer on seasons.
Careers					Podiatrist - external speaker			Renewable energy engineer			
Personal and Spiritual Development					Healthy living - healthy bones and muscles		Relationship with others - mutual respect through practical work.	Stewardship - looking after the Earth. Citizenship - consider the social issues surrounding the use of renewable energy		Stewardship. Spirituality - Awe and wonder of the natural world and ecosystems.	Spirituality - Awe and wonder of the solar system and beyond
Any other key information							This builds on the ideas introduced during the Particle model unit		This builds on the ideas introduced during the Particle model unit and Separating mixtures		