

Science at Hursthead Infant School



Hursthead Infant School

Intention statement:

Hursthead Infant School aims for children to develop an enjoyment and interest in science and an understanding of its contribution to all aspects of everyday life. We aim to develop children's curiosity, to observe and ask questions about the world around them. Children will work scientifically and develop secure scientific knowledge and conceptual understanding.

National Curriculum

The National Curriculum for Science aims to ensure that all pupils can:

Work Scientifically

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- ♣ asking simple questions and recognising that they can be answered in different ways
- ♣ observing closely, using simple equipment
- ♣ performing simple tests
- ♣ identifying and classifying
- ♣ using their observations and ideas to suggest answers to questions
- ♣ gathering and recording data to help in answering questions

Year 1

Plants

- ♣ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- ♣ identify and describe the basic structure of a variety of common flowering plants, including trees.

Animals including humans

- ♣ identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
- ♣ identify and name a variety of common animals that are carnivores, herbivores and omnivores
- ♣ describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)
- ♣ identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Everyday Materials

- ♣ distinguish between an object and the material from which it is made
- ♣ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- ♣ describe the simple physical properties of a variety of everyday materials
- ♣ compare and group together a variety of everyday materials on the basis of their simple physical properties.



Seasonal Changes

- ♣ observe changes across the four seasons
- ♣ observe and describe weather associated with the seasons and how day length varies.

Year 2

Living things and their habitats

- ♣ explore and compare the differences between things that are living, dead, and things that have never been alive
- ♣ identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other
- ♣ identify and name a variety of plants and animals in their habitats, including microhabitats
- ♣ 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.

Plants

- ♣ observe and describe how seeds and bulbs grow into mature plants
- ♣ find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

Animals, including humans

- ♣ notice that animals, including humans, have offspring which grow into adults
- ♣ find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
- ♣ describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Uses of everyday materials

- ♣ identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- ♣ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

EYFS Statutory Framework

Science in EYFS is covered in the area of learning - Understanding the World

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.



Our Curriculum

In EYFS, Children are introduced to science through Understanding the World. They are given opportunities (directed by an adult and self-initiated) to observe, sort and classify, perform simple tests to help them begin to understand the world around them and to help them raise their own questions such as "Why...?", "How...?" and "What happens if...?"

In KS1, Science is taught in discrete science sessions however where appropriate, cross curricular links are made at the discretion of each year group i.e. Design and Technology, English, Mathematics, History and Computing. Class teachers have the freedom to develop their teaching of Science in a way that suits their class. This may include a variety of teaching and learning opportunities, such as: whole-class teaching, enquiry-based research, asking and answering science questions, reports, using a variety of data, such as graphs, pictures, and photographs, drama, discussions, collecting and presenting data and use of the outdoor environment.

What does Science teaching look like?

At Hursthead Infant School we use 'Snap Science programme' to deliver Science from Foundation stage to Year 2. At a very young age, children develop vocabulary and language, observation and enquiry skills to understand change in the world around them. Here at Hursthead Infant School, our curriculum is designed to build on this foundation through delivery of the statutory content of the National Curriculum for Foundation stage and KS1 through the use of Snap Science. The science curriculum is designed to provide children with the skills, knowledge and vocabulary to investigate, understand, appreciate and reflect on their world (both locally, nationally and globally). Children will develop scientific ways of thinking, investigating and evidencing, which can be applied both within lessons and in their future learning/lives to become active global citizens.



Each module in Snap Science is made up of a carefully planned series of lessons which will engage children in the different types of science enquiry identified in the National Curriculum, where they will use and develop the necessary investigative skills and attributes identified for each Key Stage phase. All lessons are stimulated by a question for children to answer, a scientific phenomenon to investigate or a problem to solve. Science Enquiry is the methodology children will use to develop their conceptual knowledge, working in an authentically scientific and purposeful way to collect evidence to find answers to their questions.

The National Curriculum stipulates that children should learn to use a range of enquiry types to answer scientific questions.

