



Palace Fields Primary School
Whole School Science Curriculum Overview
Academic Year 2018 - 2019

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p style="text-align: center;"><u>Key Question</u> Why are humans not like tigers?</p> <p style="text-align: center;"><u>Science Key Skills</u> I can name a variety of common animals, including fish, amphibians, reptiles, birds and mammals. I can classify and name animals by what they eat. I can sort animals into categories</p> <p style="text-align: center;"><u>National Curriculum Objectives</u> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify, name, draw and label the basic parts of the human body and say which part of the body is</p>	<p style="text-align: center;"><u>Key Question</u> Why does it get darker in the winter?</p> <p style="text-align: center;"><u>Science Key Skills</u> I can observe and comment on changes in the seasons. I can name the seasons and suggest the type of weather in each.</p> <p style="text-align: center;"><u>National Curriculum Objectives</u> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.</p> <p style="text-align: center;"><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>	<p style="text-align: center;"><u>Key Question</u> Which birds and plants will little red riding hood find in our park?</p> <p style="text-align: center;"><u>Science Key Skills</u> 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 root, trunk, branches of a tree.</p> <p style="text-align: center;"><u>Plants</u> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Identify and describe the basic structure of a variety of common flowering plants, including trees.</p> <p style="text-align: center;"><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying</p>	<p style="text-align: center;"><u>Key Question</u> How do the season impact on what we do?</p> <p style="text-align: center;"><u>Science Key Skills</u> I can observe and comment on changes in the seasons. I can name the seasons and suggest the type of weather in each.</p> <p style="text-align: center;"><u>National Curriculum Objectives</u> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.</p> <p style="text-align: center;"><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>	<p style="text-align: center;"><u>Key Question</u> What do aliens think of life on planet Earth?</p> <p style="text-align: center;"><u>Science Key Skills</u> 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 they are made from.</p> <p style="text-align: center;"><u>National Curriculum Objectives</u> Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday</p>	<p style="text-align: center;"><u>Key Question</u> Which materials should the three little pigs have to build their house?</p> <p style="text-align: center;"><u>Science Key Skills</u> 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 they are made from.</p> <p style="text-align: center;"><u>National Curriculum Objectives</u> Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a</p>

	<p>associated with each sense.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>		<p>Using their observations and ideas to suggest answers to questions</p>		<p>materials Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions.</p>	<p>variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>
Year 2	<p><u>Key Question</u> Why would a dinosaur not make a good pet?</p> <p><u>Science Key Skills</u> I can identify things that are living, dead and things that have never lived. I can describe how a specific habitats provides for the basic needs of things living there. I can identify and name plants and animals in a range of habitats. I can match things to their habitat. I can describe how an animal finds their food. I can name some different</p>	<p><u>Key Question</u> Which materials did they use to build St Marys Church?</p> <p><u>Science Key Skills</u> 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</p> <p><u>National Curriculum</u></p>	<p><u>Key Question</u> How will 5 a day help me to be healthy?</p> <p><u>Science Key Skills</u> I can describe why exercise, a balanced diet and good hygiene are important for humans</p> <p><u>National Curriculum Objectives</u> Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and</p>	<p><u>Key Question</u> How could you be the next Usain Bolt/ Jade Jones?</p> <p><u>Science Key Skills</u> I can describe why exercise, a balanced diet and good hygiene are important for humans</p> <p><u>National Curriculum Objectives</u> Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and</p>	<p><u>Key Question</u> How can we grow our own salad?</p> <p><u>Science Key Skills</u> 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 suitable temperature).</p> <p><u>National Curriculum Objectives</u> Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow</p>	<p><u>Key Question</u> How can you be the next master chef?</p> <p><u>Science Key Skills</u> 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 suitable temperature).</p> <p><u>National Curriculum Objectives</u> Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>

