**Eastbury Farm School**
**Science Disciplinary Knowledge and Vocabulary Overview**

**Bold Vocabulary = Year 2, 4 and 6**

| Unit of Work | EYFS | Year 1 & 2 | Year 3 & 4 | Year 5 & 6 |
|---|---|---|---|---|
| **Plants** | **Lifecycles Planting and Growing** | **Plants** | **Plants** | **Living Things and their Habitats- Lifecycles and Classification** |
| **Vocabulary** | Plant, stem, flower, grow, rain, sun, water, soil, seed | Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud. Names of trees in local area, garden and wild flowering plants. **Light, shade, sun, warm, cool, water, grow, healthy.** | Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal, wind dispersal, animal dispersal, pollen, roots, stem, trunk, leaves, absorb, nutrients, reproduce, germination, stamen, style. **Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, habitat.** ***(Living things and habitats)*** | Lifecycle, mammal, amphibian, germination, seed formation, insect, bird, pollination, plants, animals, reproduction, environment, dispersal, growth, living, eggs and seeds. ***(Living things and habitats)*** **Vertebrates, fish, amphibian, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering.** ***(Living things and habitats)*** |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and differences in relation to places, objects, materials and living things<br>• they make observations of animals and | • explore the world around them and raise their own simple questions<br>• experience different types of science enquiries, including practical activities<br>• begin to recognise different ways in which they might answer scientific questions<br>• carry out simple tests<br>• use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying)<br>• observe closely using simple equipment | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• Set up simple practical enquiries, comparative and fair tests<br>• recognise when a simple fair test is necessary and help to decide how to set it up<br>• talk about criteria for grouping, sorting and classifying; and use simple keys<br>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations<br>• make systematic and careful observations<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data | • use their science experiences to explore ideas and raise different kinds of questions<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• identify scientific evidence that has been used to support or refute ideas or arguments |

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| | plants and explain why some things occur and talk about changes | • with help, observe changes over time<br>• record simple data<br>• use their observations and ideas to suggest answers to questions<br>• talk about what they have found out and how they found it out | • with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>• with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | • use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Animals, including humans** | **Nocturnal Animals, Senses, All About Me and Healthy Eating Habitats** | **Offspring and Basic Needs** | **Nutrition and Skeletons** | **Circulatory System** |
| **Vocabulary** | Head, body, eyes, ears, mouth, teeth, • Parts of the body including those linked to PSHE • Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue | Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves • Names of animals experienced first-hand from each vertebrate group • Parts of the body including those linked to PSHE • Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue<br><br>**Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult,** | Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints<br>**Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain** | Puberty – the vocabulary to describe sexual characteristics- link to PSHE<br>**Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle** |

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| | | **caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)** | | |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and differences in relation to places, objects, materials and living things<br>• they know the properties of some materials and can suggest some of the purposes they are used for<br>• they make observations of animals and plants and explain why some things occur and talk about changes<br>• familiar with basic scientific concepts such | • asking simple questions and recognising that they can be answered in different ways<br>• explore the world around them and raise their own simple questions<br>• experience different types of science enquiries, including practical activities<br>• begin to recognise different ways in which they might answer scientific questions<br>• use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying)<br>• ask people questions and use simple secondary sources to find answers<br>• with help, observe changes over time<br>• with guidance, they should begin to notice patterns and relationships<br>• talk about what they have found out and how they found it out<br>• with help, they should record and communicate their findings in a range of ways and begin to use simple scientific language | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• talk about criteria for grouping, sorting and classifying; and use simple keys<br>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations<br>• begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>• with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | • use their science experiences to explore ideas and raise different kinds of questions<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas<br>• use their results to make predictions and identify when further observations, comparative and fair tests might be needed |

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| | as: floating, sinking and experimentation | | | |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Living Things and their Habitats** | **Nocturnal Animals, Lifecycles Habitats** | **Living, Dead and Never Been Alive** | **Classifying Living Things** | **Lifecycles and Classification** |
| **Vocabulary** | | **Link to Humans including animals**<br><br>**Link to plants**<br><br>Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed • Names of local habitats e.g. pond, woodland etc. • Names of micro-habitats e.g. under logs, in bushes etc. | **Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate.** | Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings, mammal, amphibian, germination, seed formation, insect, bird, pollination, plants, animals, dissect, reproduction, environment, dispersal, growth, living, eggs and seeds.<br>**(Plants)**<br>• Link to PSHE<br>**Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non-flowering.**<br>**(Plants)** |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and | • explore the world around them and raise their own simple questions<br>• begin to recognise different ways in which they might answer scientific questions<br>• use simple features to compare objects, materials and living things | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• talk about criteria for grouping, sorting and classifying; and use simple keys | • use their science experiences to explore ideas and raise different kinds of questions<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment |

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| | • differences in relation to places, objects, materials and living things<br>• they make observations of animals and plants and explain why some things occur and talk about changes | and, with help, decide how to sort and group them (identifying and classifying)<br>• with guidance, they should begin to notice patterns and relationships<br>• use their observations and ideas to suggest answers to questions<br>• talk about what they have found out and how they found it out | • recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations<br>• begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions | • recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas, |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Evolution & Inheritance** | | | | |
| **Vocabulary** | | | | **Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils** |
| **Working Scientifically Skills (Disciplinary)** | | | | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas |

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| | | | | • identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Materials** | **Materials Around Us** | **Everyday Materials and Use of Everyday Materials** | | **Properties and Changes of Materials** |
| | Hard, soft, bendy, smooth, shiny, wet, dry, stiff, lumpy, wrinkly, rough. | Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through<br><br>**Names of materials – wood, metal, plastic, glass, brick, rock, paper, rubber, cardboard Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid Shape, push/pushing, pull/puling, twist/twisting, squash/squashing**, bend/bending, stretch/stretching | Link to Rocks & Soils<br>**Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle** | Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material. |

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| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and differences in relation to places, objects, materials and living things<br>• they make observations of animals and plants and explain why some things occur and talk about changes<br>familiar with basic scientific concepts such as: floating, sinking and experimentation | • explore the world around them and raise their own simple questions<br>• experience different types of science enquiries, including practical activities<br>• begin to recognise different ways in which they might answer scientific questions<br>• carry out simple tests<br>• use simple features to compare objects, materials and living things and, with help, decide how to sort and group them (identifying and classifying)<br>• observe closely using simple equipment<br>• record simple data<br>• use their observations and ideas to suggest answers to questions<br>• talk about what they have found out and how they found it out | | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• make their own decisions about what observations to make, what measurements to use and how long to make them for<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.<br>• decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results |

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| | | | | • use their results to make predictions and identify when further observations, comparative and fair tests might be needed |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Rocks & Soils** | | | **Rocks (Types, Fossils and Soil)** | |
| | | | Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil | |
| **Working Scientifically Skills (Disciplinary)** | | | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• Set up simple practical enquiries, comparative and fair tests<br>• recognise when a simple fair test is necessary and help to decide how to set it up<br>• talk about criteria for grouping, sorting and classifying; and use simple keys<br>• make systematic and careful observations<br>• help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used | |

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| | | | • begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them<br>• take accurate measurements using standard units<br>• learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>• with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Seasonal Changes** | **Seasons Light and Dark** | **Seasonal Changes** | | |
| | Snow, wind, rain, sun, day, night, stormy, cloud, hot, cold, foggy. | Weather (sunny, rainy, windy, snowy etc.)<br>Links to geography<br>• Seasons (winter, summer, spring, autumn)<br>• Sun, sunrise, sunset, day length | Light, light source, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, dangerous.<br>**(Light)** | **Year 3 Vocab + (Light)** |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and differences in | • explore the world around them and raise their own simple questions<br>• begin to recognise different ways in which they might answer scientific questions<br>• use simple features to compare objects, materials and living things and, with help, decide how to sort and | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• Set up simple practical enquiries, comparative and fair tests | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why |

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| | | | | |
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| | relation to places, objects, materials and living things<br>• they make observations of animals and plants and explain why some things occur and talk about changes<br>familiar with basic scientific concepts such as: floating, sinking and experimentation | group them (identifying and classifying)<br>• use their observations and ideas to suggest answers to questions<br>• talk about what they have found out and how they found it out | • recognise when a simple fair test is necessary and help to decide how to set it up<br>• talk about criteria for grouping, sorting and classifying; and use simple keys<br>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations<br>• make systematic and careful observations<br>• help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used<br>• begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them<br>• take accurate measurements using standard units<br>• learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | • use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• make their own decisions about what observations to make, what measurements to use and how long to make them for<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.<br>• decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results<br>use their results to make predictions and identify when further observations, comparative and fair tests might be needed |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Earth and Space** | | | | **Solar System, Movement of the Moon, Day & Night** |
| | | | | Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, |