These are:

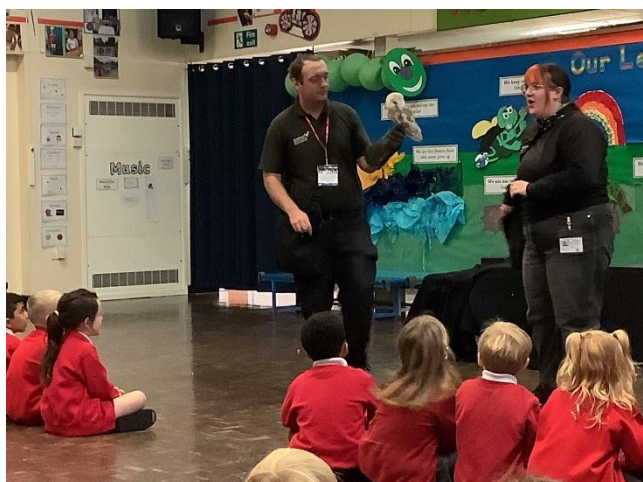
- **Observing over time** – when children observe or measure how one variable changes over time
- **Identifying and classifying** – when children identify and name materials and living things and make observations or carry out tests to organise them into groups
- **Looking for patterns** – when children make observations or carry out surveys of variables that cannot easily be controlled and look for relationships between two sets of data
- **Comparative and fair testing** – when children observe or measure the effect of changing one variable when controlling others as far as possible
- **Answering questions using secondary sources of evidence** – when children answer questions using data or information that they have not collected first hand

Wider Opportunities

Children are immersed in their Science topics through outdoor adventures, visitors, workshops and the use of scientific equipment in the classroom.



Each year, we celebrate British Science week and we have been very fortunate to take part in exciting, engaging interactive workshops across EYFS and KS1. We also enjoy our visits from the birds of prey team where we get learn about the different features of the birds.



Science Topics

Topic overview	Autumn	Spring	Summer
EYFS	What am I made of? What happens when you mix it? What is happening to the trees? (Autumn) What goes through?	What is the weather like today? What floats? What melts? What is happening to the trees? (spring)	What does an earthworm do? Who are my parents? Is all of a plant green? What is happening to the trees? (summer)
Year 1	Seasons Animals (vertebrates) Human body and Senses	Seasons Naming and describing materials Properties and uses of materials	Seasons Identifying plants and their parts
Year 2	Local Habitats Growing up	Growing seeds and bulbs Growing healthy plants	Materials: choosing materials changing materials

Science progression at Hursthead Infant School

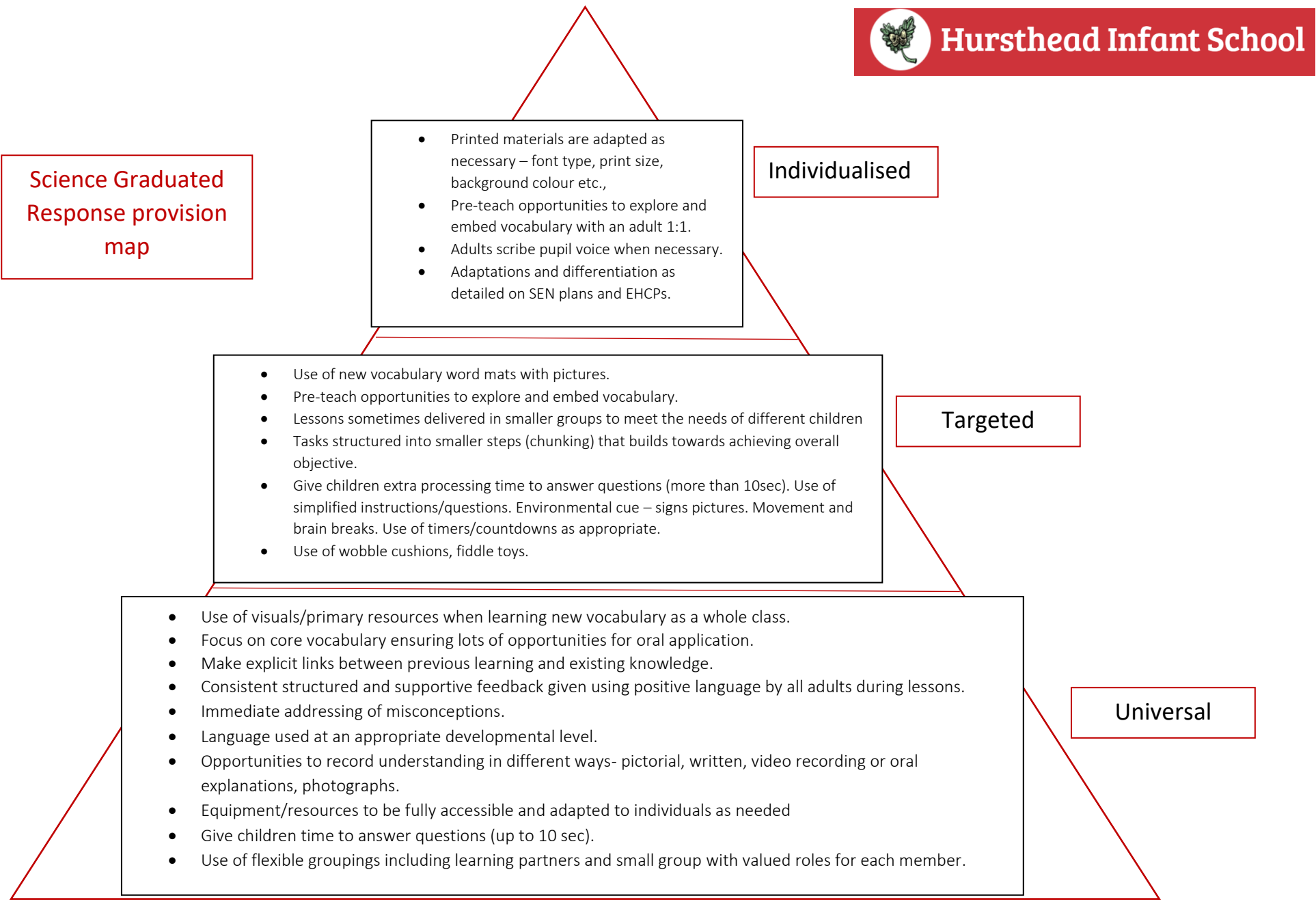
Science: Progression of Knowledge, Skills and Vocabulary

