

EASTFIELD SCIENCE OVERVIEW

Early Years – The Eastfield School Checkpoints have been collated from a series of documents including: Statutory Framework, Development Matters, Birth to Five

| | | People, Cultures and Communities | The Natural World | | |
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| Nursery | Knowledge | <ul style="list-style-type: none"> I can talk about the world around me (Link to Animals Inc Humans) | Vocabulary | <ul style="list-style-type: none"> I enjoy exploring natural materials using all of my senses. I explore and investigate collections of natural materials with similar and/or different properties I am interested in exploring how things work. I enjoy planting seeds and caring for growing plants. I am beginning understand the important parts of lifecycles of both plants and animals e.g. bean, chick, caterpillar I am beginning to learn that it is important to care for and respect the natural environment. I can talk about the differences between materials and changes I notice e.g. when cooking, melting ice etc I can show understanding that we need to care for living things e.g watering plants, handling insects gently | Vocabulary |
| | Skills | <ul style="list-style-type: none"> Begin to ask simple questions. | | <ul style="list-style-type: none"> Begin to ask simple questions. Begin to observe closely. Begin to identify and name things. | <ul style="list-style-type: none"> Sticks Sand Water Wood Leaves Seeds Plant Grow Animals insects <p>Linked Texts: Hungry Caterpillar Hooray Fish Aaaarrgh Spider! Brown Bear Brown Bear</p> |

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| Reception | Knowledge | Past and Present | | People, Cultures and Communities | |
| | | <ul style="list-style-type: none"> I can recognise the differences between myself as a baby and now (Link to Animals Inc Humans) | Vocabulary Baby Child Adult Change Brother Sister Parent Mother Father Grandparents | <ul style="list-style-type: none"> I can talk about the world around me (Link to Animals Inc Humans) | Vocabulary Inside Outside Natural Animals Plants Trees Weather water |
| | <ul style="list-style-type: none"> Begin to observe closely. | | <ul style="list-style-type: none"> Begin to ask simple questions. | | |
| | The Natural World | | Personal, Social, Emotional Development | | |
| | <ul style="list-style-type: none"> I can talk about the differences between materials and changes I notice e.g. when cooking, melting ice etc I can show understanding that we need to care for living things e.g watering plants, handling insects gently I can discuss changes in seasons e. summer to autumn. I can make careful observations e.g. the ice has melted. It is a puddle now. I can explore the natural world around me e.g playing with leaves, soil I can discuss what I see, hear and feel outside. I can use increasingly mature vocabulary when discussing the natural world and animals e.g. soil, roots. leaf. temperature, camouflage, extinct Explore the natural world around them, making observations and drawing pictures of animals and plant. Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. | Vocabulary Material Cook Melt Living things Seasons Ice Soil Roots Leaf Temperature Camouflage Extinct Sticks Sand Water Wood Leaves Seeds Plant Grow Animals Minibeasts Insects Environment Change Magnets Space Linked Texts Astro Girl Blue Penguin Errol's Garden Yucky Worms | <ul style="list-style-type: none"> I understand the importance of eating healthy, exercise and tooth brushing I can talk about some ways of keeping healthy Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices | Vocabulary | |
| <ul style="list-style-type: none"> Begin to ask simple questions. Begin to observe closely. Begin to identify and name things. | | <ul style="list-style-type: none"> Begin to ask simple questions. Begin to identify and name things. | | | |

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| Y1 | Knowledge | Toys / Materials | | Seasonal Changes | |
| | | <ul style="list-style-type: none"> Distinguish between an object and the material from which it is made (NC/CQ) Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock (NC/CQ) Describe the simple physical properties of a variety of everyday materials (NC/CQ) Compare and group together a variety of everyday materials on the basis of their simple physical properties (NC/CQ) | Vocabulary 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 | <ul style="list-style-type: none"> Observe changes across the four seasons (NC/CQ) Observe and describe weather associated with the seasons and how day length varies. (NC/CQ) | Vocabulary Weather (sunny, rainy, windy, snowy etc.) , Seasons (winter, summer, spring, autumn), Sun, sunrise, sunset, day length |
| | Skills | <ul style="list-style-type: none"> Perform simple tests (NC/CQ) Identify and classify (NC/CQ) | | <ul style="list-style-type: none"> Observe closely, using simple equipment (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Gather and record data to help in answering questions (NC/CQ) | |
| | Knowledge | Plants | | Animals Inc Humans | |
| | | <ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees (NC) Identify and describe the basic structure of a variety of common flowering plants, including trees. (NC) | Vocabulary Plants, flowers, flowering, stem, petal, leaf, leaves, roots, berry, stalk, bud, branch, seed, evergreen, deciduous. Names of trees in the local area. Names of plants in the local area. | <ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals (NC/CQ) Identify and name a variety of common animals that are carnivores, herbivores and omnivores (NC/CQ) Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) (NC/CQ) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (NC/CQ) | Vocabulary Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves |
| | Skills | <ul style="list-style-type: none"> Observe closely, using simple equipment (NC/CQ) Identify and classify (NC/CQ) | | <ul style="list-style-type: none"> Identify and classify (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) | |

