OVERCHURCH
INFANT SCHOOL

SCIENCE CURRICULUM

Early Science Skills

The three characteristics of effective teaching and learning are playing and exploring, active learning and creating and thinking critically and they guide all our practice and provision. We create daily opportunities for children to develop their early Science skills throughout the curriculum in Early Years Foundation Stage.

exploring → observing → wondering → investigating → thinking → sorting → comparing → explaining

EYFS Provision

Children are offered inspiring, enabling environments indoors and outdoors which promote scientific enquiry, foster curiosity, and risk-taking play. Serve and return interactions develop their oracy skills through play and directed teaching and activities in key groups. Children talk about the weather and seasonal changes daily with daily calendar work. New vocabulary is given in purposeful contexts and opportunities are provided to develop speaking, listening, discussing, thinking, and questioning skills. Teachers and teaching assistants model aloud thought processes and help children discover their own thinking voices and strategies for doing things. Children have opportunities to observe and interact with natural processes, make independent choices and problem solve alongside their peers. They enjoy discussing what they have found out and comparing similarities and differences both inside and outside using different materials and in forest school sessions. Children are encouraged to begin to name and describe plants, trees and animals in our grounds and have a go at drawing what they can see. The adults guide them to notice similarities and differences and children can sort and classify items. Sustained free play both inside and outdoors enables children to explore in a 'hands on' way using all their senses and investigate how things work. Children can pose their own questions based on their interests and be supported to learn more by using non-fiction books in the book area and school library. Through adult modelling and guidance, they will learn how to look after their bodies, including healthy eating, and how to manage their personal needs independently.

EYFS Vehicle texts Nursery:

EYFS Vehicle texts Reception:

EYFS Vocabulary (through planned themes and everyday routines /incidental learning, not exhaustive, and across both year groups as Reception also take from many other settings too)

Teach: look, hear, smell, taste, feel, same, different, change, sort, body parts names, looking after ourselves (washing, teeth brushing, blowing nose, also body safety/NSPCC PANTS etc.), care, weather (sun, rain, snow, wind, cloud), hot, cold, day, night, dark, light, animal names (owl, duckling, duck, tadpole, frog, caterpillar, butterfly), growing, plants, trees, forest, paper, shells, stones, conkers, magnets, float, sink, now, next, before, after, first, last, tall, taller, tallest, short, shorter, shortest, wonder (what), count, draw,

Expose to: senses, similarities, differences, plan, investigate, predict, observe, explore, humans, life cycle language (e.g. baby – toddler- child – teenager – adult, frogspawn – tadpole- froglet-frog, egg-hatchling-duckling-duck), germs, health, hygiene, exercise, respect, months of the year, days of the week, seasons, shadows, squirrel, robin, pigeon, seagull, plants including trees and their names and basic structure -poppy, daisy, daffodil, sunflower, oak, horse chestnut, sycamore (seeds/bulbs, roots, stem/trunk, branches, leaves, flowers, fruit), habitats, ponds, freeze, melt, material names (fabric, wood, plastic, metal, glass), properties (e.g. soft/hard, smooth/rough, heavy/light, see through/not see through), magnifying glass, question, how, when, why, which, measure, label, order

End of Nursery expectations (non-statutory as taken from Development matters guidelines, only statutory expectations are for the end of Reception with the ELGs)

3 and 4-year-olds will be learning to:

- use all their senses in 'hands-on' exploration of natural materials.
- explore collections of materials with similar or different properties.
- talk about what they see, using a wide vocabulary.
- explore how things work.
- 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.
- explore and talk about different forces they can feel.
- talk about the differences between materials and changes they notice.

EYFS Early Learning Goals – Understanding the World

The Natural World

Explore the natural world around them, making observations and drawing pictures of animals and plants.
Know some similarities and differences between the natural world around them and contrasting environments, drawing on 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.

Communication and Language Listening, Attention and Understanding

Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.

Speaking

Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
Offer explanations for why things might happen, making use of recently introduced vocabulary

Managing Self

Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices.

