



Eversholt Progression of Knowledge and Skills in Science

	EYFS	Year 1	Year 2	Year 3	Year 4
Working Scientifically (Questions)	<p>Show curiosity about objects, events and people.</p> <p>Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.</p> <p>Builds up vocabulary that reflects the breadth of their experience.</p> <p>Questions why things happen.</p>	<p>Explore the world around them and raise their own simple questions.</p> <p>Begin to recognise different ways in which they might answer scientific questions.</p>	<p>Raise their own simple questions based on what they observe.</p> <p>Begin to recognise different ways in which they might answer scientific questions.</p> <p>Ask people questions and use simple secondary sources to find answers</p>	<p>Raise their own relevant questions about the world around them.</p> <p>Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.</p> <p>Identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done.</p>	<p>Raise their own relevant questions about the world around them and their previous knowledge.</p> <p>Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.</p> <p>Identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done.</p>
Workig Scientifically (Experiment)	<p>Engage in open-ended activity.</p> <p>Take a risk, engage in new experiences and learn by trial and error.</p> <p>Find ways to solve problems / find new ways to do things / test their ideas.</p> <p>Use senses to explore the world around them</p> <p>Closely observes what animals, people and vehicles do.</p>	<p>Experience different types of science enquiries, including practical activities.</p> <p>Carry out simple tests.</p> <p>Observe closely using simple equipment.</p> <p>With help, observe changes over time.</p>	<p>Experience different types of science enquiries, including practical activities.</p> <p>Carry out simple tests with more accuracy and consideration.</p> <p>Observe closely using a range simple equipment and choose the correct equipment.</p> <p>With help, observe changes over time.</p>	<p>Experience a range of scientific experiences including different types of science enquiries to answer questions.</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions.</p> <p>Set up simple practical enquiries, comparative and fair tests.</p> <p>Recognise when a simple fair test is necessary and help to decide how to set it up.</p>	<p>Experience a range of scientific experiences including different types of science enquiries to answer questions.</p> <p>Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions.</p> <p>Set up simple practical enquiries, comparative and fair tests.</p> <p>Recognise when a simple fair test is necessary and help to decide how to set it up.</p> <p>Make systematic and careful observations.</p>

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				Make systematic and careful observations.	
Working Scientifically (Using tools to collect data)	Choose the resources they need for their chosen activities. Handle equipment and tools effectively.	Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data.	Use simple measurements and equipment to gather data with more precision and accuracy. Decide which simple equipment to use.	Take accurate measurements using standard units learn how to use a range of equipment.	Take accurate measurements using standard units learn how to use a range of (new) equipment, such as data loggers / thermometers appropriately.
Working Scientifically (Making Connections)	Develop ideas of grouping, sequences, cause and effect Make links and notice patterns in their experience	Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them. (identifying and classifying) With guidance, they should begin to notice patterns and relationships.	Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them using an increasing command for scientific vocabulary. (identifying and classifying) With guidance, they should begin to notice patterns and relationships.	Talk about criteria for grouping, sorting and classifying; and use simple keys. With guidance, they should begin to notice patterns and relationships. Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.	Talk about criteria for grouping, sorting and classifying; and use simple keys. With guidance, they should begin to notice patterns and relationships. Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.
Working Scientifically (Communicating Results)	Create simple representations of events, people and objects Answer how and why questions about their experiences Develop their own explanations by connecting ideas or events.	Record simple data. Use their observations and ideas to suggest answers to questions. Talk about what they have found out and how they found it out. With help, they should record and communicate their findings in a range of	Record simple data. Use their observations and ideas to suggest answers to questions. Talk about what they have found out and how they found it out using an increasing command for scientific vocabulary. With help, they should record and communicate	Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams and keys. Use relevant simple scientific language to discuss their ideas and communicate their findings,	Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data. Use relevant simple scientific language to discuss their ideas

