Science – Y9 Learning Outcomes

Skill	Foundation	Developing	Securing	Exceeding	Excelling
General	You can describe and identify the differences and changes related to simple processes, giving examples and using the correct key terms.	You can use simple models to describe and explain processes. You have limited scientific and technical knowledge.	You can use models and evidence to describe processes and justify explanations of how processes work, using scientific terms.	You can use models and evidence to explain processes, in detail. You can identify the limitations of the models. You can use the correct scientific terms.	You can evaluate the limitations of using models to explain processes and link the key ideas in your explanation.
Cells	You can describe how some features are inherited. You can give one disadvantage and one advantage of selective breeding. You can state what a vaccine is. You can give an example of natural selection.	You can describe how features are inherited, and how selective breeding can be used to favour some of these. You can describe how vaccines can be used. You can describe how animals have adapted to survive.	Your knowledge of genetics helps you to describe features of inheritance and selective breeding. You can describe methods to help immunity. You can describe natural selection and how DNA is used in criminal investigations.	You can use Punnet squares to predict inheritance. You can explain how selective breeding is carried out. You can explain how a vaccine works. You can describe the structure of DNA and how it is used in forensics.	You can use a Punnet square effectively to calculate inherited features, including disorders. You can analyse methods of selective breeding. You can explain how a vaccine works. You can link how the structure of DNA achieves its function.
Particles	You can state what a nanoparticle is. You can state the products of combustion. You can describe the atomic model. You can state what a fossil is and describe the stages in its formation.	You can give some uses of nanoparticles. You can give one advantage\disadvantage of using fuels. You can draw the atomic model and describe the evidence to support it. You can describe how fossils are formed.	You can explain what nanoparticles are. You can explain combustion and neutralisation, using word equations, and the importance of fuels. You can explain why we have the atomic model. You can describe how fossils are formed and link to evolution.	You can apply properties of nanoparticles to their uses. You can compare different types of cars and fuel use. You can explain the development of the atomic model. You can describe how fossils are evidence for evolution.	You can compare nanoparticles to normal particles. You can clearly link, combustion, pollution and hybrid cars. You can describe the limitations of the different atomic models. You can link fossil formation with evolution and geology.

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Energy	You can distinguish between analogue and digital signals. State one way to see inside the body using new technology. Describe how demand for electricity is changing.	You can give some uses of waves in communications. Describe a suitable technique to diagnose patients. Describe ways to meet future electricity needs.	You can describe how waves can be used for communications. Describe some new technologies used in hospitals. You can explain why demand for electricity is increasing and describe some ways to meet future demand.	You can compare the use of different waves for communication. You can describe the advantages of new technologies used in hospitals. You can evaluate advantages of disadvantages of generating electricity.	You can analyse the quality of signals used in communications. You can evaluate the use of new technologies in hospitals and, using data, the methods of how electricity is generated.
Forces	You can describe some models of the Solar System. You can state one use of a satellite. You can state the risk of using radioactive materials. You can name the process used to generate electricity.	You can describe the observations that led to our current Solar System model. You can state a use of radioactive materials. You can describe how electromagnetic waves are detected.	You can describe the different historical models of the universe. Describe the uses of satellites. You can describe the uses of radioactive materials and electromagnetic induction.	You can compare the different models of the Solar system. You can explain how the Big Bang is supported by evidence. Compare satellites. Explain how to reduce risks from radioactive materials. You can link frequency of wave to its use.	You can explain how the evidence changed the models of the Solar system. Present the key events of the Big Bang. Evaluate the benefits and risks of using radioactive material. Predict results of electromagnetic induction.
Literacy	Your writing is shaped, organised and lay out is mostly correctly. You can usually use a range of punctuation marks correctly. Your spelling is mostly accurate. Your writing matches the task's purpose.	Your writing is shaped and organised with increasing competence. You use a range of punctuation marks correctly and with confidence. Your spelling is mostly accurate, except for unusual words.	You make effective links between paragraphs with a variety of more complex connectives. You can use a range of punctuation marks accurately. Vocabulary is varied and your spelling is accurate, except for unusual words.	You are secure in using a range of linking devices within and between paragraphs. You confidently and accurately use a range of punctuation marks. You rarely make spelling errors.	Writing is assured and there is well controlled structuring of subject matter. Sentence structure is imaginative, precise and accurate, matched to writer's purpose and intended effect on the reader. Spelling errors are rare and vocabulary is varied.