EYFs	Characteristics of learning
Enquiry Skills	Show curiosity about objects, events and people Questions why things happen Engage in open-ended activity Take a risk, engage in new experiences and learn by trial and error Find ways to solve problems / find new ways to do things / test their ideas Develop ideas of grouping, sequences, cause and effect Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world Use senses to explore the world around them Make links and notice patterns in their experiences Create simple representations of events, people and objects Build up vocabulary that reflects the breadth of their experience
Understanding the World	Know about the similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.

<u>Working Scientifically: KS1 Statutory requirements from NC</u> During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions.		
Working Scientifically	Year One	Year Two
Asking and Answering Questions	Use everyday language/begin to use simple scientific words to ask or answer a scientific question.	Suggest ideas, ask simple questions and know that they can be answered/investigated in different ways including simple secondary sources, such as books and video clips.
Making predictions	Begin to say what might happen in an investigation.	Begin to make predictions.
Making observations	Observe objects, materials and living things and describe what they see.	Observe something closely and describe changes over time.
Equipment and measurements	Use simple, nonstandard equipment and measurements in a practical task.	Use simple equipment to take measurements, make observations and carry out simple tests.
Identifying and classifying	Sort and group objects, materials and living things, with help, according to simple observational features.	Decide, with help, how to group materials, living things and objects, noticing changes over time and beginning to see patterns.
Engaging in practical enquiry	Follow instructions to complete a simple test individually or in a group.	Do things in the correct order when performing a simple test and begin to recognise when something is unfair.
Recording and reporting findings	Begin to record simple data. Talk about their findings and explain what they have found out.	Gather data, record and talk about their findings, in a range of ways, using simple scientific vocabulary.
Drawing conclusions	Explain, with help, what they think they have found out.	Use simple scientific language to explain what they have found out.
Analysing data	Use every day or simple scientific language to ask and/or answer a question on given data.	Identify simple patterns and/or relationships using simple comparative language.
Vocabulary	Questions, answers, equipment, gather, measure, record, results, sort, group, test, explore, observe, compare, describe, similar/ities, different/ces, beaker, pipette, syringe	Previous vocab plus observe changes over time, notice patterns, secondary sources, hand lenses, egg timers, identify, classify, data,

