

**FS1 overview**

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| **Topic / area** | **Understanding of the world** | **Scientific Enquiry** | **Adults to provide** | **Future learning** | **Vocabulary** |
| Animals, excluding humans | Understand the key features of the life cycle of a plant and an animal.  Begin to understand the need to respect and care for the natural environment and all living things. | Observing over time  • How does the … change over time?  Researching using secondary sources  • Find out more about the life cycles of the animals observed.  Classification  • Match animals and their young. | Opportunities to learn about the life cycles of animals  • Caring for eggs and the young animals that emerge, such as chicks, caterpillars, frogs  • Sharing books with information about animal life cycles (fiction and non-fiction)  • Looking at and matching pictures of animals and their young  • Watching videos of animals and their young and how they change over time  Playing games involving matching or describing animals and their young  • Playing with small world animals, matching adults to their young  • Visiting a farm, zoo or pet shop, particularly to see young animals  • Talking about the sounds adult and young animals make and comparing them  • Drawing adult animals and their young | Recognise some environments that are different to the one in which they live. (Reception)  • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 – Animals, including humans)  • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 – Animals, including humans)  • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans) | Model and encourage children to use vocabulary such as:  • egg, chick, bird, caterpillar, cocoon, chrysalis, butterfly, frog spawn, tadpole, froglet, frog, grow, change, die, names of animals and their young, fur, feathers, scales, tail, wings, beak, claws, paws, hooves, swim, walk, run, jump, jump, fly, patterns, spots, stripes  Expose children to supplementary vocabulary such as:  • life cycle, mane, webbed feet |
| Humans | Use all their senses in hands-on exploration of natural materials.  • Begin to make sense of their own life-story and family’s history.  • Understand the key features of the life cycle of a plant and an animal. | Classification  • Sort images of humans according to their age.  • Sort using different senses. Which do you like/not like?  Observing over time  • How does a baby change over time?  • Research using secondary sources  • Find out about the human life-cycle from an expectant mother, parent with a baby and elderly person. | Opportunities to learn about the life cycles of humans  • Looking at photographs of the children as babies  • Sharing books about how to look after a baby  • Talking to an expectant mother, parent with a baby and elderly person  • Talking to adults about photographs of the adults at different ages  • Identifying pictures of babies, toddlers, children, adults and old people in magazines or other media  • Drawing humans at different ages  Opportunities to learn about how to take care of themselves  • Talking about how they look after their own health and hygiene  • Noticing when they feel hot and cold and how to respond to this  • Choosing appropriate materials to protect themselves from the Sun  Opportunities to learn about their senses  • Exploring the natural environment with their senses  • Exploring objects using their senses e.g. smelling pots, feely bags, listening pots etc.  • Sorting collections of natural objects using their senses e.g. bark, pebbles, feathers, seeds, cones, leaves, sticks  • Looking closely at natural objects using a magnifying glass or app on a tablet  • Going on a sound walk  • Playing guessing games where children pick an object and either describe it or are asked questions in order to identify it  • Playing listening games  • Sharing books about senses and sensory impairments  • Tasting food | Talk about members of their immediate family and community. (Reception)  • Name and describe people who are familiar to them. (Reception)  • Describe what they see, hear and feel whilst outside. (Reception)  • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 – Animals, including humans) | Model and encourage children to use vocabulary such as:  • grow, change, baby, toddler, child, adult, old person, smell, taste, touch, feel, hear, see, blind, deaf  Expose children to supplementary vocabulary such as:  • life cycle, senses, elderly, die (if appropriate) |
| Living things and their habitats | • Use all their senses in hands-on exploration of natural materials.  • Explore collections of materials with similar and/or different properties.  • Begin to understand the need to respect and care for the natural environment and all living things. | Classification  • Find and identify natural objects to include in the collection.  • Which natural objects are from plants, animals or neither? | Opportunities to explore the surrounding natural environment  • Going on local nature walks  • Identifying natural objects and things left by humans  • Gathering natural objects from nature walks to include in a collection for the nature table e.g. stones, leaves, seeds, conkers, pinecones, acorns, twigs, bark, shells, feathers  Opportunities to explore natural objects from the surrounding environment  • Using a magnifying glass or a tablet with an app to observe the natural objects in a collection closely  • Drawing natural objects in the collection  • Grouping together natural objects that are similar in the collection  • Using natural objects to make pictures and patterns | Draw information from a simple map. (Reception)  • Explore the natural world around them. (Reception)  • Describe what they see, hear and feel whilst outside. (Reception)  • Recognise some environments that are different to the one in which they live. (Reception) | Model and encourage children to use vocabulary such as:  • natural, plant, animal, leaves, seeds, conkers, acorns, twigs, bark, shells, feathers, pebbles, stones, same, different, pattern  Expose children to supplementary vocabulary such as:  • living, dead, similar |
