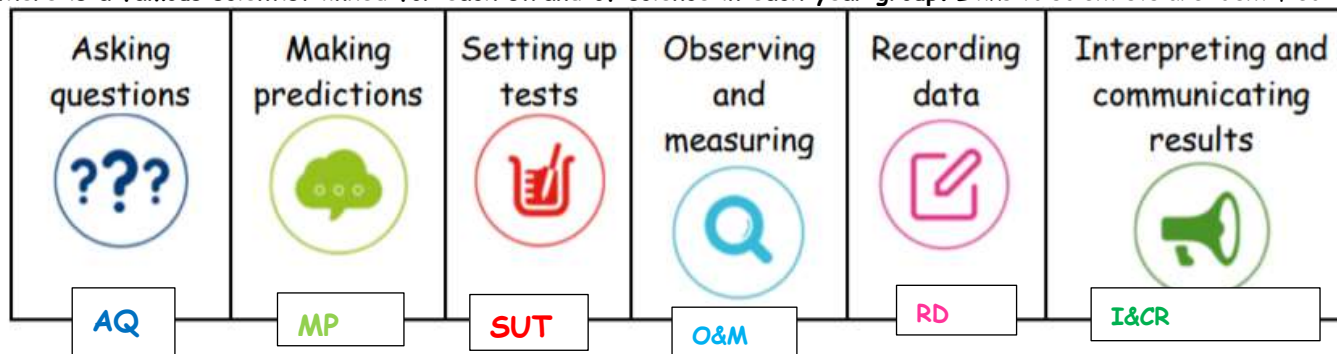


SCIENCE OVERVIEW- PROGRESSION OF CURRICULUM AND ENQUIRY SKILLS

Working scientifically progression from EYFS to KS1.

	Plan	Do	Record	Review
Reception	Choose the resources they need for their chosen activities and say when they do or don't need help.	Know about similarities and differences in relation to places, objects, materials and living things. Make observations of animals and plants. Explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Select and use technology for particular purposes.	Represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.	Talk about the features of their own immediate environment and how environments might vary from one another. Explain why some things occur and talk about changes.
KS1	Ask simple questions and recognising that they can be answered in different ways.	Observe closely, using simple equipment. Perform simple tests. Identify and classify.	Gather and record data to help in answering questions.	Use their observations and ideas to suggest answers to questions.

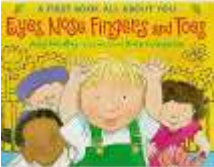


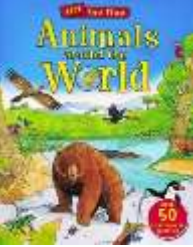
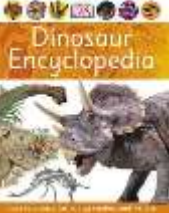
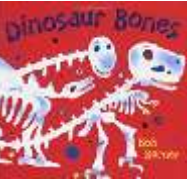
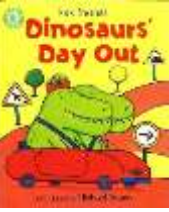
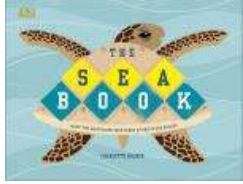



In order to ensure complete coverage of the working scientifically skills and that children gain experience in all five types of scientific enquiry, there is a big question suggested for each topic. In each big question there are progressive activities they need to do to find out the overall question. Teachers are able to adapt these to suit their class, as long as the same enquiry coverage is achieved. **In addition, there is a famous scientist linked for each strand of science in each year group.** Links to scientists are identified in yellow.



There are six enquiry types that are covered in KS1. These are covered as part of the science content coverage. Use of the big questions should ensure full coverage of these skills. It is not expected that every type will be covered in every enquiry. Instead, teachers should choose a focus skill they wish to assess within that enquiry. **These should be identified in the planning.**

Progression of vocabulary for EYFS and Key Stage 1 www.Planassessment.com	EYFS		Year 1 and Year 2			
	Look closely, observe, watch, touch, feel, smell, listen, same, different, compare, ask questions, record, sort, group		Observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing, picture, table, tally chart, present, pictogram, block chart, venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape measure, metre stick, pipette, syringe, spoon, teaspoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources			
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Reception have a topic based approach within 'Understanding the World' incorporating geography, computing, RE and science skills within this. They still have a big question to answer to assess against the Early Learning Goals (ELG)					