Programme of study	Year One	Year Two
Animals including humans	- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals - Identify and name a variety of common animals that are carnivores, herbivores and omnivores - Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	- Understand that animals, including humans, have offspring which grow into adults - Describe the basic needs of animals, including humans, for survival (water, food and air) - Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
Vocabulary	Body, head, neck, arms, elbows, legs, knees, face, ears, eyes, eyebrows, eyelashes, nose, hair, mouth, teeth, tongue, feet, toes, fingers, nails, ankle, calf, thigh, hips, waist, trunk, chest, shoulders, back, hands, wrist, tail, wing, claw, fin, scales, feathers, fur, beak, senses, hearing, seeing, touching, smelling, tasting, smooth, bright, dim, loud, quiet, high, low	offspring, life cycles, grow, change, adults, basic needs, water, food, air survival, exercise, food types (fruit and veg, bread, rice, pasta, milk, dairy, foods high in fat and sugar, meat, fish, eggs, beans), hygiene
Living things and their habitats		- Explore and compare the differences between things that are living, dead, and things that have never been alive. - Identify that most living things live in habitats to which they are suited (- Describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. - Identify and name a variety of plants and animals in their habitats, including microhabitats. - 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
Vocabulary		Living, dead, never been alive, names of local habitats, pond, woodland, meadow, name micro habitats, under log, stony path, under bushes, suited, basic needs, depend, food, food chain, shelter grow, reproduce, survive, prey, predator, producer, consumer, primary, secondary, tertiary habitat, micro-habitat, adaptation, polar, ocean, woodland, rainforest, urban, desert, coastal, pond, tally, record, herbivore, carnivore, omnivore
Plants	- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees - Identify and describe the basic structure of a variety of common flowering plants, including trees.	- Observe and describe how seeds and bulbs grow into mature plants - Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
Vocabulary	Names of: wild plants, garden pants, flowering plants, trees, leaf, flower, blossom, petal, fruit, berry, root, bulb, seed, trunk, branch, stem, bark, stalk, vegetable	seeds, bulbs, water, light, growth, healthy, shoot, seedling,
Seasonal Change	Observe changes across the four seasons - observe and describe weather associated with the seasons and how day length varies.	Compare UK season to seasons in India (link with geography)
Vocabulary	Season, spring, summer, autumn, winter, weather, hot, warm, cool, cold, sunny, cloudy, windy, rainy, snowing, hailing, sleet, frost, fog, mist, icy, rainbow, thunder, lightning, storm, light, dark, day, night	Monsoon, dry season, hot season spring, summer, autumn, winter
Everyday materials (Y1) Uses of everyday materials (Y2)	- Distinguish between an object and the material from which it is made. - Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. - Describe the simple physical properties of a variety of everyday materials. - Compare and group together a variety of everyday materials on the basis of their simple physical properties.	- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
Vocabulary	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, waterproof, absorbent, tear, rough, smooth, shiny, dull, see through, not see through	Suitable/unsuitable, use, object, material, property, wood, plastic, glass, metal water, rock, fabrics, hard, soft, stretchy, flexible, waterproof, absorbent, transparent, translucent, opaque, shape, change, twist, squash, bend, stretch, roll, squeeze, Natural, man-made, produce, transparent, waterproof, fair test, wood, metal, plastic, glass, brick, rock, paper, cardboard, fabric, soft, rough, hard, smooth, opaque, flexible, rigid, strong, fragile