Statutory Requirements for KS1 Science

The principal focus of science teaching is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them. They should be encouraged to be curious and ask questions about what they notice and helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.

Working scientifically – taught through substantive science content

* Ask simple questions and recognising that they can be answered in different ways
* Observe closely, using simple equipment
* Perform simple tests
* Identify and classify
* Use their observations and ideas to suggest answers to questions
* Gather and record data to help in answering questions

Year One Programme of Study

Plants	**Animals, inc humans**	**Everyday materials**	**Seasonal changes**
* 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.	*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. *Identify, name, draw and label the basic parts of the human body and say which body part is associated with each sense.	*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.	*Observe changes across the four seasons. *Observe and describe weather associated with the seasons and how day length varies.

Year Two Programme of Study:

Plants	**Animals, including humans**	**Uses of everyday materials**	**Living things and their habitats**
*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.	*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.	*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.	*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 suitable habitats which provide for the basic needs 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.

Developing Oracy in the Science Curriculum

EYFS Statutory Educational Programme

The development of children's spoken language underpins all seven areas of learning and development. Children's back-and-forth interactions from an early age form the foundations for language and cognitive development. The number and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added, practitioners will build children's language effectively. Reading frequently to children, and engaging them actively in stories, non-fiction, rhymes and poems, and then providing them with extensive opportunities to use and embed new words in a range of contexts, will give children the opportunity to thrive. Through conversation, storytelling and role play, where children share their ideas with support and modelling from their teacher, and sensitive questioning that invites them to elaborate, children become comfortable using a rich range of vocabulary and language structures.

National Curriculum Science: Spoken language

The national curriculum for science reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their scientific vocabulary and articulating scientific concepts clearly and precisely. They must be assisted in making their thinking clear, both to themselves and others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Developing oracy across the curriculum – talking like a scientist

They are similar/different because…

The question to be investigated is…

I predict…because…

The results show that my prediction was correct/incorrect because…

I wonder…

The equipment needed is…

I have observed…

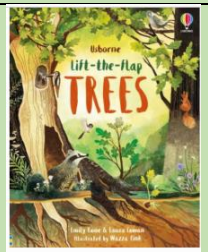
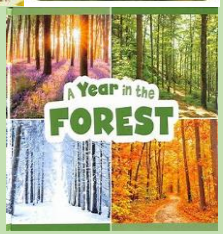
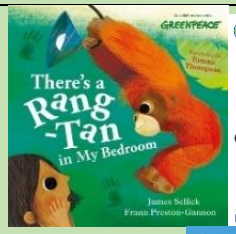
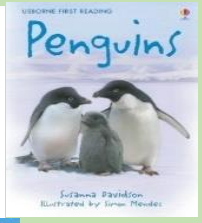
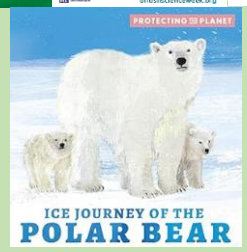
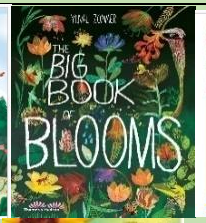
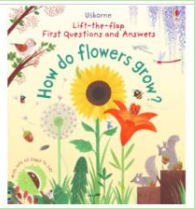
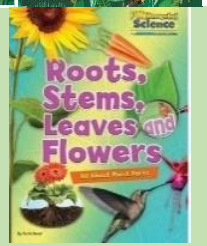
Next time I would change…