	<p>TOPIC: WHAT MAKES ME AMAZING? What do I look like? How do I grow and keep healthy? What are healthy foods? What are our senses?</p>	<p>TOPIC: SENSATIONAL SEASONS What happens to chocolate when we heat it? What are the signs of autumn? What colours can I see in different seasons? What is the weather like? What is a shadow? What do I need in different seasons? Why do we have day and night? What animals are awake in the dark?</p>	<p>TOPIC: INTO THE WOODS What animals live in the woods? How do penguins keep warm? What are the signs of winter? What animals live in a desert? How do animals change? Sir David Attenborough broadcaster, biologist, natural historian and author</p>	<p>TOPIC: DINOSAURS How have animals changed? Dinosaur fossils, skeletons, create dinosaur worlds, what dinosaurs like to eat, season of Spring. Mary Anning- palaeontologist.</p>	<p>TOPIC: INTO THE DEEP What lives under the water? Looking at what we find under water and how water moves and how it can be used, touch on forces. Marine_biologist_- Dawood_Qureshi</p>	<p>TOPIC: GARDENS How do plants grow? Season of summer, minibeast hunt, drawings of plant, planting a seed, plant lifecycle, Charles Darwin naturalist, geologist and biologist,</p>
<p>Vocab</p>	<p>Head, hair (colour and description) eyes, skin, big/ tall, small/short, baby, toddler, child, adult, old person, old, young, brother, sister, mother, father, aunt, uncle, grandmother, grandfather, cousin, sound, noise, listen, hear, music, voices, bird song, traffic, sirens, thunder, high, low, loud, quiet, soft, volume, crackle,</p>	<p>Sun, sunny, light, shadow, shady, clouds, torch, see-through, not see-through, source, light source, nocturnal, names of animals,</p>	<p>habitat, woods forest, squirrel, badger, deer, hedgehog, penguins, polar bears, north pole, south pole, cold, snow, ice, water, animals, trees, warmth, freezing, Winter, ice, snow, cold, December, January, February, frosty, weather, climate, hot, desert, scorpion, camel, mother, parent, baby, young, cub,</p>	<p>Animal, bird, reptiles, fish, tail, nose, eye, feet, teeth, wings, claws, feathers, sizes, carnivore, herbivore, omnivore, extinct</p>	<p>Float, sink, up, down, top, bottom, surface, move, roll, water, flow, see through, wet, fast, slow, hard, soft, frozen, ice, frozen, icicle, snow, melt, cold, slippery, smooth, beach, names of animals, coast</p>	<p>Plant, tree, bush, flower, vegetable, herb, weed, bulb, flowers seed, stem minibeast, names of minibeast, names of minibeast they see</p>

	thunder, hum, buzz, roar		kitten, puppy, chick, joey, lamb, calf,			
Helpful resources	Visit from dentist, nurse, hairdresser, doctor or optician, Jojo and gran gran	Bbc teach nocturnal animals, Jojo and gran gran	Online- Eco quest, ranger Hamza, Andy's wild adventures, bbc David Attenborough, bbc teach clips	Clips of BBC walking with dinosaurs. Andy's prehistoric adventures	Maddie do you know? Bbc blue planet	Jojo and Gran Gran, bug hotel, its time to grow a flower,
Suggested texts	   	  	   	   	  	   

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	<p>Animals including humans: Is everyone's body the same? How do we stay standing up? skeletons Wilhelm Conrad Röntgen first invented the xray What is inside my body? Internal organs What are my senses? What did the three bears porridge taste of? Taste experiment What changes can you sense around you? Autumn walk What happens to the trees at Autumn? Autumn artwork</p>	<p>Animals including humans: What animals might I see around the school? Scavenger hunt around school, pictures of British wildlife Are all birds the same? Comparing owls and flamingos What are baby rabbits called? Visit? Chris Packham (Animal Conservationist, Wildlife photographer, ASD) Can fish breathe under water? What is the difference between amphibians and reptiles? What animal groups are in the story of Alice in Wonderland? What do animals eat?</p>	<p>Everyday materials: What material is this? Classifying materials What material is this? Classifying materials what do animals do in the winter? Hibernation and migration What materials are in school? (Linked to a scientist) Dr Pearl Agyakwa Is paper all the same? Testing uses of paper</p>	<p>Everyday materials: What is a magnet? Does it bend or stretch? How do we stay dry? What properties do materials have? Charles Mackintosh- inventor of waterproof materials. Seasonal Changes: What signs of spring can we see? Spring</p>	<p>Seasonal Changes: How does weather affect us? How does the weather affect me? What do I need to wear for different weather? What type of weather have we had the most of lately? What is our favourite type of weather? What is extreme weather and why do we get it? Liam Dutton (Weatherperson/ Meteorologist)</p>	<p>Plants: What is in our local environment? Beatrix Potter (Author and Botanist) Revisit animals including humans after school trip, science focus, classifying animals and by what they eat</p>
Vocab	<p>Leg, arm, elbow, head, body, eyes, ears, mouth, nose, teeth, leg, tongue, taste, sight, hearing, touch, smell, skeleton, skull, ribcage, pelvis, spine, organs, brain, heart, lungs, stomach, liver, kidneys, small</p>	<p>Tail, wing, claw, fin, scales, gills, feathers, fur, beak, paws, talons, beak, legs, neck, Mammal, bird, fish, reptiles, amphibians (+ examples of each), warm blooded, cold blooded, hibernate,</p>	<p>Object, material, Wood, plastic, glass, paper, water, metal, rock, brick, foil, wool, paper, fabric, elastic, card/ cardboard, rubber, clay, absorbent, waterproof</p>	<p>hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through, Spring, daytime, warmer,</p>	<p>Weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightening, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, sun,</p>	<p>Names of trees in the local area, names of garden and wild flowering plants in the local area. Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, deciduous, evergreen trees, bulb</p>