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		ways and begin to use simple scientific language.	their findings more precise and accurately.	including oral and written explanations.	and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions.
Plants	<p>Make observations of animals and plants and explain why some things occur, and talk about changes.</p> <p>Know about similarities and differences in relation to places, objects, materials and living things.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structures of a variety of common flowering plants, including trees.</p>	<p>Know about how light, water and temperature affect plants.</p> <p>Observe and describe how seeds and bulbs grow into mature plants.</p>	<p>Identify and describe the functions of different parts of flowering plants; roots, stem, leaves and flowers.</p> <p>Know the requirements of plants for life</p> <p>Know the stages of the life cycle of flowering plants.</p> <p>Understand how water is transported in a plant.</p> <p>Explore the structure of a fruit and how seeds are dispersed.</p> <p>Explore the work of Joseph Banks (Plants).</p>	
Seasonal Changes	<p>Make daily observations of the weather.</p> <p>Name the four seasons.</p> <p>Be able to talk about some signs of spring.</p> <p>Talk about the changes to trees as the seasons change.</p>	<p>Observe changes across the four seasons.</p> <p>Describe the weather and temperature in different seasons and learn how the day length varies.</p>	<p>Make observations and use equipment to log weather patterns and seasonal changes, consolidating what is taught in Yr1.</p>	Not taught in KS2	
Animals, Including Humans	<p>Make observations of animals and explain why some things occur, and talk about changes.</p> <p>Talk about the similarities and differences between themselves and others.</p> <p>Be able to name parts of the body through songs and rhymes.</p> <p>Observe and talk about some common lifecycles found in books.</p>	<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Describe and compare the structure of a variety of animals (fish, amphibians</p>	<p>Understand that animals including humans grow and have offspring.</p> <p>Know the names of animals and their offspring and their life cycles.</p> <p>Describe basic needs for survival (water, food, air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>Know the different types of teeth in humans and their simple functions.</p> <p>Understand the functions of the basic parts of the digestive system in humans.</p> <p>Understand food chains, producers, predators and prey.</p> <p>Talk about the differences in human and animal ears.</p> <p>Understand the importance of nutrition.</p> <p>Identify the main body parts associated with the skeleton and muscles and how different parts of the body have special functions.</p> <p>Know that animals need nutrition and it needs to be the right amount and type; they know animals gain the correct nutrition and how animals do this.</p>	

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	<p>Talk about the lifecycle of a human and comment on how we grow.</p> <p>Name familiar animals and comment on their physical appearance.</p>	<p>and mammals, including pets)</p> <p>Identify, name and draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>		<p>Know that all animals and humans have bones and there are some similarities between different skeletons.</p> <p>Know that the purpose of the skeleton is for support, protection and movement.</p> <p>Know that muscles allow movement and how to care for them.</p> <p>Explore the work of Elsie Widdowson. (Nutrition)</p>
<p>Living things and their habitats</p>	<p>Be able to categorise some animals to familiar places. E.g. animals on a farm.</p> <p>Talk about the pets that they have at home and how to look after them.</p> <p>Look for insects and minibeasts and talk about where they are found.</p> <p>Be able simply sort and categorise animals. E.g. number of legs.</p>	<p>Be able to identify and name a variety of plants and animals in their local environment.</p> <p>Understand and name the micro-habitats of some of these animals. E.g. rabbit – warren.</p>	<p>Explore and compare differences between things that are living, dead and never been alive.</p> <p>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.</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>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.</p>	<p>Know that living things can be grouped in a variety of ways (plants: trees, grasses, flowers, ferns and mosses, vertebrates: fish, amphibians, reptiles, birds, and mammals. Invertebrates: snails and slugs, worms, spiders, and insects.)</p> <p>Learn how to use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Know that environments can change and that this can sometimes pose dangers to living things.</p> <p>Explore the work of Tom Hart Dyke.</p> <p>Explore the work of Dian Fossey (Gorilla conservationist)</p>
<p>Everyday materials</p>	<p>Play with a variety of malleable materials.</p> <p>Explore natural materials and investigate their properties. E.g. a dry leaf</p>	<p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic,</p>	<p>Identify and compare the properties and use of materials.</p> <p>Find out how solid shapes can be changed by</p>	<p>Not taught in KS2</p>