Inclusive Practice



Examples of planning at Hursthead Infant School

Science Medium Term Plan

Year 2

Science Topic: Living Things and their Habitats

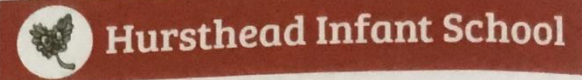
Autumn Term

Learning Objectives	Teaching Focus	Vocabulary	Resources	Assessment Opportunities
Lesson 1 To explore and compare the differences between things that are living, dead, and things that have never been alive Working scientifically: identifying and classifying	Local Habitats: Are the things I find alive, have they never been alive or were they once alive? Tell children that today they are going to answer the question: ‘Are the things that I find alive, have they never been alive or were they once alive?’ Introduce the language – alive, once alive, never been alive. Show children picture of an adult and baby rabbit. Ask them whether real rabbits are alive. How do they know? Children may say that rabbits move about, they breathe, feed and have baby rabbits. Show children something that is alive, never has been alive and something that was once alive (twig). Ask: Is this it alive? How do we know it’s alive/never been alive/once lived? Children might say they know it is alive because it is growing. Children might say that the object doesn’t move, breathe, grow or need water so it has never been alive or once lived. They might say that it used to be part of something that was alive but has fallen off. The task Give each child a copy of Resource sheet 2: Alive, once alive or never been alive checklist. Ask them to put it on their clipboards. Explain that the top half of the sheet has a checklist of things that living things do: breathe, move, need water, grow and make more living things. Tell children that they are going to use this checklist to think about whether things are alive, have never been alive or were once alive. Give each pair of children an object. It could be a leaf, flower, toy, pebble, stick, something from the recycling bin – anything at all. Ask children to discuss in pairs to decide if their object is alive, once alive or has never been alive. Ask them to explain their choice. Place three sorting hoops on the floor, labelled ‘Alive’, ‘Once alive’ and ‘Never alive’. Ask pairs to place their object into one of the hoops. Tell children that they are going to complete the bottom half of the sheet. They need to read the checklist at the top of the page, cut out the pictures and stick them into the correct boxes.	Tier 2: feed, move, record Tier 3: alive, breathe, dead, never been alive, once alive	an outdoor space with some flowering plants cones to mark the outdoor work space clipboards and pencils stick (fallen twig) a cup a selection of living, once-lived and never-lived items to sort, e.g. leaf, flower, toy, pebble, stick, something from the recycling bin (one item per pair of children) three sorting hoops labels for hoops: ‘Alive’, ‘Once alive’, ‘Never been alive’ digital camera (optional)	Children can: - sort their finds into alive, never been alive or was once alive - explain how they know something is alive, has never been alive or was once alive. If you are unsure if a child can explore and compare the differences between things that are living, dead, and things that have never been alive, you can use Snapshot 1: Odd one out to check understanding and develop learning.
Lesson 2 To 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 Working scientifically: observing closely, identifying and classifying using observations and ideas to suggest answers to questions	Local Habitats: What lives in my tree? Show the children Oak tree. Use the picture of the tree to recap the parts of the oak tree including leaves, branches, trunk, bark and roots. Tell children that today they are going to answer the question: ‘What lives in my tree?’ <i>Tell children that a habitat is a place where plants and animals naturally live and grow. A habitat provides all that a living thing needs to survive, for example: food, water and shelter.</i> Explain that they will observe a tree habitat and work out what lives there, and they will think about why the tree is a good place for those plants and animals to live and grow. Take children into the Woodland Walk. Ask children in groups to choose a tree to look at. Ask them to look beneath the tree for a leaf. Provide Resource sheet 2: Leaf ID sheet for the children, and ask them to put it on their clipboards. Can they match the leaf to the chart? What type of tree is it? Are there any animals living in/on/around their tree? <i>Remind children to be quiet and not to disturb the wildlife.</i>	Tier 3: habitat, shelter, survive observe	an outdoor space with mature trees – this could be on the school site, a local park, allotment or other green space cones to mark the outdoor work space, clipboards and pencils, digital camera (optional), reference books to research different habitats (optional)	Children can: - explain that a habitat is a natural environment for a variety of plants and animals - describe how a habitat provides everything that living needs to survive and reproduce, for example, food, water, shelter and space.

