Manor Farm Community Infant School

Science Curriculum Progression of Skills and Knowledge



		Scien	ice - EYFS Progressive Statements
	3- and 4- Year Olds	Communication and Language	Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"
		Physical Development	• Make healthy choices about food, drink, activity and toothbrushing.
		Understanding the World	Use all their senses in hands-on exploration of natural materials.
			 Explore collections of materials with similar and/or different properties.
			 Talk about what they see, using a wide vocabulary.
			 Begin to make sense of their own life-story and family's history.
			• 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.
EYFS			 Begin to understand the need to respect and care for the natural environment and all living things.
ш			Explore and talk about different forces they can feel.
			 Talk about the differences between materials and changes they notice.
	Reception	Communication and Language	Learn new vocabulary.
			 Ask questions to find out more and to check what has been said to them.
			 Articulate their ideas and thoughts in well-formed sentences.
			Describe events in some detail.
			 Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen.
			Use new vocabulary in different contexts.
		Physical Development	Know and talk about the different factors that support their overall health and

	Understanding th	ne World	 wellbeing: regular physical activity healthy eating toothbrushing sensible amounts of 'screen time' having a good sleep routine being a safe pedestrian Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different from the one in which they live. Understand the effect of changing seasons on the natural world around them.
ELG	Communication and Language	Listening, Attention and Understanding	 Make comments about what they have heard and ask questions to clarify their understanding.
	Physical Development	Managing Self	 Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
	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 their 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.

<u>Year</u>	<u>Term</u>	Scheme of Work	<u>Plants</u>	Working Scientifically
1	Autumn			
1	Spring	Identifying Plants	 I know that a plant is a living thing that grows. I know that plants need sunlight, air and water. I know that plants have seeds that grow into new plants. I can recognise where the seeds are in a variety of plants. I can plant a seed and describe what I expect it to look like in a few weeks' time. I can identify and describe a variety of garden plants. I can identify the difference between a flower and a tree. I can identify a variety of wild plants. I can identify and describe a variety of trees. I can identify and describe a variety of trees. I can identify the oots, stem, leaves, flower and petals of a flower. I know what roots are and why they are important. I can observe plants closely and draw my findings. I can use a simple classification key to identify wild flowers. I can use close observation to explain how a seed changes to a plant. 	 I know that a plant is a living thing that grows. I know that plants need sunlight, air and water. I know that plants have seeds that grow into new plants. I can recognise where the seeds are in a variety of plants. I can plant a seed and describe what I expect it to look like in a few weeks' time. I can identify and describe a variety of garden plants. I can identify the difference between a flower and a tree. I can identify and describe a variety of trees. I can identify and describe a variety of trees. I can identify the difference between an evergreen and a deciduous tree. I can identify the roots, stem, leaves, flower and petals of a flower. I know what roots are and why they are important. I can use a simple classification key to identify wild flowers.

				 I can use close observation to explain how a seed changes to a
				plant.
1	Summer			
2	Autumn			
2	Spring			
2	Summer	Growing Plants	 I know that different seeds grow into different plants. I can use information on a seed packet to tell me when a seed should be planted, how to plant it and how to care for the seed as it grows into a plant. I can follow the instructions on a seed packet to plant a seed. I know that seeds can be eaten by humans and animals. I know that some plants grow from bulbs. I can explain the life cycle of a plant grown from a bulb, such as a tulip. I know that the bulb provides a store of food for the plant while it is in the ground during the winter months. I know that the fruit of the plant is the part that carries the seeds. I can explain some of the ways in which seeds are dispersed. I know that the term 'germination' refers to the process when a seed starts to grow and produce shoots. I can carry out an experiment to observe how the roots of a bulb grow. I can use close observation to examine different fruits to see how many seeds they have, making predictions beforehand. I can suggest how to make an experiment a fair test. I can use the results of my experiment to draw a diagram explaining the best conditions for seed germination. 	 I know that different seeds grow into different plants. I can use information on a seed packet to tell me when a seed should be planted, how to plant it and how to care for the seed as it grows into a plant. I can follow the instructions on a seed packet to plant a seed. I know that seeds can be eaten by humans and animals. I know that some plants grow from bulbs. I can explain the life cycle of a plant grown from a bulb, such as a tulip. I know that the bulb provides a store of food for the plant while it is in the ground during the winter months. I know that the fruit of the plant is the part that carries the seeds. I can explain some of the ways in which seeds are dispersed. I know that not all seeds will grow into a new plant and can explain reasons for this.
			conditions are best for seed germination.I can suggest how to make an experiment a fair test.I can use the results of my experiment to draw a diagram	• I know that not all seeds w into a new plant and can ex

	 I know that the term 'germination'
	refers to the process when a seed
	starts to grow and produce shoots.
	 I can carry out an experiment to
	observe how the roots of a bulb
	grow.
	 I can use close observation to
	examine different fruits to see how
	many seeds they have, making
	predictions beforehand.
	 I can plan and set up an experimen
	to find out which conditions are best
	for seed germination.
	 I can suggest how to make an
	experiment a fair test.
	 I can use the results of my
	experiment to draw a diagram
	explaining the best conditions for
	seed germination.
	 I can use observation to explain
	how a seed changes over time.