OVERCHURCH
INFANT SCHOOL

YEAR ONE AUTUMN ONE EXPLORERS	YEAR ONE SPRING ONE PLANET PROTECTORS	YEAR ONE SUMMER ONE HEROES
<u>Seasonal change</u> **Working scientifically**	<u>Seasonal change/Animals including humans</u> **Working Scientifically**	<u>Seasonal change/Materials</u> **Working Scientifically**
<u>Lesson 1- What is Science?</u> I can begin to talk about what science is. **I can identify some ways that I can work scientifically, just like a real scientist.** <u>Lesson 2 -Seasonal change mind map and Autumn Walk</u> I can show you what I already know about the seasons. I can say the name of the season we are in now. I can observe and talk about some seasonal changes on an autumn walk around our school grounds. **I can contribute to recording some features of Autumn.** <u>Lesson 3 – Weather</u> I know that this season is called Autumn. **I can observe and describe different types of weather.** <u>Lesson 4 – Seasonal changes affecting humans</u>	<u>Lesson 1 - Winter mind map and winter walk</u> I can say that we have four seasons and share what I already know about them. **I can contribute to recording features of Winter, including day length and weather.** <u>Lesson 2- Human body parts</u> I can identify and name the basic parts of the human body and say which part of the body is associated with each sense. **I can contribute to drawing and labelling a diagram of the human body.** <u>Lesson 3 - Senses</u> I can say which part of the body is associated with each sense. **I can use my sense of smell to investigate different aromas.** <u>Lesson 4 - Animal features and structures</u> I can describe and compare some features of common animals.	<u>Lesson 1 - 'Spring Walk' and planting for summer growth</u> I can observe changes across the 4 seasons. I can observe and make comments about spring and discuss things linked to this season (typical weather/day length). **I can plant seeds with my class and discuss how we will monitor their growth into flowers.** <u>Lesson 2 – Materials</u> I can distinguish between an object and the material/s from which it is made. I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. <u>Lesson 3 - Properties</u> I can describe simple physical properties of materials (hard/soft, stretchy/stiff, shiny/dull, rough/smooth,

I know that as the seasons change that often the weather will change too. I know that the clothes that humans wear are affected by seasonal changes. **I can gather and record data in the form of a weather diary.** <u>Lesson 5- Seasonal changes affecting animals</u> I can talk about seasonal changes related to animals that hibernate and migrate. **I can use my ideas to suggest answers and I can begin to sort and classify some seasonal changes.**	**I am beginning to understand that animals can be sorted into groups based on their similarities and differences.** **I can draw a labelled diagram of an animal.** <u>Lesson 5 Classification</u> I can identify, name and **classify** some animals that are carnivores, herbivores and omnivores. I can use **simple scientific language** to **describe and group** a variety of animals, including birds, reptiles, amphibians, mammals and fish.	bendy/not bendy, waterproof/not waterproof, absorbent/not absorbent, opaque/transparent.) **I can compare and group together a variety of everyday materials e.g. brick, paper, fabrics and foil, based on properties.** <u>Lesson 4 – Investigation – waterproof hat</u> I can name and describe a variety of everyday materials and some of their physical properties. **I can perform simple tests to explore questions and talk about what I have found out.**
Cross-curricular writing opportunity *None in Autumn*	**Cross-curricular writing opportunity** *English- Hello Ocean – senses sentences 'I can see…hear….'*	**Cross-curricular writing opportunity** *Science Lesson 1 – labelling materials*
Maths link: Days of the week and dates	**Maths link:** Sorting and grouping	**Maths link:** **Suggestions for measuring**
Other curriculum links: PSHE – sun safety	**Other curriculum links:** PSHE – human bodies	**Other curriculum links:** Design Technology – discussions around items being 'fit for purpose' is done across both subjects

OVERCHURCH INFANT SCHOOL

YEAR ONE AUTUMN TWO EXPLORERS	YEAR ONE SPRING TWO PLANET PROTECTORS	YEAR ONE SUMMER TWO HEROES
<u>Plants / Seasonal change</u> **Working scientifically**	<u>Seasonal change</u> **Working scientifically** *Rang-Tan 3rd March (whole school focus)* *British Science Week 7-16th March*	<u>Seasonal change / Plants</u> **Working scientifically**
     	  	   