Lesson 3 To learn that different animals are suited to live in different parts of a woody habitat e.g. in the leaf litter, on the bark of trees, on the leaves. Working scientifically: observing closely, identifying and classifying using observations and ideas to suggest answers to questions	Local Habitats: What animals live in this woody habitat? Tell children that today's question is: ‘What animals live in this woody habitat?’ Begin the lesson with the children outside, looking at a woody habitat such as under a tree/wooded area/hedgerow/wood pile. Remind children that in the previous lesson they learnt about some of the living things that they might find living in or around a tree. Ask them if they can remember any of their names. Ask children to remind you what a habitat is. They may tell you that a habitat is a place where plants and animals naturally live and grow. A habitat provides all that a living thing needs to survive, for example, food, water, shelter and space. Tell children that today they are going to investigate this woody habitat and they are going to discover which animals live there. Before they begin, have a look with them at the location, feeling the ground with their hands. Ask: What is this woody habitat like? Is it light or dark? Is it damp or dry? What is on the ground – is there bare soil or are there leaves? What else can they see? Discuss the plants that live in this woody habitat. Ask: Which plants can you see here? Can you name any? What condition are the plants in? Where are the leaves? What size are the leaves? Can you see signs of plants decaying? Are there any fungi? Tell them that fungi are things like mushrooms, which are neither a plant nor an animal. They are a different group of living things. Fungi are decomposers, which break down dead things, such as wood and leaves, so that they can be used by plants to help them grow. Make sure that children know not to touch fungi as some are extremely poisonous. The task Ask children if there are any animals they would expect to see in a habitat full of trees, hedges or shrubs. Can they see any signs of animals? For example, bird nests, squirrel drays, spider webs, holes in the bark of a tree or in the soil, snail shells, feathers, nibbled pine cones or acorns. Explain to children that they are going to find out which animals live in this habitat. They will be looking for small animals such as insects, spiders and worms. They will need to look in different places in the habitat: under stones, beneath fallen leaves, on the tree (both under the leaves and on the bark), under plants and in nooks and crevices. The children can use two methods to find any animals living there – hand sampling and beat sampling: ● Hand sampling is good for collecting small animals from the ground. Children will need a soft paint brush and several pots with lids, so that their finds cannot escape! Demonstrate how to use the brush to sweep the animal into the collecting jar. Next, show children how to look closely at their animal using magnifiers. Explain the clues or features to look for – colour, size, number of legs, wing shape, body segments, shape of antennae, and so on. ● Beat sampling is an effective way to collect animals from foliage on trees and shrubs. Use a white tray (this could be an ice cream tub or a tray with a piece of white paper at the bottom of it) and a sturdy stick. Hold the tray underneath the plant under investigation. Gently tap on the branches with the stick; this should dislodge any insects into the tray. Have a look to see what you have got. Pop any finds into pots with lids, using a soft paint brush. This method is likely to catch beetles, ants and spiders. This method does not work so well when foliage is wet. They are going to record what they find on Resource sheet 1: Woody habitat spotter sheet. Ask children to identify each find, ticking them off on their sheet, and then draw them, labelling the features that they spot. Children can use magnifiers to help them to see the features of the animals more closely. When they have finished looking, show them how to replace the animal in the part of the habitat where it was found. Explain that they need to release the creature so that it can find its own way back, without being damaged in any way	Tier 2: record Tier 3: decay, decomposer, habitat, shelter, survive insect pattern	a woody habitat, such as a log pile, under a tree, a hedgerow or wooded area in a park, graveyard, allotment or woodland area ● cones to mark the outdoor work space ● clipboards and pencils ● soft paint brushes ● lidded pots ● white tray ● stick ● magnifiers ● plastic insects (optional) ● shallow tray with sand or compost (optional) ● clay (optional) https://resources.discoveryeducation.co.uk/player/6934dc30-d639-4c93-a24c-91b0c4853b37?lock=1&search?term=insects https://www.bbc.co.uk/teach/class-clips-video/articles/zy2hbow https://www.youtube.com/watch?v=5J8etwJ8Gu	Children can: ▪ Explain that different animals are suited to different woody habitat ▪ name and identify animals they observed in the woody habitat ▪ use a magnifier to observe closely the living things they find.
Lesson 4 To learn that different living things are suited to living in different parts of a grassy habitat, for example, deep down in the grass, in short or long grass, on top of the grass or on flowers.	Local Habitats: What animals live in this grassy habitat? Tell children that today they are going to answer the lesson question: ‘What animals live in this grassy habitat?’ Begin the lesson with the children outside in a grassy spot. Before they begin, have a look with them at the location, and ask them to feel the ground with their hands. Ask: What is this grassy habitat like? Is it light or dark? Is it damp or dry? What is on the ground? What else can you see? Ask children to select words to describe this habitat. Children might compare how much more light and open this grassy habitat is than the shady wooded area they studied before.	Tier 2: compare, record Tier 3: decay, habitat	a grassy habitat, such as an unmowed grassy area, graveyard, allotment, woodland clearing, wildflower meadow, pasture or sports field	Children can: ● name and identify six animals they observed in the grassy habitat ● use a magnifier to observe closely the living things they find.

