Y1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Weather and Seasons Humans – Parts of the body and senses	**Plants and trees**	**Materials**	**Animals**	**Parts of a plant**	**Weather and Seasons**
Year 1 Milestones	Observe seasonal changes Observe and describe weather associated with the seasons and how day length varies. Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Identify & describe the basic structure of a variety of common flowering plants, including trees.	Distinguish between an object & 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 material Compare and group together a variety of everyday materials on the basis of their simple physical properties.	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 & describe the basic structure of a variety of common flowering plants, including trees. Observe seasonal changes	Observe seasonal changes Observe and describe weather associated with the seasons and how day length varies.
Skill Focus	**Question**	**Observation**	**Test**	**Classify**	**Hypothesise**	**Gather and Record**
	<u>Working Scientifically</u> **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		<u>Working Scientifically</u> 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		<u>Working Scientifically</u> 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**	

Y2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Basic needs of humans	**Living, dead, never alive Food chains**	**Materials**	**Life Cycles**	**Basic needs of plants Growing plants**	**Habitats including microhabitats.**
Year 2 Milestones	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.	Explore & compare the differences between things that are living, dead, and things that have never been alive 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 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.	Notice that animals, including humans, have offspring which grow into adults	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.	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 micro-habitats
Skill Focus	**Question**	**Classify**	**Test**	**Observe**	**Hypothesise**	**Gather and Record**
	<u>Working Scientifically</u> **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		<u>Working Scientifically</u> 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		<u>Working Scientifically</u> 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**	

Science Progression – Working Scientifically

	Nursery 2/3	Nursery 3/4	Reception	Y1	Y2	End KS1	beyond
			exploring	*with adult support*	*generally*		*independently*
Question	Understands 'who' 'what' 'where' in simple questions asked. Uses a variety of questions (eg. What, where, who)	Beginning to understand how and why questions asked. Questions why things happen and gives explanations. Asks e.g. who, what, when, how. Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.	Children follow instructions involving several ideas or actions. They answer 'how' and 'why' questions about their experiences and in response to stories or events.	**Ask Simple Questions** With help, I can use: Why, What if, How and When	**Ask Simple Questions** I can use practical activities to ask my own questions I can ask simple questions about how things change or how they happen or what will happen if…? I can sort questions into those that can be answered by trying it out and those that cannot.	Asking simple questions and recognising that they can be answered in different ways	simple questions are asked. questions that lead to scientific enquiry are asked independently.
Observe	Notices detailed features of objects in their environment.	Can talk about some of the things they have observed such as plants, animals, natural and found objects. Talks about why things happen and how things work.	Looks closely at similarities, differences, patterns and change. (Objects, materials, living things.) They make observations of animals and plants and explain why some things occur, and talk about changes.	**Observe closely with *simple* equipment** With help, I can use simple equipment to collect data I recognise some simple equipment we use	**Observe closely with *simple* equipment** I can make simple measurements I can use simple equipment e.g. handlenses and egg timers to gather data	Observing closely, using simple equipment	an explanation can be given as to why something has happened, using appropriate scientific vocabulary. close observations are made using simple equipment.
Test	Understands use of objects (eg. What do we use to cut things.) Explores objects by linking together different approaches: shaking, hitting, looking, feeling, tasting, mouthing, pulling, turning and poking.	Can select and use activities and resources with help. Uses various construction materials. Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. Joins construction pieces together to build and balance. Realises tools can be used for a purpose.	Manipulates materials to achieve a planned effect. Constructs with a purpose in mind, using a variety of resources. Uses simple tools and techniques competently and appropriately. Selects appropriate resources and adapts work where necessary.	**Perform simple tests** I state what I am doing now. I am beginning to say what to do next.	**Perform simple tests** I have experienced different ways of asking questions. I have started to work on different types of enquiry. I am beginning to recognise the ways I can answer questions. I can carry out simple tests.	Performing simple tests	more complex tests, such as fair tests, are beginning to be performed.

