KEY STAGE 2 SCIENCE KEY ASSESSMENT OVERVIEW

YEAR 3

Working Scientifically:	I can ask relevant scientific questions.
	I can use observations and knowledge to answer scientific questions.
	I can set up a simple enquiry to explore a scientific question.
	I can set up a test to compare two things.
	I can set up a fair test and explain why it is fair.
	I can make careful and accurate observations, including the use of standard units.
	I can use equipment, including thermometers and data loggers to make measurements.
	I can gather, record, classify and present data in different ways to answer scientific questions.
	I can use diagrams, keys, bar charts and tables; using scientific language.
	I can use findings to report in different ways, including oral and written explanations, presentation.
	I can draw conclusions and suggest improvements.
	I can make a prediction with a reason.
	I can identify differences, similarities and changes related to an enquiry.
Biology - Plants	I can describe the function of different parts of flowering plants and trees.
	I can explore and describe the needs of different plants for survival.
	I can explore and describe how water is transported within plants.
	I can describe the plant life cycle, especially the importance of flowers (pollination, seed formation and seed dispersal).
Biology - Animals, including humans	I can explain the importance of a nutritious, balanced diet.
	I can explain how nutrients, water and oxygen are transported within animals and humans.
	I can describe and explain the skeletal system of a human.
	I can describe and explain the muscular system of a human.
	I can describe the purpose of the skeleton in humans and animals.
Chemistry - Rocks	I can compare and group rocks based on their appearance and physical properties, giving a reason.
	I can describe how fossils are formed.
	I can describe how soil is made.

	I can describe and explain the difference between sedimentary and igneous rock.
Physics - Light	I can describe what dark is (the absence of light).
	I can explain that light is needed in order to see.
	I can explain that light is reflected from a surface.
	I can explain and demonstrate how a shadow is formed.
	I can explore shadow size and explain.
	I can explain the danger of direct sunlight and describe how to keep protected.
Physics - Forces and Magnets	I can explore and describe how objects move on different surfaces.
	I can explain how some forces require contact and some do not, giving examples.
	I can explore and explain how objects attract and repel in relation to objects and other magnets.
	I can predict whether objects will be magnetic and carry out an enquiry to test this out.
	I can describe how magnets work.
	I can predict whether magnets will attract or repel and give a reason.

YEAR 4

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	I can set up a test to compare two things.
	I can set up a fair test and explain why it is fair.
	I can make careful and accurate observations, including the use of standard units.
	I can use equipment, including thermometers and data loggers to make measurements.
	I can gather, record, classify and present data in different ways to answer scientific questions.
	I can use diagrams, keys, bar charts and tables; using scientific language.
	I can use findings to report in different ways, including oral and written explanations, presentation.
	I can draw conclusions and suggest improvements.
	I can make a prediction with a reason.
	I can identify differences, similarities and changes related to an enquiry.
Biology - Living things and their habitats	I can group living things in different ways.
	I can use classification keys to group, identify and name living things.
	I can create classification keys to group, identify and name living things (for others to use).
	I can describe how changes to an environment could endanger living things.
Biology - Animals, including humans	I can identify and name the parts of the human digestive system.
	I can describe the functions of the organs in the human digestive system.
	I can identify and describe the different types of teeth in humans.
	I can describe the functions of different human teeth.
	I can use food chains to identify producers, predators and prey.
	I can construct food chains to identify producers, predators and prey.
Chemistry - States of matter	I can group materials based on their state of matter (solid, liquid, gas).
	I can describe how some materials can change state.
	I can explore how materials change state.