| Plants | Use all their senses in hands-on exploration of natural materials.  • Explore collections of materials with similar and/or different properties.  • Plant seeds and care for growing plants.  • Understand the key features of the life cycle of a plant and an animal.  • Begin to understand the need to respect and care for the natural environment and all living things. | Comparative testing  • Compare how quickly different seeds/bulbs germinate.  • Compare how different vegetable tops grow.  Observing over time  • How does a plant change as it grows?  • What happens to fruit, vegetables and flowers when left over time?  Researching using secondary sources  • Look at seed and bulb packets to learn how to plant and care for them. | Opportunities to grow plants  • Visiting a garden centre  • Gathering seeds from the surrounding natural environment  • Gathering seeds from fruit  • Observing collections of seeds and bulbs using a magnifying glass or an app on a tablet  • Drawing seeds and bulbs  • Planting and caring for seeds and bulbs  • Growing vegetable tops  Observing and photographing/drawing how plants grow and die  • Observing and photographing/drawing what happens when fruit, vegetables and flowers are left to decay  • Gathering seeds and digging up bulbs of the plants they grow  • Designing seed packets  • Using what they grow to make food to eat  • Sharing books about plants and growing plants | Observe and describe how seeds and bulbs grow into mature plants. (Y2 – Plants)  • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Y2 – Plants)  • Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 – Plants) | Model and encourage children to use vocabulary such as:  • plant, leaf, stem, branch, root, bark, flower, petal, seed, berry, fruit, vegetable, bulb, plant, hole, dig, water, weed, grow, shoot, die, dead, soil, names of plants they grow  Expose children to supplementary vocabulary such as:  • seedling, healthy, unhealthy, strong, sturdy, wilting, decay, mould, life cycle |
| Materials, including changing materials | Use all their senses in hands-on exploration of natural materials.  • Explore collections of materials with similar and/or different properties.  • Talk about the differences between materials and changes they notice. | Classification  • Sort materials using simple properties.  Observing over time  • How does the cake mixture change?  • How does chocolate change when heated?  • How does fruit juice change when put in the freezer?  • How does fruit change when blended? | Opportunities to explore a range of materials in a sensory way especially through touch, including more unusual materials  • Exploring oobleck (cornflour and water), gellibaff, shaving foam, foam burst shower gel etc.  Opportunities to shape and join materials  • Building junk models using a range of materials  • Shaping and joining materials using equipment e.g. scissors, hole punch, including when using wood e.g. a hammer and nail  Opportunities to change materials  • Making smoothies  • Mixing ingredients to make playdough, cakes, biscuits, bread, jelly etc.  • Melting chocolate for decorating bakes/biscuits or to combine with other ingredients e.g. refrigerator cake, chocolate crispy cakes  • Comparing cooked and uncooked pasta, noodles, rice or potatoes  • Cooking popcorn in a microwave  • Cooking cakes, biscuits, bread etc.  • Making ice lollies and ice-cream  • Using medical ice packs including self-activated cool pads  • Removing toys from ice  • Adding baking soda and fizzy bath bombs to water  • Adding coloured sweets to water  • Adding currants to fizzy water/lemonade  • Adding bicarbonate of soda to vinegar to make a bubbling potion | Explore the natural world around them. (Reception)  • Describe what they see, hear and feel whilst outside. (Reception)  • Distinguish between an object and the material from which it is made. (Y1 – Everyday materials)  • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 – Everyday materials)  • Describe the simple physical properties of a variety of everyday materials. (Y1 – Everyday materials)  • Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 – Everyday materials) | Model and encourage children to use vocabulary such as:  • mix, stir, cook, hot, oven, microwave, change, burn, melt, hard, runny, set, freeze, freezer, cold, blended, hard, soft, bendy, stiff, wobbly, wood, plastic, paper, card, fabric  Expose children to supplementary vocabulary such as:  • solid, liquid, rigid, stronger, weaker |
| Electricity | Explore how things work. | Classification  • Identify objects that use electricity to work.  • Identify devices that use batteries and/or mains electricity. | Opportunities to identify electrical devices  • Spotting devices that are plugged into power sockets in the classroom  • Spotting devices that use batteries in the classroom  • Sorting objects/photographs of objects according to whether they use electricity or not  • Sorting objects/photographs of objects according to whether they use batteries and/or mains electricity.  • Looking at shopping catalogues that include electrical devices  Opportunities to use battery-powered devices  • Using Code-a-Pillars, Bee-Bots, shopping tills, torches, remote control cars, talk cards/recording devices, hand-held fans  Opportunities to talk about how electrical devices work  • Describing what the devices do e.g. make a sound, make light, move  • Suggesting that batteries may need charging or replacing when a device does not work | Identify common appliances that run on electricity. (Y4 - Electricity) | Model and encourage children to use vocabulary such as:  • battery, plug, socket, electricity, wire, sound, light, move  Expose children to supplementary vocabulary such as:  • mains electricity, device, appliance, electrical |