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| | | | | Neptune), spherical, solar system, rotates, star, orbit, planets |
| **Working Scientifically Skills (Disciplinary)** | | | | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Light** | **Light and Dark Senses** | | **Shadow and Reflection** | **Light** |
| | **Smell, sound, sight, see, look**. | **Link to Seasonal Changes**<br><br>**Link to Animals including Humans** | Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous | **Link to Earth and Space**<br><br>As for Year 6 - Light, plus straight lines, light rays |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and differences in relation to places, objects, | | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• Set up simple practical enquiries, comparative and fair tests<br>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations<br>• make systematic and careful observations | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment |

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| | | | | |
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| | materials and living things<br>• they make observations of animals and plants and explain why some things occur and talk about changes<br>familiar with basic scientific concepts such as: floating, sinking and experimentation | | • help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used<br>• take accurate measurements using standard units<br>• learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>• with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | • recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• make their own decisions about what observations to make, what measurements to use and how long to make them for<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Sound** | **Senses** | | **Sound** | |
| | **Smell, sound, sight, see, look**. | **Link to Seasonal Changes**<br><br>**Link to Animals including Humans** | Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation | |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change<br>• know about the similarities and differences in relation to places, objects, | | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• Set up simple practical enquiries, comparative and fair tests<br>• recognise when a simple fair test is necessary and help to decide how to set it up | |

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| | | | | |
|---|---|---|---|---|
| | materials and living things<br>• they make observations of animals and plants and explain why some things occur and talk about changes<br>familiar with basic scientific concepts such as: floating, sinking and experimentation | | • talk about criteria for grouping, sorting and classifying; and use simple keys<br>• make systematic and careful observations<br>• help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used<br>• take accurate measurements using standard units<br>• learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>• with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Forces** | **Forces- Push and Pull** | | **Forces & Magnets** | **Forces** |
| | Push, pull, twist, stretch, turn, open, lift, squeeze, pinch, flick, tap. | **Link to Materials** | Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole | Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears |
| **Working Scientifically Skills (Disciplinary)** | • looks closely at similarities, differences, patterns and change | | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time |

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| | • know about the similarities and differences in relation to places, objects, materials and living things<br>• they make observations of animals and plants and explain why some things occur and talk about changes<br>• Familiar with basic scientific concepts such as: floating, sinking and experimentation | | • start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• Set up simple practical enquiries, comparative and fair tests<br>• recognise when a simple fair test is necessary and help to decide how to set it up<br>• talk about criteria for grouping, sorting and classifying; and use simple keys<br>• recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations<br>• make systematic and careful observations<br>• help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used<br>• begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them<br>• take accurate measurements using standard units<br>• learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions<br>with support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done | • recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact<br>• make their own decisions about what observations to make, what measurements to use and how long to make them for<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.<br>• decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results |
| **Unit of Work** | **EYFS** | **Year 1 & 2** | **Year 3 & 4** | **Year 5 & 6** |
| **Electricity** | | | **Conductors and Insulators** | **Circuits** |
| | | | **Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell,** | **Circuit, complete circuit, circuit diagram, circuit symbol, cell,** |

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**Science Disciplinary Knowledge and Vocabulary Overview**

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| | | | **battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non - metal, symbol** | **battery, bulb, buzzer, motor, switch, voltage** |
| **Working Scientifically Skills (Disciplinary)** | | | • raise their own relevant questions about the world around them<br>• should be given a range of scientific experiences including different types of science enquiries to answer questions<br>• start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions<br>• Set up simple practical enquiries, comparative and fair tests<br>• recognise when a simple fair test is necessary and help to decide how to set it up<br>• make systematic and careful observations<br>• help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used<br>• collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data<br>• with help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions<br>• use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions with support, they should identify new | • use their science experiences to explore ideas and raise different kinds of questions<br>• talk about how scientific ideas have developed over time<br>• select and plan the most appropriate type of scientific enquiry to use to answer scientific questions<br>• recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why<br>• use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment<br>• look for different causal relationships in their data and identify evidence that refutes or supports their ideas<br>• choose the most appropriate equipment to make measurements with increasing precision and explain how to use it accurately. Take repeat measurements where appropriate.<br>• decide how to record data and results of increasing complexity from a choice of familiar approaches: scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs<br>• identify scientific evidence that has been used to support or refute ideas or arguments<br>• use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas,<br>• use oral and written forms such as displays and other presentations to report conclusions, causal relationships and explanations of degree of trust in results |

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