<u>Lesson 1 - Mind map and naming some common trees in our grounds</u> I can share what I already know about plants, including trees. I know that trees are also plants, and I can name some common trees in our school grounds. **I can use my ideas and observations to answer some questions.** <u>Lesson 2 - Features of trees</u> I am learning that most trees have leaves and seeds. I am learning that trees can be described as evergreen or deciduous. **I can use some simple scientific language, with support, to describe and compare some features of trees.**	<u>Lesson 1 - Senses (inc. crisps)</u> **I can use simple scientific language to discuss and compare** features of animals, including humans. **I can make a prediction and say if it was correct or incorrect.** <u>Lesson 2 - Cross curricular whole school English focus – Rang Tan</u> **I can ask simple questions and recognise that they can be answered in different ways.** **I can use 'secondary sources' to gather information about orangutans.** <u>Lesson 3 - British Science Week and penguins</u> **I can use my ideas to suggest answers to questions, sometimes using some simple scientific language.**	<u>Lesson 1 - Seasonal change- summer walk</u> I can observe changes across the 4 seasons. **I can observe and describe weather associated with the seasons and how day length varies.** <u>Lesson 2 - Plants</u> I can identify and name a variety of common wild and garden plants. **I can observe closely using equipment such as magnifying glasses.** <u>Lesson 3 – Observing growth over time</u> I can observe the growth of flowers we planted in Spring. **I can gather and record information and data to help answer questions about plants we have grown.**

Lesson 3 – Tree structure labelled diagrams I can name some common trees. I can talk about the basic structures of trees. **I can draw and label a tree diagram.** **I can use some simple scientific language to describe and compare parts of trees including roots, trunk, branches, leaves, fruit, flowers (blossom).** Lesson 4 - Seasonal changes affecting trees I can name some common trees. **I can use my ideas to suggest answers and I can share my knowledge and observations about how trees are affected by seasonal changes.** **I can discuss similarities and differences between trees in the different seasons.**	I am beginning to understand how animals change and adapt to survive. **I can perform simple tests.** Lesson 4 - ICE and planning investigation **I can use my ideas and observations to suggest answers to questions.** **I can plan an investigation with my teacher.** **I can make a prediction.** Lesson 5 – group investigation and evaluation **I can observe closely and perform simple tests and investigations.** **I can talk about what I have found out with support and begin to use some simple scientific language.**	Lesson 4 - flowering plant structure I can identify and describe the basic structure of a variety of common flowering plants. **I can (draw and) label diagrams.** **I can use simple scientific language to describe and compare parts of plants**, including leaves, flowers, petals, roots, stems, and seeds. Lesson 5 – Recapping Y1 knowledge I can revisit prior learning and use some simple scientific language to talk about what I have found out in Year 1
Cross-curricular writing opportunity: Science – labelling a tree	**Cross-curricular writing opportunity:** English – Animal factfile – Penguins	**Cross-curricular writing opportunity:** Science-specific extended piece ‘My favourite season’
Maths link: Language of comparison	**Maths link:** Tally charts/bar charts	**Maths link:** Teacher modelling measuring plants using rulers
Other curriculum links: Forest School planning	**Other curriculum links:** PSHE – Conservation and protecting our planet	**Other curriculum links:** PSHE – sun and water safety

OVERCHURCH
INFANT SCHOOL

EAR TWO AUTUMN ONE EXPLORERS	YEAR TWO SPRING ONE PLANET PROTECTORS	YEAR TWO SUMMER ONE HEROES
<u>Living things and Habitats</u> **Working Scientifically**	<u>Materials</u> **Working Scientifically**	<u>Animals inc humans / Plants</u> **Working scientifically**
<u>Lesson 1 – Working scientifically</u> I can talk about what science is and I can recall some prior knowledge from science topics covered in previous years. **I can identify some ways that I can work scientifically, just like a real scientist.** <u>Lesson 2 – Habitats and micro-habitats</u> I can identify and name a variety of plants and animals in their habitats, including micro-habitats. **I can collect data to answer questions about the number and type of living things in different habitats and micro-habitats in our school grounds.** <u>Lesson 3 – Living and not living</u> I can explore and compare the differences between things that are living, dead and things that have never been alive.	<u>Lesson 1 - MIND MAP/PLASTIC</u> I can identify a variety of everyday materials and discuss how the same material can be used for very different things. **I can compare the uses of plastic in school with plastic found in my home and present my findings to the class.** <u>Lesson 2 - HOMES</u> I can identify a variety of everyday materials and discuss how the same object can be made from different materials. **I can use my observations, ideas and knowledge about materials and their properties to suggest answers to questions relating to materials being 'fit for purpose'.** <u>Lesson 3 - SORTING HATS</u> I can compare the suitability of a variety of everyday materials based on what they will be used for. **I can sort materials based on their properties (e.g. waterproof/not waterproof).**	<u>Lesson 1 – Animals and offspring</u> I can talk about what I already know about animals, including humans. I can notice that animals, including humans, have offspring which grow into adults. **I can observe through video how some baby animals look and discuss similarities and differences.** <u>Lesson 2 – Planting in local environment</u> I can talk about what I already know about plants, including trees. I can suggest what a plant needs to grow and survive. **I can help to plant some seeds and bulbs and make a prediction about their growth.** <u>Lesson 3 - Lifecycles and needs for survival</u> I can talk about how animals, including humans grow and change. (lifecycles)