| Light | Explore how things work.  • Talk about the differences in materials and changes they notice. | Comparative testing  • Compare how bright different light sources are.  • Compare how reflective different materials are.  Classification  • Which materials are reflective to use for an outside mobile?  • Which fabrics are reflective to help us be seen at night?  • Which materials block light to help us protect ourselves from the Sun? | Opportunities to explore light sources  • Switching light sources on and off  • Comparing the brightness of light sources  • Using different light sources in dark dens with reflective and fluorescent stickers  Opportunities to shine light on or through different materials  • Shining light on or through different objects and materials e.g. reflective, non-reflective, transparent, translucent, opaque, coloured filters, holographic paper, glitter ball  • Looking at their reflection in different types of mirrors e.g. plane, convex, concave and wobbly  • Looking for their reflection in other objects  • Making glitter pictures or pictures with reflective materials | Describe what they see, hear and feel whilst outside. (Reception)  • Recognise that they need light in order to see things and that dark is the absence of light. (Y3 – Light)  • Notice that light is reflected from surfaces. (Y3 – Light)  • Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Y3 – Light)  • Recognise that shadows are formed when the light from a light source is blocked by an opaque object. (Y3 – Light)  • Find patterns in the way that the size of shadows change. (Y3 – Light) | Model and encourage children to use vocabulary such as:  • light, torch, bulb, lamp, spotlight, shiny, bright, brighter, brightest, Sun, shine, glow, mirror  Expose children to supplementary vocabulary such as:  • light source, reflective, non-reflective, dim, dimmer, dimmest |
| Forces | Explore how things work.  • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. | Comparative testing  • Compare the path of different wind-up toys.  • Compare how far different wind-up toys move.  • Compare the speed and direction of gears.  • Compare how easy or hard it is to lift an object with or without a pulley.  • Compare how easy it is to ride a scooter or bike on different surfaces.  Classification  • Sort objects according to whether they float or sink.  • Sort objects/materials according to whether their shape can be changed. | Opportunities to feel forces  • Pushing floating objects under water e.g. balloons, table tennis balls etc.  • Exploring magnets of different shapes and sizes  Exploring springs of different sizes, both compression and extension springs  • Using bikes and scooters on different surfaces and ramps  Opportunities to explore how things work  • Testing a range of objects to find out if they float or sink  • Playing games that contain springs e.g. bagatelle  • Playing with wind-up toys  • Racing wind-up toys  • Playing with gears and pulleys e.g. sets of gears, large playground pulleys etc.  • Playing with magnetic toys e.g. train carriages joined by magnets, magnetic construction kits etc.  Opportunities to explore how objects/materials are affected by forces  • Pushing, pulling, twisting and bending malleable (e.g. modelling clay, playdough, springs, pipe cleaners, elastics, sponges etc.) and non-malleable objects/materials  • Cutting and joining objects/materials e.g. wood, building kits with nuts and bolts etc. | Explore the natural world around them. (Reception)  • Describe what they see, hear and feel whilst outside. (Reception)  • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 – Uses of everyday materials)  • Compare how things move on different surfaces. (Y3 – Forces and magnets)  • Observe how magnets attract or repel each other and attract some materials and not others. (Y3 – Forces and magnets)  • 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. (Y3 – Forces and magnets)  • Describe magnets as having two poles. (Y3 – Forces and magnets)  • Predict whether two magnets will attract or repel each other, depending on which poles are facing. (Y3 – Forces and magnets)  • Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. (Y5 – Forces) | Model and encourage children to use vocabulary such as:  • object, float, sink, water, up, down, top, bottom, push, pull, magnet, spring, squash, bend, twist, stretch, turn, spin, smooth, rough, fast, slow  Expose children to supplementary vocabulary such as:  • rising, falling, attract, repel, faster, slower, pulley, gear, elastic |
| Sound | Explore how things work. | Comparative testing  • Compare the sound produced by shakers made with different materials.  • Compare the sound produced by different drums.  • Compare the sound produced by different elastic bands on their ‘guitar’. | Opportunities to listen to sounds  • Listening to the sounds around them at different times and in different places  • Playing listening games  • Listening to recordings of different sounds and identifying what they are  • Listening to visiting musicians  • Making artwork based on the sounds that they hear  Recording sounds they hear  Opportunities to make sounds  • Making sounds using their bodies  • Singing songs and rhymes  • Exploring toys and other objects that make a noise  • Hitting different objects with beaters of different materials to notice the different sounds they make  • Playing musical instruments  • Making and playing musical instruments e.g. shakers drums, guitars, kazoos and rainmakers etc.  • Recording the sounds they make | Describe what they see, hear and feel whilst outside. (Reception)  • Identify how sounds are made, associating some of them with something vibrating. (Y4 – Sound)  • Recognise that vibrations from sounds travel through a medium to the ear. (Y4 – Sound)  • Find patterns between the pitch of a sound and features of the object that produced it. (Y4 – Sound)  • Find patterns between the volume of a sound and the strength of the vibrations that produced it. (Y4 – Sound)  • Recognise that sounds get fainter as the distance from the sound source increases. (Y4 – Sound) | Model and encourage children to use vocabulary such as:  • sound, noise, loud, quiet, high, low, music, bang, blow, pluck, soft, hard, fast, slow, names of instruments  Expose children to supplementary vocabulary such as:  • musician, notes, vibrate, vibration, pitch, rhythm, pulse, volume |