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| Y2 | Knowledge | Living Things and their Habitats | | Materials | |
| | | <ul style="list-style-type: none"> 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 (NC/CQ) Identify and name a variety of plants and animals in their habitats (NC/CQ) 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 (NC/CQ) | Vocabulary 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 microhabitats, e.g. under logs, in bushes etc. | <ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses (NC/CQ) Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (NC/CQ) | Vocabulary Names of materials: wood, Plastic, glass, metal, water, rock, brick, paper, fabric, card, rubber; suitable/unsuitable, use/useful, hard/soft, stretchy/stiff, rigid/flexible, waterproof/absorbent, strong/weak, rough/smooth, transparent/opaque, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching. |
| | <ul style="list-style-type: none"> Identify and classify (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Gather and record data to help in answering questions (NC/CQ) | <ul style="list-style-type: none"> Identify and classify (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Perform simple tests (NC/CQ) | | | |
| | Skills | Animals Inc Humans | | Plants (Our Garden) | |
| | | <ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults (NC/CQ) Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) (NC/CQ) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene (NC/CQ) | Vocabulary Offspring, needs, survival, shelter, healthy, unhealthy, balanced diet | <ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants (NC/CQ) Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (NC/CQ) | Vocabulary Y1 words: Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, Y2 words: light, shade, sun, warm, cool, water, grow, healthy, germinate |
| | Knowledge | Animals Inc Humans | | Plants (Our Garden) | |
| | | <ul style="list-style-type: none"> Identify and classify (NC/CQ) Perform simple tests (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Gather and record data to help in answering questions (NC/CQ) | <ul style="list-style-type: none"> Identify and classify (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Observe closely, using simple equipment (NC/CQ) | | |
| | Skills | Animals Inc Humans | | Plants (Our Garden) | |
| <ul style="list-style-type: none"> Identify and classify (NC/CQ) Perform simple tests (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Gather and record data to help in answering questions (NC/CQ) | | <ul style="list-style-type: none"> Identify and classify (NC/CQ) Use observations and ideas to suggest answers to questions (NC/CQ) Observe closely, using simple equipment (NC/CQ) | | | |

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| Y3 | Knowledge | Light | | Animals Inc Humans | |
| | | <ul style="list-style-type: none"> Recognise that they need light in order to see things and that dark is the absence of light. (NC/CQ) Notice that light is reflected from surfaces. (NC/CQ) Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (NC/CQ) Recognise that shadows are formed when the light from a light source is blocked by an opaque object. (NC/CQ) Find patterns in the way that the size of shadows change. (NC/CQ) | Vocabulary | <ul style="list-style-type: none"> 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 (NC/CQ) Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (NC/CQ) | Vocabulary |
| | Skills | <ul style="list-style-type: none"> Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers (NC/CQ) Set up simple, practical enquiries and comparative and fair tests (NC/CQ) | Light, Light source, Dark, Absence of light, Transparent, Translucent, Opaque, Shiny, Matt, Surface, Shadow, Reflect, Mirror, Sunlight, Dangerous | <ul style="list-style-type: none"> Gather, record, classify and present data in a variety of ways to help in answering questions (NC/CQ) Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables (NC/CQ) | Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, skull, ribs, spine, muscles, joints |
| | Knowledge | Plants | | Forces and Magnets | |
| Skills | <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers (NC/CQ) 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 (NC/CQ) Investigate the way in which water is transported within plants (NC/CQ) Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (NC/CQ) | Vocabulary | <ul style="list-style-type: none"> 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 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. | Vocabulary | |
| Skills | <ul style="list-style-type: none"> Set up simple, practical enquiries and comparative and fair tests (NC/CQ) Use straightforward, scientific evidence to answer questions or to support their findings (NC/CQ) Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables (NC/CQ) | Plant, flower, function, root, stem, growth, air, light, nutrients, water, soil, seed, dispersal, pollination, germination, growth, absorption, | <ul style="list-style-type: none"> Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers (NC/CQ) Set up simple, practical enquiries and comparative and fair tests (NC/CQ) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (NC/CQ) | Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole | |

| Rocks and Soils | | |
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| Knowledge | <ul style="list-style-type: none"> • Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties (NC/CQ) • Describe in simple terms how fossils are formed when things that have lived are trapped within rock (NC/CQ) • Recognise that soils are made from rocks and organic matter. (NC/CQ) | Vocabulary |
| | | 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 Words for the properties of rocks |
| Skills | <ul style="list-style-type: none"> • Ask relevant questions (NC/CQ) • Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables (NC/CQ) • Identify differences, similarities or changes related to simple, scientific ideas and processes (NC/CQ) • Use straightforward, scientific evidence to answer questions or to support their findings (NC/CQ) | |

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| Y4 | Knowledge | Living Things and their Habitats | Vocabulary | States of Matter | Vocabulary |
| | | <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways (NC/CQ) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment (NC/CQ) Recognise that environments can change and that this can sometimes pose dangers to living things. (NC/CQ) | Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate | <ul style="list-style-type: none"> 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 cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature | Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle |
| | Skills | <ul style="list-style-type: none"> Gather, record, classify and present data in a variety of ways to help in answering questions (NC/CQ) Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables (NC/CQ) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (NC/CQ) | | <ul style="list-style-type: none"> Set up simple, practical enquiries and comparative and fair tests (NC/CQ) Use straightforward, scientific evidence to answer questions or to support their findings (NC/CQ) Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables (NC/CQ) | |
| | Knowledge | Sound | Vocabulary | Electricity | Vocabulary |
| | | <ul style="list-style-type: none"> Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the pitch of a sound and features of the object that produced it Find patterns between the volume of a sound and the strength of the vibrations that produced it Recognise that sounds get fainter as the distance from the sound source increases. | Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation | <ul style="list-style-type: none"> Identify common appliances that run on electricity (NC/CQ) Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers (NC/CQ) 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 (NC/CQ) Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit (NC/CQ) Recognise some common conductors and insulators, and associate metals with being good conductors. (NC/CQ) | Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol |
| | Skills | <ul style="list-style-type: none"> Set up simple, practical enquiries and comparative and fair tests (NC/CQ) Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers (NC/CQ) Use straightforward, scientific evidence to answer questions or to support their findings (NC/CQ) | | <ul style="list-style-type: none"> Set up simple, practical enquiries and comparative and fair tests (NC/CQ) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (NC/CQ) Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests (NC/CQ) Use straightforward, scientific evidence to answer questions or to support their findings (NC/CQ) | |

| Animals Inc Humans (Digestive System) | | |
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| Knowledge | <ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. (NC/CQ) Identify the different types of teeth in humans and their simple functions. (NC/CQ) Construct and interpret a variety of food chains, identifying producers, predators and prey (NQ) | Vocabulary |
| | | Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, herbivore, carnivore, omnivore, producer, consumer, primary, secondary, tertiary |
| Skills | <ul style="list-style-type: none"> Set up simple, practical enquiries and comparative and fair tests (NC/CQ) Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers (NC/CQ) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (NC/CQ) | |