I can sort and classify things according to whether they are living, dead or were never alive and record my findings on a chart, explaining why I made those choices. **I can suggest answers to questions based on the knowledge I am learning and observations I have made.** <u>Lesson 4 – Habitat conditions</u> I can identify that most living things live in suitable habitats which provide for the basic needs of animals and plants, and how they depend on each other to survive. I can identify and name a variety of plants and animals in their habitats, including microhabitats. **I can sort and classify habitats based on their conditions and record the information in a table.**	<u>Lesson 4 - Flexibility of materials</u> I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. **I can perform simple tests by squashing, bending, twisting and stretching solid objects made of different materials.** <u>Lesson 5 – Cardboard Catastrophe</u> I can consider unusual or creative uses for everyday materials. **I can use my observations of materials to answer challenging questions about future products.**	**I can ask and answer questions about the basic needs of animals, including humans, for survival (water, food, air).** <u>Lesson 4 - Exercise</u> I can describe the importance of exercise for humans. **I can show curiosity by raising questions and suggesting ways to find answers to my questions.** <u>Lesson 5 - Nutrition</u> I can describe the importance of humans eating the right amounts of different types of food. **I can use my observations and ideas to suggest answers to questions.** **I can use secondary sources to find out information (books, videos, iPad).**
Cross curricular writing opportunity: Design a sign for our forest area, encouraging visitors to protect the wildlife there.	**Cross curricular writing opportunity:** Write instructions for the game they have created in the Cardboard catastrophe lesson.	**Cross curricular writing opportunity:** Create a healthy meal plan for a famous athlete.
Maths link: Tally charts	**Maths link:** Sorting	**Maths link:** Measuring with stopwatches/clocks,
Other curriculum links: Forest Schools	**Other curriculum links:** Design Technology – refining their cardboard games to make them stronger/more stable/stiffer etc	**Other curriculum links:** PSHE Jigsaw ‘Healthy Me’ unit