	I can measure the temperature at which materials change state.
	I can describe the water cycle.
	I can explain the part played by evaporation and condensation in the water cycle.
Physics - Sound	I can describe how sound is made.
	I can explain how sound travels from a source to our ears.
	I can explain the place of vibration in hearing.
	I can explore the correlation between pitch and the object producing a sound.
	I can explore the correlation between the volume of a sound and the strength of the vibrations that produced it.
	I can describe what happens to a sound as it travels away from its source.
Physics - Forces and Magnets	I can identify and name appliances that require electricity to function.
	I can construct a series circuit.
	I can identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers).
	I can draw a circuit diagram.
	I can predict and test whether a lamp will light within a circuit.
	I can describe the function of a switch in a circuit.
	I can describe the difference between a conductor and insulators; giving examples of each.

YEAR 5

Working Scientifically:	I can plan different types of scientific enquiry.
	I can control variables in an enquiry.
	I can measure accurately and precisely using a range of equipment.
	I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
	I can use the outcome of test results to make predictions and set up a further comparative fair test.
	I can repeat findings from enquiries in a range of ways.
	I can explain a conclusion from an enquiry.
	I can explain causal relationships in an enquiry.
	I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.
	Read, spell and pronounce scientific vocabulary accurately.
Biology - Living things and their habitats	I can describe the life cycle of different living things, e.g. mammal, amphibian, insect, bird.
	I can describe the differences between different life cycles.
	I can describe the life process of reproduction in plants.
	I can describe the life process of reproduction in animals.
Biology - Animals, including humans	I can create a timeline to indicate stages of growth in humans.
Chemistry - Properties and changes of materials	I can compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity [electrical and thermal], and response to magnets.
	I can describe how a material dissolves to form a solution; explaining the process of dissolving.
	I can describe and show how to recover a substance from a solution.
	I can describe how some materials can be separated (e.g. filtering, sieving and evaporating).
	I know and can demonstrate that some changes are reversible and some are not.
	I can explain how some changes result in the formation of a new material and that this is usually irreversible.
	I can discuss reversible and irreversible changes.
	I can give evidenced reasons why materials should be used for specific purposes.
Physics - Earth and Space	I can describe and explain the movement of the Earth and other planets relative to the Sun.
	I can describe and explain the movement of the Moon relative to the Earth.

	I can explain and demonstrate how night and day are created.
	I can describe the Sun, Earth and Moon (using the term spherical).
Physics - Forces	I can explain what gravity is and its impact on our lives.
	I can identify and explain the effect of air resistance.
	I can identify and explain the effect of water resistance.
	I can identify and explain the effect of friction.
	I can explain how levers, pulleys and gears allow a smaller force to have a greater effect.

YEAR 6

Working Scientifically:	I can plan different types of scientific enquiry.
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	I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
	I can use the outcome of test results to make predictions and set up a further comparative fair test.
	I can repeat findings from enquiries in a range of ways.
	I can explain a conclusion from an enquiry.
	I can explain causal relationships in an enquiry.
	I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.
	Read, spell and pronounce scientific vocabulary accurately.
Biology - Living things and their habitats	I can classify living things into broad groups according to observable characteristics and based on similarities and differences.
	I can describe how living things have been classified.
	I can give reasons for classifying plants and animals in a specific way.
Biology - Animals, including humans	I can identify and name the main parts of the circulatory system.
	I can describe the function of the heart, blood vessels and blood.
	I can discuss the impact of diet, exercise, drugs and lifestyle on health.
	I can describe the ways in which nutrients and water are transported in animals, including humans.
Biology - Evolution and Inheritance	I can describe how the earth and living things have changed over time.
	I can explain how fossils can be used to find out about the past.
	I can explain about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents).
	I can explain how animals and plants are adapted to suit their environment.
	I can link adaptation over time to evolution.
	I can explain evolution.
Physics - Light	I can explain how light travels.
	I can explain and demonstrate how we see objects.
	I can explain why shadows have the same shape as the object that casts them.

	I can explain how simple optical instruments work, e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.
Electricity	I can explain how the number & voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer.
	I can compare and give reasons for why components work and do not work in a circuit.
	I can draw circuit diagrams using correct symbols.