<p>sources of food for animals. I can explain a simple food chain</p> <p><u>National Curriculum Objectives</u> Explore and compare the differences between things that are living, dead, and things that have never been alive Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Identify and name a variety of plants and animals in their habitats, including micro-habitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying</p>	<p><u>Objectives</u> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>	<p>air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>	<p>air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>	<p>and stay healthy.</p> <p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>	<p><u>Working Scientifically</u> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions</p>
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	Using their observations and ideas to suggest answers to questions					
Year 3	<p><u>Key Question</u> Are you attractive enough?</p> <p><u>Science Key Skills</u> I can use different ideas and suggest how to find something out I can make and record a prediction before testing I can plan a fair test and explain why it is a fair test I can explain why I need to collect information to answer a question. I can observe that magnetic forces can be transmitted without direct contact I can talk about how some magnets attract or repel each other I can classify which materials are attracted to magnets</p> <p><u>National Curriculum Objectives</u> Compare how things move on different surfaces Notice that some forces need contact between two objects, but magnetic forces can act at a distance Observe how magnets attract or repel each other and attract some materials and not others Compare and group together a variety of</p>	<p><u>Key Question</u> How far can you throw your shadow?</p> <p><u>Science Key Skills</u> I can recognise that they need light in order to see things I can recognise that dark is the absence of light I can notice that light is reflected from surfaces I can recognise that light from the sun can be dangerous and that there are ways to protect their eyes I can recognise that shadows are formed when the light from a light source is blocked by a solid object I can find patterns in the way that the size of shadows change</p> <p><u>National Curriculum Objectives</u> Recognise that they need light in order to see things and that dark is the absence of light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p>	<p><u>Key Question</u> What do rocks tell us about the way the Earth was formed?</p> <p><u>Science Key Skills</u> I can compare and group together different rocks on the basis of their appearance and simple physical properties? I can describe and explain how different rocks can be useful to us? I can describe and explain the differences between sedimentary and igneous rocks, considering the way they are formed? I can describe in simple terms how fossils are formed when things that have lived are trapped within rock? I can recognise that soils are made from rocks and organic matter</p> <p><u>National Curriculum Objectives</u> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock</p>	<p><u>Key Question</u> What do rocks tell us about the way the Earth was formed?</p> <p><u>Science Key Skills</u> I can compare and group together different rocks on the basis of their appearance and simple physical properties? I can describe and explain how different rocks can be useful to us? 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I can investigate the way water is transported within plants</p> <p><u>National Curriculum Objectives Plants</u> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant Investigate the way in</p>	<p><u>Key Question</u> How can Usain Bolt move so quickly?</p> <p><u>Science Key Skills</u> I can explain the importance of a nutritious balanced diet I can describe 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</p> <p><u>National Curriculum Objectives</u> Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them</p>

<p>everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials Describe magnets as having two poles Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Using results to draw</p>	<p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object Find patterns in the way that the size of shadows change.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Using results to draw simple conclusions, make predictions for new values, suggest improvements and 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similarities or changes related to simple scientific ideas and processes</p>	<p>which water is transported within plants Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Using results to 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Year 4	<p><u>Key Question</u> How can we cope without electricity?</p> <p><u>Science Key Skills</u> 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. 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 on a circuit. I can describe the difference between a conductor and insulators; giving examples of each.</p> <p><u>National Curriculum Objectives</u> Identify common appliances that run on electricity Construct a simple series</p>	<p><u>Key Question</u> How can we cope without electricity?</p> <p><u>Science Key Skills</u> 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. 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 on a circuit. I can describe the difference between a conductor and insulators; giving examples of each.</p> <p><u>National Curriculum Objectives</u> Identify common appliances that run on electricity Construct a simple series</p>	<p><u>Key Question</u> Which wild animals and plants thrive in your locality?</p> <p><u>Science Key Skills</u> 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.</p> <p><u>National Curriculum Objectives</u> Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p>	<p><u>Key Question</u> How would we survive without water?</p> <p><u>Science Key Skills</u> I can group materials based on their state of matter. 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 describe the part played by evaporation and condensation in the water cycle.</p> <p><u>National Curriculum Objectives</u> Compare and group materials together, according to whether they are solids, liquids or gases Observe that some materials change state when they are heated or</p>	<p><u>Key Question</u> What happens to the food we eat?</p> <p><u>Science Key Skills</u> I can identify and name the parts of the human digestive system I can describe the functions of the organs in the digestive system I can identify and describe the different types of teeth in humans I can construct and interpret a variety of food chains, identifying, producers, predators and prey</p> <p><u>National Curriculum Objectives</u> Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions</p>	<p><u>Key Question</u> Why the sound that One Direction makes is enjoyed by so many?</p> <p><u>Science Key Skills</u> I can identify how sounds are made. I can explain how sound travels from a source to our ears. 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</p> <p><u>National Curriculum Objectives</u> Identify how sounds are made, associating some of them with something</p>

