Science Year 1

Knowledge and Skills:	Test Question, Apparatus, Method, Results, Conclusion. Scientific Enquiry	Examples
Know and recall accurately key facts relevant to the science topics below.	Children should be able to (by end of key stage) :	Ideas for prompting scientific enquiry:
Plants • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. • Know the common names of flowers. • Know examples of deciduous and evergreen trees. • Identify and describe the basic structure of a variety of common flowering plants, including trees. • Plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem) . • Draw diagrams showing the parts of different plants including trees.	ϒ Observe closely, using simple equipment. Plant sunflower seeds. Measure height using a ruler over a number of weeks, and record findings. ϒ Perform simple tests Perform simple tests e.g. comparing 2 plants – 1 is watered and 1 is not watered . ϒ Use their observations and ideas to suggest answers to questions ϒ Gather and record data to help in answering questions.	• Use the local environment throughout the year to explore and answer questions about plants growing in their habitat. • Encourage exploration of their own home environment too through a home-learning task. • Observe the growth of flowers and vegetables that they have planted. • Use real plants to identify and know parts – use plants (dandelions/daisies etc from school area to gain confidence in names). • Keep records of how plants have changed over time, for example the leaves falling off trees and buds opening; and compare and contrast what they have found out about different plants (links to seasonal change). • Class display opportunity – Use ICT to photograph/ art to record observations

		• Seasonal walks (link to senses). • Nature journal using flower press to observe anatomy. • Look after plants and flowers in the classroom all year round. • Link to Easter

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Animals including Humans • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals including pets. • 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.	ϒ Identify and classify using first-hand experiences, where possible. (photos and videos may also be used where first-hand is not possible). ϒ Observe closely, using simple equipment. Investigation - Whose is the poo? Investigate fake poo that has been sent from a zoo to identify the type of diet, for 3 of their new animals. □ Ask simple questions and recognise that they can be answered in different ways. Senses investigations/first-hand experiences Odour or aroma? Identifying textures from variety of objects – natural and man-made. – smooth, rough, gritty, slippery, fluffy. Which would be the best surface for a slide and why? Hearing investigation – factors affecting hearing the whistle at the end of play. Taste test – sweet, sour, salty or bitter?	• Use the local environment throughout the year to explore and answer questions about animals in their habitat. (woodlands/hedgerow/ playgroud/fields) Children should take care of animals taken from their local environment e.g. mini-beasts, tadpoles/frogs and return them safely after study. • RSPB Big Schools Birdwatch. Become ornithologists. • Visit from a local vet/doctor/paramedic. • 3 Haggs Wood nature reserve trip -including pond dipping.. • Zoo/zoos2schools/Askham Bryan Wildlife park experiences. • Make a wormery. • Collect mini-beasts (invertebrates) using pooters, petri dishes and brushes.

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Everyday Materials and their Properties • 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. Additionally: brick, paper, fabrics, elastic, foil. • Describe the simple physical properties of a variety of everyday materials such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent. • Compare and group together a variety of everyday materials on the basis of their simple physical properties.	□ Identify and classify. Sort everyday objects by materials and by properties. □ Ask simple questions and recognise that they can be answered in different ways. e.g. organise everyday objects into a venn diagram sorting metal from plastic. E.g. aluminium can, polypocket, metal fork, staples, drawing pin. Some items may overlap e.g. a stapler that has metal and plastic parts. □ Perform simple tests 'Which is the best material for creating a fairy tale house? Lining a dog basket?.....for a bookshelf? ...for a gymnast's leotard?' Investigation: - build and test the 3 little pigs houses to see which materials can withstand the wolf's huff and puff. □ Use their observations and ideas to suggest answers to questions. Investigation: Which materials are magnetic? How might we get a metal paperclip out of a shallow bowl of water without touching it? Would the idea you have chosen work with a plastic paperclip? Does everything made of metal stick to a	• Odd one out – trays of different materials covered up. Which item is the odd one out e.g. all but one are made of wood. • Walk around the local area to 'I Spy' different materials and create a tally chart e.g. wooden gate, metal lamp post, plastic bin etc. • Create a recycling station in your classroom to sort items throughout the topic. • Water play -test materials to see which will float and which will sink. • Links to art work – fabric collage, foil art.

	magnet?	

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Seasonal Changes • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies. Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.	□ Gather and record data to help in answering questions. Make tables and charts. Investigation: Collect rainwater via a rain gauge. Record how much is collected each day over a week/ month. □ Use their observations and ideas to suggest answers to questions e.g. after gathering the data above answer questions such as 'On which days might Percy the park-keeper have needed to water his outdoor plants? Which season is most likely to have the highest number of 'wet play' times. □ Perform simple tests. Investigation: Measure outdoor temperature in winter at different times throughout a day. Compare with temperatures on a summer day at the same times. Asking simple questions and knowing they can be answered in different ways – How do we know it's Autumn? □ Observe closely using simple equipment such as rain gauges, thermometers.	• Seasonal walks including talking about day length, as the seasons change. • Set up a weather station and create own weather broadcasting company. • Create a photo story for each season (from the walk) identifying the different flora and fauna/ weather observed/daylight hours etc. • Make a wind sock, pin wheel, wind vane, wind chime. • Link to RE – special festivals