



Science – Y8 Learning Outcomes

Skill	Foundation	Developing	Securing	Exceeding	Excelling
General	You can identify the key facts in processes, giving examples and using scientific terms.	You can identify the differences and changes related to key processes, giving examples and using scientific terms.	You can use simple models to describe processes and explain some key ideas.	You can use models and evidence to describe processes and justify explanations of how processes work, using scientific terms. You have a good knowledge of the nature of science and its laws.	You can evaluate the limitations of using models to explain processes and link the key ideas in your explanation. You can use the correct terminology.
Cells	You can name the parts of the digestive system. You can identify the processes in an ecosystem and how living things are adapted to help them survive.	You can describe the difference between photosynthesis and respiration. You can link these to processes to food webs in an ecosystem.	You can describe the processes of digestion, photosynthesis, respiration and inheritance and explain why these are key process, linking them to ecosystems.	You can use models to explain digestion and different types of respiration, in detail. You can explain the importance of photosynthesis in ecosystems. You can explain natural selection.	You can interpret data to make health comparisons. You can explain how plants carry out photosynthesis and evaluate adaptations to leaf structure. You can link ideas of adaptation and extinction.
Particles	You can state some common properties of metals and non-metals and state their different uses. You can state some processes used to separate mixtures. You can give a simple description of how rocks form. You can state an impact of global warming.	You can identify patterns in substances, linked to the Periodic Table. You can describe different methods to separate mixtures. You can describe the rock cycle. You can state one cause and one impact of global warming. You can state one advantage and one disadvantage of recycling.	You can classify substances using their properties. You can explain how these properties make them suitable for different uses. You can use models to explain how to separate mixtures. You can use the rock cycle to explain how different rocks have formed. You can explain global warming and analyse recycling.	You can use observations to classify substances and apply patterns. You can use particle models to represent mixtures. You can identify a suitable separating method in different situations. You can make predictions using the reactivity series. You can use models to explain rock formations and global warming.	You can predict the position of an element in the Periodic table, given its properties. You can explain, and justify, why different separating techniques are needed. You can use formula equations. You can evaluate models used to describe the rock cycle and global warming.

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Energy	<p>You can list examples of insulators and conductors.</p> <p>You can state some ways in which energy is transferred.</p> <p>State a disadvantage and advantage of fossil fuels.</p>	<p>You can identify components in an electrical circuit and the difference between series and parallel circuits. You can identify different ways to transfer energy.</p> <p>You can describe differences between renewable and non-renewable energy resources.</p>	<p>You can use models to describe and explain features of series and parallel circuits, magnetic fields, electromagnets and energy transfers.</p> <p>You can carry out basic calculations in electric circuits.</p> <p>You can describe how electricity is generated in a power station.</p>	<p>You can use models to explain how current flows. You can explain the difference between potential difference and current.</p> <p>You can explain how magnets can be used.</p> <p>You can compare the advantages and disadvantages of energy resources.</p>	<p>You can predict the current in different circuits, and use models to explain how current flows. You can measure potential difference.</p> <p>You can explain how a compass and an electromagnet work.</p> <p>You can compare energy transfer to energy conservation.</p>
Forces	<p>You can measure distances and times and state the equation for speed.</p> <p>Describe simply what a distance-time graph shows.</p> <p>State two things that can affect gas pressure.</p>	<p>You can state the equations for speed, pressure and to calculate a turning force.</p> <p>You can use a distance-time graph to describe a journey.</p> <p>You can describe the effects of atmospheric pressure.</p>	<p>You can calculate speed, pressure and the moment of a force.</p> <p>You can interpret distance - time graphs.</p> <p>You can describe what affects the pressures of gases and liquids.</p> <p>You can apply the ideas of pressure to different situations.</p>	<p>You can calculate speed, pressure and the moment of a force.</p> <p>You can describe relative motion.</p> <p>You can draw distance-time graphs.</p> <p>Compare some effects of atmospheric pressure.</p> <p>Apply moments to everyday situations.</p>	<p>Explain what is meant by relative motion and how it can be calculated.</p> <p>Use the speed equation to explain unfamiliar situations and analyse journeys.</p> <p>Explain situations using moments and differences in pressure.</p>
Literacy	<p>You are beginning to use paragraphs, with topic sentences and detailed ideas.</p> <p>You can use capital letters, full stops, commas and question marks correctly.</p> <p>Spelling is increasingly accurate with simple words spelled correctly.</p>	<p>You consistently set out paragraphs correctly.</p> <p>You use a range of punctuation marks correctly.</p> <p>Your spelling is mostly accurate.</p>	<p>You consistently set out paragraphs correctly.</p> <p>You make effective links between paragraphs.</p> <p>You can use a range of punctuation marks with competence.</p> <p>Your spelling is mostly accurate, except for unusual words.</p>	<p>You make effective links between paragraphs with a variety of more complex connectives.</p> <p>You can use a range of punctuation marks accurately and with increasing confidence.</p> <p>Your spelling is accurate, except for unusual words.</p>	<p>You are secure in using a range of linking devices within and between paragraphs.</p> <p>You confidently and accurately use a range of punctuation marks.</p> <p>You rarely make spelling errors.</p>