	intestine, large intestine, bladder Autumn, Colder, shorter days, leaves, migration, hibernate		Winter, hibernate, migrate,		sunrise, sunset, day length,	Summer, warmer, sunny, daytime longer, sun, hot
Helpful resources	BBC teach Operation ouch	BBC bitesize Andy's baby animals cbeebies	Maddies did you know? Snow animals bbc		Bitesize daily	Down on the farm Maddie the plants and you Cbeebies Green planet
Suggested books	  	 	 	  	 	  

<p>Year 2</p>	<p>Animals, including humans: Basic needs to survive, hygiene How do I lead a healthy lifestyle? What makes a good scientist? What is Science?</p> <p>How can we stay clean? How can we stay fit? Sorting food What sort of food should we eat? (Sugar in drinks investigation) How can we stay healthy?</p> <p>Louis Pasteur (Vaccinations)</p>	<p>Animals, including humans: (exercise) How do I lead a healthy lifestyle What makes a good scientist? What is Science?</p> <p>Living things and their habitats: (food chains, life cycles) What's in your habitat? Living, once-lived, never-lived What do different animals eat in their habitats? x2 (Food chains) Where can I live? Adaptation</p> <p>Tanesha Aleen (Zoologist)</p>	<p>Uses of everyday materials: How do I use materials? What makes a good scientist? What is Science?</p> <p>What type of everyday materials can they identify around school?</p> <p>What is the best material for a tea bag? Performing simple tests and recording data Use STEM sentences to speak a prediction with why? Conclusion in full sentences stating why?</p> <p>Investigating Fabrics (waterproofing) Use STEM sentences to speak a prediction with why? Conclusion in full sentences stating why?</p> <p>Thomas Sullivan Tea Bag</p>	<p>Uses of everyday materials: How do I use materials? What makes a good scientist? What is Science?</p> <p>Particle Theory Melting Which material is best for floating? (Boats) Which ball is the bounciest? How can I make Different Shapes? How can I change the Shape of an object? Are bricks Absorbent?</p> <p>Chicks- Easter, lifecycle</p> <p>Danial Azahan (Mechanical engineer)</p>	<p>Plants: What happens in a garden? What makes a good scientist? What is Science?</p> <p>What will seeds grow into? How should we plant the seeds? What do gardeners know? How do we care for plants? What happens when a seed germinates? What shall we plant for our Salsa?</p> <p>Carl Linneus (botanist and zoologist)</p>	<p>Plants: What happens in a garden? What makes a good scientist? What is Science?</p> <p>How do plants grow and change over time? Are we an expert? Information Leaflet from seed to plant and beyond How do we harvest?</p> <p>Making Salsa</p> <p>Agnes Arber (1879-1960) Botanist</p>

<p>Vocab</p>	<p>offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies, survive, survival, water, food, exercise, heartbeat, breathing, hygiene, germs, disease, food types (fruit and veg, bread, rice, pasta, milk, dairy, foods high in fat and sugar, meat, fish, eggs, beans),</p>	<p>Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, names of local habitats (pond woodland etc), names of micro-habitats (under logs, under bushes etc) conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and the micro-habitats</p>	<p>studied Opaque, transparent, translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching</p>	<p>Light, shade, sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling</p>
<p>Suggested books</p>		