Classify	Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles	Builds up vocabulary that reflects the breadth of their experiences.	Extends vocabulary, especially by grouping and naming.	**Identifying and Classifying** I use my senses to observe & start to describe simple features of objects, events / living things. I respond & begin to sort appropriately with regard to simple features. I can observe a change. I begin to make simple comparisons.	**Identifying and Classifying** I can explore the world around me. I can make comparisons of objects, materials and living things. I decide on how to group and sort things with help. I observe changes over time.	Identifying and classifying	classify using more complicated taxonomies, etc.
Gather & record	Distinguishes between the different marks they make. Creates and experiments with symbols and marks representing ideas of number.	Sometimes gives meaning to marks as they draw and paint	Gives meaning to marks they make as they draw, write and paint.	**Gather and record data** I communicate and draw simple pictures of my findings with help. I can add blocks to towers, showing early measurement. I can stick pictures onto a chart drawn for me. With help, I can use **simple books and other sources** to help find out about simple scientific ideas.	**Gather and record data** I can record simple data. I can record what I found out in a variety of ways. (*ICT and on paper, using text, drawings and labelled diagrams)* I fill in a tally chart if the teacher makes it for me or with help. I can use simple chart templates provided to communicate with help. I ask people questions to find out answers. I can use **simple** secondary resources to help find answers	Gathering and recording data to help in answering questions. (And recognise that they can be answered in different ways.)	observations are recorded using ICT & on paper, using text, drawings and labelled diagrams. prepared tables & block graphs are used to present information data is gathered & recorded to help in answering questions.
Hypothesise	Explores objects by linking together different approaches: shaking, hitting, looking, feeling, tasting, mouthing, pulling, turning and poking.	Talks about why things happen and how things work.	Develop their own narratives and explanations by connecting ideas or events.	**Use observations and ideas to suggest answers to questions.** I begin to tell others some differences and similarities. I use annotate drawings and simple sentences to communicate. I can state what happened or what we did.	**Use observations and ideas to suggest answers to questions.** I am beginning to notice patterns with help. I can talk about what has happened and how I found it out. I am beginning to use some simple scientific language to share what I found out. I describe obs. simply with a range of vocab.	Using their observations and ideas to suggest answers to questions	observations and ideas are used to suggest answers to questions. systematic observations and measurements of what is observed are made.

Science Progression – Scientific Knowledge

	Nursery 2/3	Nursery 3/4	Reception	Y1	Y2	beyond
Plants	Notices detailed features of objects in their environment.	Can talk about some of the things they have observed such as plants, animals, natural and found objects. Developing an understanding of growth, decay and changes over time.	Make observations of plants and explain why some things occur, and talk about changes. Looks closely at similarities, differences, patterns and change.	identify & name a variety of common wild & garden plants, including deciduous & evergreen trees		identify & describe the functions of different parts of flowering plants explore the requirements of plants for life & growth & how they vary from plant to plant investigate the way in which water is transported within plants explore the part that flowers play in the life cycle of flowering plants
				identify & 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.	
Living things and their habitats	Notices detailed features of objects in their environment.	Developing an understanding of growth, decay and changes over time.	Children know about similarities and differences in relation to living things.		explore & compare the differences between things that are living, dead, and things that have never been alive	
					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.	
		Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. Shows care and concern for living things and the environment	Talks about features of their own immediate environment and how environments might vary from one another.		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 micro-habitats	
Seasonal changes	Notices detailed features of objects in their environment.	Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.	Looks closely at similarities, differences, patterns and change. Talk about the features of their own immediate environment and how environments might vary from one another	observe changes across the four seasons		
				observe and describe weather associated with the seasons and how day length varies.		

Animals including humans	Enjoys playing with small world models such as a farm. Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles	Can talk about some of the things they have observed such as plants, animals, natural and found objects. Shows care and concern for living things and the environment	-Children know about similarities and differences in relation to living things.	identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	notice that animals, including humans, have offspring which grow into adults	
				identify and name a variety of common animals that are carnivores, herbivores and omnivores	find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	identify that animals, including humans, need the right types & amount of nutrition, & that they cannot make their own food; they get nutrition from what they eat
					describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	
				describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)		identify that humans & some other animals have skeletons & muscles for support, protection & movement
				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	Notices detailed features of objects in their environment. Creates sounds by banging, shaking, tapping or blowing. Explores and experiments with a range of media through sensory exploration, and using whole body.	Can talk about some of the things they have observed such as natural and found objects. Talks about why things happen and how things work.	Looks closely at similarities, differences, patterns and change Children know about similarities and differences in relation to materials. Experiments to create different textures.	distinguish between an object & 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 material	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	
		Realises tools can be used for a purpose	Selects and uses technology for particular purposes.	compare and group together a variety of everyday materials on the basis of their simple physical properties.		
	Experiments with blocks, colours and marks.	Uses various construction materials.	Manipulates materials to achieve a planned effect.		find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	