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| Y5 | Knowledge | Forces | | Space | |
| | | <ul style="list-style-type: none"> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between 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 | Vocabulary Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears | <ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system Describe the movement of the Moon relative to the Earth Describe the Sun, Earth and Moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. | Vocabulary Earth, Sun, Moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune |
| | Skills | <ul style="list-style-type: none"> Take measurements, using a range of scientific equipment, with increasing accuracy and precision (NC / CQ) Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments (NC / CQ) | | <ul style="list-style-type: none"> Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments (NC / CQ) Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models (NC / CQ) | Spherical, Solar system, rotates, star, orbits, planets, axis |
| | Knowledge | Animals Inc Humans / Living Things and their Habitats | | Changing States | |
| | | <ul style="list-style-type: none"> Describe the changes as humans develop to old age (CQ/NC) Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. (CQ) Recognise the importance of diet, exercise, drugs and lifestyle on the way the human body functions. (CQ) Describe the ways in which nutrients and water are transported within animals, including humans. (CQ) | Vocabulary Living things: Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings Animals inc Humans: Puberty, the vocabulary to describe a range of sexual characteristics | <ul style="list-style-type: none"> 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 (NC/CQ) Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution (NC/CQ) Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating (NC/CQ) Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic (NC/CQ) Demonstrate that dissolving, mixing and changes of state are reversible changes (NC/CQ) 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. (NC/CQ) | Vocabulary Thermal/electrical insulator/conduct or, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve reversible/non-reversible change, burning, rusting, new material |
| | | Skills | <ul style="list-style-type: none"> Present findings in written form, displays and other presentations (NC/CQ) Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments (NC / CQ) | | <ul style="list-style-type: none"> Plan enquiries, including recognising and controlling variables where necessary (NC/CQ) Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work (NC/CQ) Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models (NC / CQ) |

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| Y6 | Knowledge | Animals Inc Humans (Circulation) | Vocabulary | Living things and their Habitats | Vocabulary |
| | | <ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood (NC / CQ) Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function (NC / CQ) Describe the ways in which nutrients and water are transported within animals, including humans (NC / CQ) | Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrient, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle | <ul style="list-style-type: none"> 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 (NC / CQ) Give reasons for classifying plants and animals based on specific characteristics. (NC / CQ) | Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non-flowering |
| | Skills | <ul style="list-style-type: none"> Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions (NC / CQ) Present findings in written form, displays and other presentations (NC/CQ) Take measurements, using a range of scientific equipment, with increasing accuracy and precision (NC / CQ) | | <ul style="list-style-type: none"> Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models (NC / CQ) Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions (NC / CQ) | |
| | | Evolution and Inheritance | Vocabulary | Electricity | Vocabulary |
| | Knowledge | <ul style="list-style-type: none"> Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents (NC, CQ) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution (NC, CQ) Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago (NC, CQ) | Evolve, offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils | <ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit (NC/CQ) 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 (NC/CQ) Use recognised symbols when representing a simple circuit in a diagram (NC/CQ) | Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, motor, switch, voltage |
| | | <ul style="list-style-type: none"> Present findings in written form, displays and other presentations (NC/CQ) Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions (NC / CQ) Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments (NC / CQ) | | <ul style="list-style-type: none"> Plan enquiries, including recognising and controlling variables where necessary (NC/CQ) Use test results to make predictions to set up further comparative and fair tests (NC/CQ) | |
| Knowledge | Light | | Vocabulary | | |
| | <ul style="list-style-type: none"> 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 explain why shadows have the same shape as the objects that cast them. | Straight line, Light rays (Y3 Vocab) Light, light source, dark, absence of | | | |

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| Skills | <ul style="list-style-type: none">• Plan enquiries, including recognising and controlling variables where necessary (NC/CQ)• Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work (NC/CQ)• Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments (NC / CQ) | light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous |
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| <p>Key Aspects -</p> <ul style="list-style-type: none"> • Animals including Humans • Electricity • Evolution and Inheritance • Forces • Light • Living things and their Habitats • Materials • Sound • Space | <p>Key Skills -</p> <ul style="list-style-type: none"> • Asking Questions (in every unit) • Using Scientific Language (in every unit) • Using Equipment • Planning Enquiries • Observing and Measuring • Identifying and Classifying • Recording Data and Presenting Findings |
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Working Scientifically skills in more detail

Early Years: (CA generated)

- Begin to ask simple questions.
- Begin to observe closely.
- Begin to identify and name things.

KS1:

- Ask simple questions.
- Observe closely, using simple equipment.
- Perform simple tests.
- Identify and classify.
- Use observations and ideas to suggest answers to questions.
- Gather and record data to help in answering questions.

Lower KS2:

- Ask relevant questions.
- Set up simple, practical enquiries and comparative and fair tests.
- Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers.
- Gather, record, classify and present data in a variety of ways to help in answering questions.
- Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests.
- Identify differences, similarities or changes related to simple, scientific ideas and processes.
- Use straightforward, scientific evidence to answer questions or to support their findings.

Upper KS2

- Plan enquiries, including recognising and controlling variables where necessary.
- Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work.
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision.
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.
- Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions.
- Present findings in written form, displays and other presentations.
- Use test results to make predictions to set up further comparative and fair tests.
- Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.