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YEAR TWO AUTUMN TWO EXPLORERS	YEAR TWO SPRING TWO PLANET PROTECTORS	YEAR TWO SUMMER TWO HEROES
<u>Living things and Habitats</u> **Working Scientifically**	<u>Materials</u> **Working Scientifically** *Rang-Tan 3rd March (whole school focus)* *British Science Week 7-16th March*	<u>Animals including humans</u> <u>Plants</u> **Working Scientifically**
<u>Lesson 5 and 6 - Habitat shoeboxes</u> I can describe how different habitats provide for the basic needs of different kinds of animals and plants and how they depend on each other. **I can compare animals in familiar habitats with animals found in less familiar habitats such as the seashore, ocean, woodland or rainforest.** **I can record my findings in different ways (habitat box) and begin to use simple scientific language to describe the habitat I have replicated.** <u>Lesson 7 – Food chains</u> I 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. **I can construct a simple food chain showing the knowledge that I am learning from secondary sources.**	<u>Lesson 1 - Cross curricular PSHE/ STEM Careers</u> **I can talk about 'being a scientist, 'and I can explain what 'working scientifically' means.** <u>Lesson 2 - Cross curricular whole school English focus – Rang Tan</u> **I can use 'secondary sources' to gather information about deforestation and palm oil.** **I can use sustainable palm oil in a creative and fun way.** <u>Lesson 3 BSW week/ice cream (Poem writing opportunity English)</u> I can make a prediction about how materials can be changed and adapted for different purposes. **I can observe changes over time and discuss my findings with others.** <u>LESSON 4 - Planning investigations/class investigation</u> **I can use my own ideas to raise questions.** **I can make predictions as to what I think will happen.**	<u>Lesson 6 - Hygiene</u> I can describe the importance of hygiene for humans. **I can use appropriate scientific language when talking about health and hygiene.** <u>Lesson 7 – Seeds into plants</u> I can talk about how seeds grow into plants. **I can observe, describe, compare and measure growth of plants and vegetables in our local environment.** <u>Lesson 8 – Bulbs into plants and pea investigation</u> I can talk about what a seed or bulb needs to grow healthily into a mature plant. **I can observe closely using simple equipment and begin to measure with some accuracy.** **I can plan an investigation testing conditions of growth.** <u>Lesson 9 – Measuring plants and cress investigation</u>

Lesson 8 – Our world as a habitat, now and in the future I can use my observations and ideas to suggest answers to questions. I can learn about inspiring people who can help us care and protect our world for all living things. **I can design a poster to show ways we can look after our world as a habitat for all living things, now and in the future.**	**I can plan an investigation and work as a team to decide roles and responsibilities.** **I can observe closely using timers to gather data and record findings.** LESSON 5 - Group investigations/findings **I can work scientifically by performing simple tests and observing closely using measurements and equipment.** **I can talk about the method we used for our investigation and what we have discovered, using some simple scientific language.**	I can look at similar plants at different stages of growth in my local environment and make comments about my observations. **I can use a hand lens and measuring equipment to record with some accuracy the growth of a variety of plants as they change over time.** **I can set up a comparative test to show the conditions of growth that a plant needs to be healthy and grow, (water, light, suitable temperature)** Lesson 10 – Recapping and concluding I can revisit prior learning and address any misunderstandings. I can talk about favourite Science activities and give reasons for my choices. I can demonstrate my solid science understanding across a range of different topics.
Cross curricular writing opportunity: Poster as above	**Cross curricular writing opportunity:** Poems about objects changing (over time) including Chocolate by Michael Rosen. The children could write their own 'melting **poem**' to reinforce learning.	**Cross curricular writing opportunity:** Writing about results of science investigation
Maths link: Interpreting data that has been collected in previous half term's lessons	**Maths link:** Measuring with timers	**Maths link:** Bar chart Children independently measuring plants using hand lens and rulers (with accuracy)
Other curriculum links: Reading comprehension optional booklet in Lesson 8 about Sir David Attenborough Art/DT – habitat shoeboxes	**Other curriculum links:** PSHE (careers, STEM skills)	**Other curriculum links:** Warwick Park trip in Geography

Vocabulary progression from EYFS to Y2 (not exhaustive) (non–statutory)

