

Subject

Year 7

Autumn

Year: 7		Term: Autumn			
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	The Night Sky	Objects in the Night Sky  The Solar System  The Earth  The Moon and its phases  Changing ideas on the structure of the Solar System and Universe	KS2 Earth and Space		<a href="#">The Earth Knowledge</a>
	Forces	What forces are  Balanced and unbalanced forces  Speed  Distance-time graphs  Gravity	KS2 Forces		<a href="#">Forces Knowledge</a>

Subject

Year 7

Spring

Year:		Term:			
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Physics	Potential Difference and Resistance	Potential difference  Resistance, its effect and measurement  Series and Parallel circuits  Current and its measurement	KS2 Electricity		<a href="#">Magnets and Electromagnets Knowledge</a>
	Energy	Food and fuels  Energy resources  Energy and Power  Energy dissipation  Conservation of energy			<a href="#">Energy Knowledge</a>

Year 7

Summer

Subject

Year:		Term:			
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	Waves	Sound waves and how they travel	KS2 Light KS2 Sound		<a href="#">Waves Knowledge</a>
		Speed of sound			
		Loudness and amplitude Frequency and pitch			
		The ear and hearing			

Year 8

Autumn

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Physics	Contact forces	Friction and drag	KS2 Forces and Magnets		<a href="#">Forces Knowledge</a>
		Squashing and stretching forces			
	Turning forces and moments				
	Pressure	Pressure in gases and liquids			<a href="#">Forces Knowledge</a>

Year 8

Spring

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Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	Magnetism and electromagnets	Magnets and magnetic fields  Electromagnets and their uses	KS2 Forces and Magnets		<a href="#">Electromagnets Knowledge</a>

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	Work	Work, energy and machines  Energy transfers by conduction, convection and radiation  Energy and temperature			<a href="#">Energy Knowledge</a>

Year 8

Summer

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Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	Wave Effects and Wave Properties	Sound waves, water waves and energy  Radiation and energy  Modelling waves	KS2 Light KS2 Sound		<a href="#">Waves Knowledge</a>

Year 9

Subject

Autumn

Year:		Term:			
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	P1 Conservation and dissipation of Energy	Changes in energy stores Conservation of energy Energy and work Gravitational potential and kinetic energy Elastic energy Energy dissipation Electrical appliances Energy and efficiency Energy and power	KS3 Energy		<a href="#">P1 Conservation and dissipation of Energy</a>
	P2 Energy Transfer by heating	Conduction, convection, radiation Specific heat capacity Heating and insulating buildings	KS3 Energy		<a href="#">P2 Energy Transfer by heating</a>

Subject

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Year 9

Spring

Year:		Term:			
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	P3 Energy Resources	Our demand for energy  Energy from wind and water  Power from the Sun and Earth  Energy and the environment and energy issues	KS3 Energy	Geography	<a href="#">P3 Energy Resources</a>
	P4 Electric Circuits	Electrical charge and fields  Current and charge  Potential difference and resistance  Series and parallel circuits  Electrical components	KS3 Electromagnets, Potential Difference and resistance		<a href="#">P4 Electric Circuits</a>

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	P6 Molecules and Matter	Density  States of matter  Changes of state  Internal energy and latent heat  Gas pressure, temperature and volume		Chemistry	<a href="#">P6 Molecules and Matter</a>
	P7 Radioactivity	Atoms and radiation  Discovery of the nucleus  Changes in the nucleus  Alpha, beta, gamma radiation and half-life  Nuclear medicine  Nuclear fission and fusion  Nuclear issues		Chemistry	<a href="#">P7 Radioactivity</a>

Year 9

Summer

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			learning	connections	Quizlet
Physics	P5 Electricity in the home	Alternating current	KS3 Electricity		<a href="#">P5 Electricity in the home</a>
		Cables and plugs			
		Energy transfer and efficiency			
		Electrical power and potential difference			

Year 10

Autumn

Year:		Term:			
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	P8 Forces in Balance	Vectors and scalars  Forces between objects  Resultant forces  Moments, levers and gears and equilibrium	KS3 Forces	Maths	<a href="#">P8 Forces in Balance</a>

Subject

		Centre of mass Parallelogram of forces Resolution of forces			
	P9 Motion	Speed and distance-time graphs Velocity Acceleration Analysing motion-time graphs	KS3 Forces	Maths	<a href="#">P9 Motion</a>

Year 10

Spring

Year:		Term:			
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	P10 Forces and Motion	Force and acceleration Weight and terminal velocity Forces and braking Momentum	KS3 Forces	Maths	<a href="#">P10 Forces and Motion</a>

Subject

		Impact forces			
		Forces and elasticity			

Year 10

Summer

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Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Physics	P11 Pressure and Surfaces	Pressure and surfaces  Pressure and a liquid at rest  Atmospheric pressure  Upthrust and flotation	KS3 Forces		<a href="#">P11 Pressure and Surfaces</a>
	P12 Wave Properties	The nature of waves  Properties of waves  Reflection and refraction  Sound waves	KS3 Waves		<a href="#">P12 Wave Properties</a>

Subject

		Uses of ultrasound Seismic waves			
	P13 Electromagnetic Waves	The EM spectrum Light infrared, microwaves and radio waves Communication using waves Ultraviolet x-rays and gamma rays Medical applications of x-rays	KS3 Waves		<a href="#">P13 Electromagnetic Waves</a>
	P14 Light	Reflection and refraction of light Light and colour Lenses	KS3 Waves		<a href="#">P14 Light</a>

Year 11

Autumn

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Physics	P15 Electromagnetism	<p>Magnetic fields and electric current</p> <p>The motor effect</p> <p>The generator effect</p> <p>The AC generator</p> <p>Transformers</p> <p>Electromagnets in devices</p>	KS3 Electromagnets		<a href="#">P15 Electromagnetism</a>
	P16 Space	<p>Formation of the Solar System</p> <p>Life cycle of a star</p> <p>Planets, satellites and orbits</p> <p>The Big Bang and the expanding universe</p>	KS3 The Night Sky		<a href="#">P16 Space</a>
	Bespoke Revision				

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Physics	Bespoke Revision				

Year 11

Summer

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Physics	Bespoke Revision				