

Year 10 (Autumn term 1)	Year 10 (Autumn term 2)	Year 10 (Spring term 1)
Knowledge <i>What pupils will know</i>	Knowledge <i>What pupils will know</i>	Knowledge <i>What pupils will know</i>
Physics: Conservation of energy Explain the law of conservation of energy Chemistry: Key concepts in chemistry Compare the different forms of bonding and how to calculate relative formula mass	Biology: Key concepts in biology Explain how enzymes become denatured Chemistry: States of matter Describe how filtration, distillation, crystallisation and chromatography can separate mixtures	Physics: Motion and forces Explain Newton's laws of motion and how can forces be calculated Biology: Cells and control Explain what happens at each stage of mitosis
Skill <i>What pupils will be able to do</i>	Skill <i>What pupils will be able to do</i>	Skill <i>What pupils will be able to do</i>
Conduct and monitor chemical reactions safely	Use of appropriate apparatus to make and record a range of measurements and observations accurately Conduct and monitor chemical reactions safely Measure rates of reaction	Use of appropriate apparatus to make and record a range of measurements and observations accurately
Year 10 (Spring term 2)	Year 10 (Summer term 1)	Year 10 (Summer term 2)
Knowledge <i>What pupils will know</i>	Knowledge <i>What pupils will know</i>	Knowledge <i>What pupils will know</i>
Chemistry: Chemical change Describe neutralisation and how to prepare a neutral salt Biology: Genetics Represent genetic inheritance using Punnett squares Physics: Waves Compare transverse and longitudinal waves	Physics: Electromagnetic spectrum Describe the use of each electromagnetic wave and how the speed of a wave is determined Chemistry: Extracting metals Explain the reactivity series of metals in terms of their reactivity with acids Biology: Natural selection Explain how natural selection leads to evolution Physics: Radioactivity Describe the penetrating capabilities of the three forms of ionising radiation	Biology: Health and disease Explain the role of white blood cells in the human immune response Chemistry: Groups of the periodic table Describe the pattern in reactivity and melting points in group 1 and group 7 of the periodic table. Biology: Plants and photosynthesis Explain the effect of light intensity, temperature and carbon dioxide on the rate of photosynthesis
Skill <i>What pupils will be able to do</i>	Skill <i>What pupils will be able to do</i>	Skill <i>What pupils will be able to do</i>

<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately</p> <p>Conduct and monitor chemical reactions safely</p> <p>Make observations of waves in solids and liquids</p>	<p>Conduct and monitor chemical reactions safely</p> <p>Make observations of waves in solids and liquids</p>	<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately</p>
<p>Year 11 <i>(Autumn term 1)</i></p>	<p>Year 11 <i>(Autumn term 2)</i></p>	<p>Year 1 <i>(Spring term 1)</i></p>
<p>Knowledge <i>What pupils will know</i></p>	<p>Knowledge <i>What pupils will know</i></p>	<p>Knowledge <i>What pupils will know</i></p>
<p>Chemistry: Groups of the periodic table Describe the pattern in reactivity and melting points in group 1 and group 7 of the periodic table.</p> <p>Biology: Plants and photosynthesis Explain the effect of light intensity, temperature and carbon dioxide on the rate of photosynthesis</p> <p>Physics: Energy and forces Draw and interpret energy diagrams</p>	<p>Physics: Forces and their effects Define scalar and vector quantities and give examples</p> <p>Biology: Animal coordination Explain the role of oestrogen and progesterone in the menstrual cycle</p> <p>Chemistry: Rates of reaction Explain the effect of changing the temperature, concentration and surface area on the rate of a chemical reaction</p>	<p>Physics: Electricity Interpret series and parallel circuits referring to current, potential difference and resistance</p> <p>Physics: Magnetism Describe how to determine the shape and size of a magnetic field around bar magnets and electromagnets</p> <p>Biology: Exchange and transport Describe the structure of the heart, veins, capillaries and arteries</p> <p>Biology: Ecosystems Describe the effect of biotic and abiotic factors on an ecosystem</p> <p>Chemistry: Fuels Explain the fractional distillation of crude oil</p>
<p>Skill <i>What pupils will be able to do</i></p>	<p>Skill <i>What pupils will be able to do</i></p>	<p>Skill <i>What pupils will be able to do</i></p>

<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately</p>	<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately Conduct and monitor chemical reactions safely</p>	<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately Safe and ethical use of living organisms Application of sampling techniques</p>
<p>Year 11 (Spring term 2)</p>	<p>Year 11 (Summer term 1)</p>	<p>Year 11 (Summer term 2)</p>
<p>Knowledge What pupils will know</p>	<p>Knowledge What pupils will know</p>	<p>Knowledge What pupils will know</p>
<p>Physics: Particle model Define specific heat capacity and specific latent heat Physics: Energy and elasticity Compare elastic and inelastic distortion Physics: Electromagnetic induction Describe what a transformer is and explain how they induce a potential difference</p>	<p>Biology: Natural cycles Describe what happens during the water and nitrogen cycle? Chemistry: Cracking hydrocarbons Explain the process of cracking Physics: Pressure in gases Explain the effect of changing the temperature of a gas on the motion of its particles and the effect this has on pressure</p>	<p>Revision for exams</p>
<p>Skill What pupils will be able to do</p>	<p>Skill What pupils will be able to do</p>	<p>Skill What pupils will be able to do</p>
<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately</p>	<p>Use of appropriate apparatus to make and record a range of measurements and observations accurately</p>	