<p>electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in 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variety of ways to help in answering questions</p>	<p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identifying differences, similarities or changes</p>	<p>cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Using results to draw simple conclusions, make</p>	<p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>Identifying differences, similarities or changes related to simple scientific</p>	<p>vibrating</p> <p>Recognise that vibrations from sounds travel through a medium to the ear</p> <p>Find patterns between the pitch of a sound and features of the object that produced it</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p> <p><u>Working Scientifically</u> Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including 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Year 5	<p><u>Key Question</u> How different will you be when you are as old as your grandparent?</p> <p><u>Science Key Skills</u> I can create a timeline to indicate stages of growth in humans.</p> <p><u>National Curriculum Objectives</u> Describe the changes as humans develop to old age.</p> <p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings</p>	<p><u>Key Question</u> Can you feel the force?</p> <p><u>Science Key Skills</u> I can explain what gravity is and its impact on our lives. I can identify and explain the effects of air resistance. I can identify and explain the effects water resistance. I can identify and explain the effects of friction. I can explain how levers, pulleys and gears allow a smaller force to have a greater effect.</p> <p><u>National Curriculum Objectives</u> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between</p>	<p><u>Key Question</u> Could you be the next CSI investigator?</p> <p><u>Science Key Skills</u> I can compare and group materials. 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 I can demonstrate that some changes are reversible and some are not. I can explain how some</p>	<p><u>Key Question</u> Could you be the next CSI investigator?</p> <p><u>Science Key Skills</u> I can compare and group materials. 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 I can demonstrate that some changes are reversible and some are not. I can explain how some</p>	<p><u>Key Question</u> Do all animals and plants start life as an egg?</p> <p><u>Science Key Skills</u> I can describe the life cycle of different things. I can describe the differences between different lifecycles I can describe the process in reproduction in plants and animals. I can create a timeline that indicate stages of growth in humans.</p> <p><u>National Curriculum Objectives</u> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some animals</p>	<p><u>Key Question</u> Will we ever send another human to the moon?</p> <p><u>Science Key Skills</u> I can describe and explain the movement of 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).</p> <p><u>National Curriculum Objectives</u> <u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling</p>

<p>when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>the Earth and the falling object Identify the effects of air resistance, water resistance and friction, that act between moving surfaces Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> <p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as</p>	<p>changes result in the formation of a new material and this is usually irreversible. I can discuss reversible and irreversible changes I can give evidenced reasons why materials should be used for specific purposes.</p> <p><u>National Curriculum Objectives</u> 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 Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes</p>	<p>changes result in the formation of a new material and this is usually irreversible. 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		<p>displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p> <p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific</p>	<p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p> <p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific</p>		
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Year 6	<p><u>Key Question</u> Could Spiderman really exist?</p> <p><u>Science Key Skills</u> I can describe and compare the life cycles of a range of animals, including humans, amphibians, insects and birds I can talk with knowledge about birth, reproduction and death of familiar animals or plants I can take measurements using a range of scientific equipment with increasing accuracy and precision I can record more complex data and results using scientific diagrams, classification keys, labels, scattergraphs, tables, bar and line graphs</p> <p><u>National Curriculum Objectives</u> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics.</p>	<p><u>Key Question</u> What would a journey through your body be like?</p> <p><u>Science Key Skills</u> I can plan and carry out an investigation by controlling variables fairly and accurately I can make a prediction with reasons I can use test results to make further predictions and set up further comparative tests I can identify and explain the function of the organs of the human circulatory system I can name the major organs in the human body I can locate the major human organs I can make a diagram that outlines the main parts of a body</p> <p><u>National Curriculum Objectives</u> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function Describe</p>	<p><u>Key Question</u> How can you light up your life?</p> <p><u>Science Key Skills</u> I can explain how light travels I can explain how the human eye sees objects I can explain how different colours of light can be created I can use and explain how simple optical instruments work (periscope, telescope, binoculars, mirror, magnifying glass, Newton's first reflecting telescope) I can explain changes linked to light</p> <p><u>National Curriculum Objectives</u> Recognise that light appears to travel in straight lines Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes Use the idea that light travels in straight lines to</p>	<p><u>Key Question</u> How can you light up your life?</p> <p><u>Science Key Skills</u> I can explain how light travels I can explain how the human eye sees objects I can explain how different colours of light can be created I can use and explain how simple optical instruments work (periscope, telescope, binoculars, mirror, magnifying glass, Newton's first reflecting telescope) I can explain changes linked to light</p> <p><u>National Curriculum 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used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches Use recognised symbols when representing a simple circuit in a diagram.</p>	<p><u>Key Question</u> Have you always looked like this?</p> <p><u>Science Key Skills</u> I can give reasons for why living things produce offspring of the same kind I can give reasons for why offspring are not identical with each other or with their parents I can explain the process of evolution and describe the evidence for this I can begin to appreciate that variation in offspring over time can make animals more or less able to survive in particular environments I can talk about the life of Charles Darwin</p> <p><u>National Curriculum Objectives</u> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in</p>

	<p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>the ways in which nutrients and water are transported within animals, including humans.</p> <p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>	<p>explain why shadows have the same shape as the objects that cast them.</p> <p><u>Working Scientifically</u> Planning different types of scientific enquiries to answer questions, 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