

Year 1 Assessing Science		EME	EXP	EXC Science Capital?
Working Scientifically in Key Stage 1 will be used to teach curriculum content.				
	I can ask simple scientific questions.			
	I can use simple equipment to make observations.			
	I can carry out simple tests.			
	I can identify and classify things.			
	I can suggest what I have found out.			
	I can use simple data to answer questions.			
Plants (Biology)				
	I can name a variety of common wild and garden plants.			
	I can name the petals, stem, leaf and root of a plant.			
	I can name the roots, trunk, branches and leaves of a tree.			
Animals, including humans (Biology)				
	I can name a variety of animals including fish, amphibians, reptiles, birds and mammals.			
	I can classify and name animals by what they eat. (Carnivores, herbivores and omnivores).			
	I can sort animals into categories (including fish, amphibians, reptiles, birds and mammals).			
	I can living and non-living things.			
	I can name parts of the body that I can see.			
	I can link the correct part of the human body to each sense.			
Everyday materials (Chemistry)				
	I can distinguish between an object and the material it is made from.			
	I can explain the materials that an object is made from.			
	I can name wood, plastic, glass, metal, water and rock.			
	I can describe the properties of everyday materials.			
	I can group objects based on the materials that they are made from.			
Seasonal Changes (Physics)				
	I can observe and comment on changes in the seasons.			
	I can name the seasons and suggest the type of weather in each season.			

Year 2 Assessing Science		EME	EXP	EXC Science Capital?
Working Scientifically in Key Stage 1 will be used to teach curriculum content.				
	I can ask simple scientific questions.			
	I can use simple equipment to make observations.			
	I can carry out simple tests.			
	I can identify and classify things.			
	I can suggest what I have found out.			
	I can use simple data to answer questions.			
Living things and their habitats (Biology)				
	I can identify things that are living, dead and have never lived.			
	I can describe how a specific habitat provides for the basic needs of things living there (plants and animals).			
	I can identify and name plants and animals in a range of habitats.			
	I can match living things to their habitat.			
	I can describe how animals find their food.			
	I can name some different sources of food for animals.			
	I can explain a simple food chain.			
Plants (Biology)				
	I can describe how seeds and bulbs grow into plants.			
	I can describe what plants need in order to grow and stay healthy (water, light and a suitable temperature).			
Animals including humans (Biology)				
	I can explain the basic stages in a life cycle for animals, including humans.			
	I can describe what animals and humans need to survive.			
	I can describe why exercise, a balanced diet and good hygiene are important to humans.			
Uses of everyday materials (Chemistry)				
	I can identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard.			
	I can suggest why a material might or might not be used for a specific job.			
	I can explore how shapes can be changed by squashing, bending, twisting and stretching.			

Year 3 Assessing Science		EME	EXP	EXC Science Capital?
Working Scientifically in Lower Key Stage 2 will be used to teach curriculum content.				
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 and 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.				
Plants (Biology)				
I can describe the functions 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.				
Animals including humans (Biology)				
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.				

Rocks (Chemistry)			
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.			
Light (Physics)			
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.			
Forces and magnets (Physics)			
I can explore and explain 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 Assessing Science		EME	EXP	EXC Science Capital?
Working Scientifically in Lower Key Stage 2 will be used to teach curriculum content.				
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 and 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.				
Living things and their habitats (Biology)				
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 can endanger living things.				
Animals including humans (Biology)				
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 the human teeth.				
I can use food chains to identify producers, predators and prey.				

I can construct food chains to identify producers, predators and prey.			
States of matter (Chemistry)			
I can group materials based on their state of matter (solids, liquids or gases).			
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 shape.			
I can describe the water cycle.			
I can explain the part played by evaporation and condensation in the water cycle.			
Sound (Physics)			
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.			
Electricity (Physics)			
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 conductors and insulators, giving examples of each.			

Year 5 Assessing Science		EME	EXP	EXC Science Capital?
Working Scientifically in Upper Key Stage 2 will be used to teach curriculum content.				
I can plan different types of scientific enquiries.				
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 test.				
I can report 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.				
Living things and their habitats (Biology)				
I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.				
I can describe the differences between different life cycles.				
I can describe the life processes of reproduction in plants.				
I can describe the life processes of reproduction in animals.				
Animals including humans (Biology)				
I can create a timeline to indicate stages of growth in humans.				
Properties and changes of materials (Chemistry)				
I can compare and group together everyday materials on the basis of their properties, including their 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.				
I can demonstrate how materials can be separated through 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 reversible.			
I can discuss reversible and irreversible changes.			
I can give evidenced reasons why materials should be used for specific purposes.			
Earth and Space (Physics)			
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).			
Forces (Physics)			
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 Assessing Science		EME	EXP	EXC Science Capital?
Working Scientifically in Upper Key Stage 2 will be used to teach curriculum content.				
I can plan different types of scientific enquiries.				
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 test.				
I can report 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 of theory.				
I can read, spell and pronounce scientific vocabulary accurately.				
Living things and their habitats (Biology)				
I can classify 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 reasons for classifying plants and animals in a specific way.				
Animals including humans (Biology)				
I can identify and name the main parts of the human 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.				
Evolution and inheritance (Biology)				
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 adaption over time t evolution.			
I can explain evolution.			
Light (Physics).			
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 (Physics).			
I can explain how the number and 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 why components work and do not work in a circuit.			
I can draw circuit diagrams using correct symbols.			