Hursthead Infant School	Working scientifically: observing closely, identifying and classifying using observations and ideas to suggest answers to questions	Remind children that in the previous lesson they looked for animals which live in a woody habitat. Ask children to remind you which animals they saw. Tell children that today they are going to explore this grassy habitat and they are going to find out which animals live there. Talk with the children about the plants that can be found in this grassy habitat. Ask: Which plants can you see here? What condition are the plants in? Where are the leaves? What size are the leaves? Can you see signs of plants decaying? Are there any fungi? The task Ask children if there are any animals they would expect to see there. Can they see any signs of animals? For example, worm casts, mole hills, patches in the grass from ants. Explain to the children that they are going to find out which animals live in this habitat. Children can use two methods to find animals – hand sampling and sweep nets: • Hand sampling: hand sampling is good for collecting small animals in short grass, such as ants, worms and spiders. Children can use a soft paint brush to gently sweep the animals into a pot with a lid. • Sweep net: a sweep net is good for collecting small animals in long grass, such as grasshoppers, beetles and other small insects. Children can sweep the net slowly back and forth in the grass for about a minute. Then they place the net on the floor and look to see what is in/on the net. Remind children how to look closely at the animals they find. Explain which clues or features to look for, such as colour, size, number of legs, wing shape, body segments, shape of antennae, and so on. Give children Resource sheet 1: Grassy habitat spotter sheet, for them to record their finds. Ask children to identify each animal they find, ticking them off on their sheet, and then draw them, labelling the features that they spot. Children can use magnifiers to help them to see the features of the animals more closely. When you have finished, show children how to replace the insects back gently into the grass, without being damaged in any way.		cones to mark the outdoor work space clipboards and pencils soft paint brushes lidded pots sweep nets magnifiers mini whiteboards and pens photographs of common invertebrates (found online) (optional)	
Lesson 5 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 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 Working scientifically: observing closely, using simple equipment identifying and classifying using their observations and Ideas to suggest answers to questions	Local Habitats: What do animals that live in the woods eat? Show the children the flipchart. Ask: What plants and animals can you see here? (Children will see an acorn, fox, owl, mouse and squirrel.) Ask them what they think each animal eats. Next, show children how to create a food chain for an ‘acorn’, ‘mouse’ and ‘fox’. acorn → mouse → fox First the mouse eats the acorn. Then the fox eats the mouse. Explain that a food chain is a series of living things, each dependent on the one before it as a source of food. The mouse depends on the acorn for its food. The fox depends on the mouse for its food. Tell children the following: All food chains begin with a producer. A producer is a living thing that produces its own food. Plants are one type of producer. In our food chain the producer is the acorn. Talk with the children about how the mouse eats acorns, nuts and seeds to survive. Wild mice are actually omnivores and will also eat small insects too. Foxes are also omnivores and will eat both plants and animals. So, the food chain they have seen is just one example of a possible food chain involving mice or foxes. Tell children that animals that eat other plants or animals are called consumers. The arrows in the food chain shows the order in which the food chain happens, and therefore always points from producer (plant) to consumer. Encourage children to draw their own food chain from the woodland habitat picture on their mini whiteboards.	Tier 2: Record Tier 3: order consumer, depend, food chain, habitat, omnivore, producer	Scissors Glue	Children can: • talk about how the plants and animals within a woodland habitat food chain are dependent on each other • make a woodland habitat food chain with three steps to make the links between foods and consumers (and do this for at least two different examples of food chains) • use arrows in a simple food chain correctly. If you are unsure if a child can 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, you can use Snapshot 1: Who lives here? to check understanding and develop learning.	

	For example: ● acorn → mouse → fox ● acorn → mouse → owl ● acorn → squirrel → fox Spread the cards from Resource sheet 2. Children complete their own food chains using the card that they are given. When the children have created their own food chain they need to record it on Resource sheet 3: food chains.			If you are unsure if a child can 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, you can use Snapshot 2: Who eats what? to check understanding and develop the understanding.
--	--	--	--	--