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	<p>can be crushed, wet mud can be poured.</p> <p>Know about similarities and differences in relation to objects and materials.</p> <p>Interact with different materials and understand how they behave.</p> <p>Use new vocabulary to describe different materials.</p> <p>Name different materials.</p> <p>Talk about how different materials look and their textures.</p>	<p>glass, metal, water and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>squashing, bending, twisting and stretching.</p> <p>Researching people who have developed new materials. (John McAdam – road surface)</p>	
Forces and Magents	<p>Explore the movement of different materials and how this can be altered or changed. E.g. paper aeroplanes, making sandcastles, moving boats in water.</p> <p>Explore the movements that they can do. E.g. jumping.</p> <p>Investigate floating and sinking.</p>	Not taught in KS1.	Not taught in KS1.	<p>Learn how to compare how objects move on different surfaces.</p> <p>Learn about magnets and how they work.</p> <p>Know magnets have two poles.</p> <p>Understand that two magnets will attract or repel each other, depending on which poles are facing.</p> <p>Know that some forces need contact between two objects but magnetic forces can act at a distance.</p> <p>Know uses of magnetism in everyday life.</p> <p>Explore the work of Sir Isaac Newton. (Forces)</p> <p>Explore the work of Andre-Marie Ampere. (Magnets)</p>
Sound	<p>Explore how different instruments and objects can make noise.</p> <p>Investigate ways that sound can be changed. i.e. volume and pitch.</p>	Not taught in KS1.	Not taught in KS1.	<p>Pupils will identify how sounds are made, associating some of them with something vibrating.</p> <p>They will recognise that vibrations from the sounds travel through the medium to the ear.</p> <p>Pupils will find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Pupils will find patterns between the volume of a sound and the strength of the vibrations that produced it.</p>

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				<p>They will recognise that sounds get fainter as the distance from the sound source increases.</p> <p>Explore the work of Alexander Graham Bell (Telephone)</p>
Light	<p>Explore shiny materials and objects.</p> <p>Investigate light and dark.</p> <p>Use toys to explore sources of light and shadows.</p> <p>Talk about how rainbows are made and the colours that we can see.</p>	Not taught in KS1.	Not taught in KS1.	<p>Learn about different light sources.</p> <p>Understand that we need light to see.</p> <p>Know that dark is the absence of light.</p> <p>Know that the sun can damage their eyes and how to protect their eyes from the sun.</p> <p>Understand that a shadow is formed when a solid object blocks light.</p> <p>Identify patterns in the way the size of a shadow changes.</p> <p>Know that light can be reflected from surfaces.</p> <p>Explore the work of Marie Curie.</p> <p>Explore the work of Justus Von Liebig (Mirrors).</p>
Electricity	<p>Understand that some objects need electricity to work.</p> <p>Understand that electricity can be unsafe.</p> <p>Be able to use various electronic toys and equipment.</p>	Not taught in KS1.	Not taught in KS1.	<p>Learn about safety with electricity.</p> <p>Know common appliances that run on electricity.</p> <p>Know how to construct a simple electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Know whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <p>Know that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Know some common conductors and insulators, and associate metals with being good conductors.</p> <p>Explore the work of Thomas Edison.</p>
Rocks	<p>Make observations about the outside world.</p>	Not taught in KS1.	Not taught in KS1.	<p>Know different rocks and their properties.</p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Describe, in simple terms, how fossils are formed when things that have lived are trapped within rock.</p> <p>Recognise that solid are made from rocks and organic matter.</p> <p>Explore the work of Mary Anning (Fossils)</p> <p>Explore the work of William Smith. (Rocks)</p>

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States of Matter	Talk about how different materials feel using a variety of vocabulary. Play with water and ice and talk about these changes. Cook with different materials and talk about how materials change i.e. melt, harden, mix.	Not taught in KS1.	Not taught in KS1.	Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
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