	Working Scientifically vocab	Plants	Animals inc humans	Everyday materials	Seasonal change (Y1 only)	Living things and habitats (Y2 only)
EYFS	same, different, sort, now, next, before, after, first, last, tall, taller, tallest, short, shorter, shortest, question (what), count, draw	growing, plants, trees, forest	caring for ourselves (washing, teeth brushing, blowing nose, body safety/NSPCC PANTS), care, names of basic body parts, and those linked with senses, look, hear, smell, taste, feel, animal names (owl, pets – dog, cat, rabbit, fish, spider, duckling, duck, tadpole, frog, butterfly)	paper, shells, stones, conkers, magnets, float, sink	weather (sun, rain, snow, wind, cloud), hot, cold, day, night, dark, light	homes, food, forest, stones, logs, leaves
Exposed to:	*similarities, differences, plan, investigate, predict, observe, explore, question, how, when, why, which, measure, label, order* *magnifying glass, goggles, magnets,*	*plants including trees and their names and basic structure -poppy, daisy, daffodil, sunflower, oak, horse chestnut, sycamore (seeds/bulbs, roots, stem/trunk, branches, leaves, flowers, fruit),*	*senses, humans, life cycle language (e.g. baby – toddler- child – teenager – adult, frogspawn – tadpole-froglet-frog, egg-hatchling-duckling-duck), squirrel, robin, pigeon, seagull, germs, health, hygiene, exercise, respect,*	*freeze, melt, material names (fabric, wood, plastic, metal, glass), properties (e.g. soft/hard, smooth/rough, heavy/light, see through/not see through)*	*months of the year, days of the week, seasons, shadows*	*habitats, pond,*
Y1	science, scientist, scientific skills, wonder, observe, question, question words (e.g. what, how, where), similarities, differences, sort, group, identify, classify, investigate, predict, prediction, information, research, secondary sources, data, measure, findings, evaluation,	trees and common tree names (including oak, horse chestnut and sycamore), plants and common wild and garden plant names (including rose, poppy, daisy, daffodil), deciduous, evergreen, leaves, flowers, blossom,	human, basic body parts including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth), senses (and associated body parts), animal names, fish, birds, amphibians, reptiles, mammals, features, standard animal body	objects, materials including wood, plastic, glass, metal, water, and rock, brick, paper, fabrics, elastic, properties hard/soft, waterproof/not waterproof	seasons, seasonal changes, autumn, winter, spring, summer, day length, weather types, (e.g. rain, sun, wind, hail, snow etc), hot, cold	(LTH not taught in Y1 but aspects may be introduced during cross curricular links and forest sessions)

	labelled diagram, keep records over time, *Magnifying glasses	petals, fruit, roots, seeds, trunk, branches, stem, buds, plant structure	parts, carnivores, herbivores, omnivores			
Exposed to: *(will come up the next time they are taught this)*	*Measuring (observe teachers using rulers etc)*	*plant names, bulb, environment, flowers and vegetables, growth,*	*backbone, vertebrates, diet, habitat, change, adapt, survive*	*stiff, shiny/dull, rough/smooth, absorbent/not absorbent, uses, materials, ice, melt, freeze, changing matter, salt,*	*Hibernation, migration*	*plants and animal names*
Y2	scientist, scientific enquiry skills, planning, observe/observing, observations, secondary sources concluding, investigate/ investigation, predict/prediction, test, sort, group, classify, questions, wonder, identify, similarities/differences compare, method, equipment, results, find out, findings, describe, measure and record (with some accuracy), comparative tests *timers/ stop clocks/watches *Hand lens *Clipboards *Tables	seeds, bulbs, mature plants, conditions of growth, water, light, temperature, healthy, grow/growth, survive, change,	animals, humans, offspring, 'survival needs', water, food, air, exercise, healthy, hygiene, change,	solid object, materials (including those learnt in Y1 and cardboard), changes, uses, suitable/unsuitable, bend/bendy/ bending/bent not bendy, twist/twisting/ twisted, stretch/stretchy/ stretching/ stretched, opaque/ transparent	(Seasonal change not taught in Y2 but will be embedded through daily seasonal observations and changes)	living things, plants, animals, living, dead 'never been alive', conditions, habitats, (including desert, ocean, rainforest), micro-habitats, food, food chain,
Exposed to:	*fair test, hypothesis, variables, STEM, careers, stereotypes,*	*germination, deforestation, palm oil – cross curricular linked to English text)*	*life processes and cycles, adults, teenager, toddler lifestyle, balanced diet, germs, nutrition, (reproduction and growth in animals, including terms such as offspring, pupa),*	*states of matter*		stones, logs, leaf litter shelter, life processes, environment, prey, predator, consumer, energy

Science throughout the Curriculum

We revisit and embed our science learning across the whole school learning journey and our curriculum, particularly in our English, Maths, forest sessions and extra-curricular visits and visitors. We plan experiences and cross curricular learning opportunities that enhance the children's growing understanding of science, ourselves and the natural and man-made world around us.