Science in Year 1

Autumn 1: Seasons and Animals

Autumn 2: Seasons and Animals

Spring 1: Human Body and Senses

Spring 2: Naming and describing materials.
Properties and uses of materials

Summer 1: Seasons and plants

Summer 2: Seasons and plants

2024-2025

<u>Date:</u> weeks – 5-13
<u>LO:</u> • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
<u>Vocabulary:</u> feature, structure, adult, amphibian, carnivore, diet, fish, herbivore, mammal, omnivore, reptile, vertebrate, classify, group, identify, bird
<u>Our Skills</u> Working scientifically: Skill 1: observing closely, using simple equipment. Skill 2: Using their observations and ideas to suggest answers to questions..
Children have previously learnt: Children have previously learnt: • to explore the natural world around them, making observations and drawing pictures of animals (EYFS framework; ELG The Natural World). This prepares children for later learning: • Identifying and naming animals in their habitats (Year 2 Biology – Living things and their habitats)

Examples of Science work:

What is happening to the trees? (Autumn)

Week commencing: 04.11.24

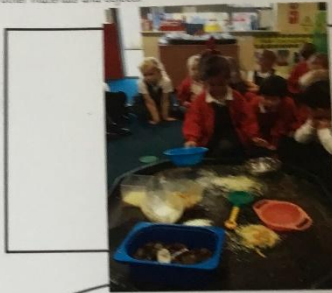
I can describe the physical changes they notice on and around a tree during the season of autumn.



What goes through?

Week commencing: 02.12.24

We have been investigating how to separate mixtures of different materials and different sized objects. We used sieves to separate sand, pebbles, stones and other materials and objects.



"The leaves change colour, they go brown orange, red and yellow, and they fall down." Eva.

"When I was shaking the pasta and salt, the salt came out because it's small."

EYFS

What melts?

W/c: 24.02.25

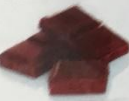
L.O: I can name some materials that melt and describe what they observe during the melting process.

Melts

Ice lolly



Chocolate



Doesn't melt

Bricks



Chair



Can you describe what happened to the chocolate?

"It melted because it was going soft and then melted"

EYFS

What is happening to the trees in Spring

w/c: 31.03.25

L.O: I can describe the physical changes I notice on and around a tree during the season of Spring

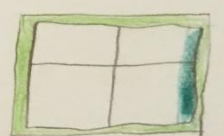
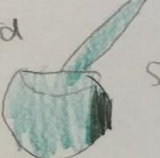


"I saw some sticks and also some grass growing. I saw some flowers. Some dandelions and purple ones."

EYFS

Date: 22.3.25 Name: Sam (SS)

I can describe the simple physical properties of a variety of everyday materials.

 hard wood sharp ergo! glass	not flexible  smooth hard wooden black strip black ink
unbreakable  hard metal shiny	 stiff wooden hard

KS1

Date: 18.12.24 Name: Rachael Sam (SS)

I can identify the features of mammals.

Have lungs
Have hair/fur
Give birth to live young
Look after their offspring
Produce milk for their offspring
Have a range of movements
Are warm blooded

Mammals



Date: 12.2.24 Name: Sam (SS)

I can group animals into herbivores, omnivores and carnivores based on their diet.

Herbivore An animal that only likes plants.	 Butterfly
Omnivore An animal that likes to eat plants and meat.	 fox mouse
Carnivore An animal that only likes to eat meat.	 Snake owl

KS1

Date: 4.4.25 Name: Charlotte (SS)

I can recognise whether a plant is healthy or unhealthy and why.

Is this plant Healthy or Unhealthy?
Can you describe what you see?


Unhealthy because it is yellow not the right colour.


healthy because it has green leaves and it has water in there


Unhealthy because it is dead and brown.

KS1

Pupil Voice

“I really liked learning about adaptations and camouflage because I liked searching for where the animal was!”

“Learning is fun outside where we pick up the leaves and talk about how they look different.”

“I liked learning about food chains and how things can eat other things.”

“I liked the ‘touch my hand’ experiment when we were learning about our senses.”

“We love Science because our teachers make it fun!”



CPD

This can take many forms including but not limited to: staff meetings, attendance at subject leader meetings, Science specific training linked to phases/year groups. Engagement in this training allows for the development of staff confidence, knowledge and curriculum coverage across the school.

All staff also have access to the Science 'padlet' resources to access resources, articles and training from SEERIH Subject Leader Networks.

<https://manchester.padlet.org/mfbxuaj2/seerih-subject-leader-network-spring-25-z0yt65752notlv7r>

Governors are also kept up to date with any changes made to the Science curriculum through presentations by the subject coordinator and regular visits into school.