<u>Year</u>	<u>Term</u>	Scheme of Work	Animals, including Humans	Working Scientifically
EYFS	Autumn			
EYFS	Spring			
EYFS	Summer			
1	Autumn	My Body	 I can name the different parts of my body, such as arms, legs, head, wrist, fingernails, etc. I can describe which parts of my body I use for different activities. I can name the five senses. I can describe why each of the five senses is important, and how we use each one. I know that the senses of smell and taste are very closely linked. I can carry out a blind test to identify familiar smells. 	 I can name the different parts of my body, such as arms, legs, head, wrist, fingernails, etc. I can describe which parts of my body I use for different activities. I can name the five senses. I can describe why each of the five senses is important, and how we use each one.

			 I can gather facts about the sense of smell to answer questions. I can taste different fruits and use appropriate vocabulary to describe them 	 I know that the senses of smell and taste are very closely linked. I can carry out a blind test to identify familiar smells. I can gather facts about the sense of smell to answer questions. I can taste different fruits and use appropriate vocabulary to describe them
1	Spring			
1	Summer	Identifying Animals	 I can identify and name a variety of common UK pets. I can identify a variety of UK mammals, birds, reptiles, fish and amphibians. I know that mammals have backbones, feed their young with milk and have fur. I can find a similarity or difference between pairs of mammals. I know that birds have feathers, wings and a beak. I know that lizards are cold-blooded vertebrates that lay eggs. I can identify differences in the features of birds and lizards. I know that fish and amphibians lay eggs. I know the steps in the life cycles of amphibians and fish, and spot similarities and differences. I know what a herbivore, carnivore and omnivore are. I can identify common animals that are herbivores, carnivores and omnivores. I can use a Venn diagram to sort animals to show which are herbivores, carnivores and omnivores. I can use a tally chart to gather data about our class's favourite pet. I can use information I have gathered in tally charts to answer simple questions 	 I can identify and name a variety of common UK pets. I can identify a variety of UK mammals, birds, reptiles, fish and amphibians. I know that mammals have backbones, feed their young with milk and have fur. I can find a similarity or difference between pairs of mammals. I know that birds have feathers, wings and a beak. I know that lizards are cold-blooded vertebrates that lay eggs. I can identify differences in the features of birds and lizards. I know that fish and amphibians lay eggs. I know the steps in the life cycles of amphibians and fish, and spot similarities and differences. I know what a herbivore, carnivore and omnivore are. I can identify common animals that are herbivores, carnivores and omnivores.

				 I can explain some of the ways in which people need to look after pets. I can use a Venn diagram to sort animals to show which are herbivores, carnivores and omnivores. I can use a tally chart to gather data about our class's favourite pet. I can use a tally chart to gather information about minibeasts I spot. I can use information I have gathered in tally charts to answer simple questions
2	Autumn	Growth and Survival	 I know that all species of animals have babies, including humans, and that if they didn't the species would become extinct. I can match a variety of baby animals to their parents. I know that some baby animals look very similar to their parents and some look very different. I know that mammals give birth to live young and birds, reptiles and fish lay eggs. I know that different animals are pregnant for different lengths of time, and that this is often dependent on the size of the animal. I know that the eggs animals lay are vulnerable to predators and other dangers, which is why the parent animal often builds a nest to keep them safe and lays several eggs at once. I know that some eggs have hard shells and some eggs have soft shells. I can identify a variety of animals that give birth to live young and those that lay eggs. I can explain the stages a human goes through to grow from a baby to an adult. I know that all animals need food, water and air to stay alive, and that some animals breathe oxygen with their lungs while fish that live under water take in oxygen through their gills. 	 I know that all species of animals have babies, including humans, and that if they didn't the species would become extinct. I can match a variety of baby animals to their parents. I know that some baby animals look very similar to their parents and some look very different. I know that mammals give birth to live young and birds, reptiles and fish lay eggs. I know that different animals are pregnant for different lengths of time, and that this is often dependent on the size of the animal. I know that the eggs animals lay are vulnerable to predators and other dangers, which is why the parent animal often builds a nest to keep them safe and lays several eggs at once.

	 I know that animals need to live in different environments to get the food, water and oxygen they need. I know that it is important to eat a healthy balance of foods because different foods are useful to our bodies for different things. I can use the food pyramid and balanced plate model to find out how much carbohydrate, fruits and vegetables, protein, dairy, fats and sugars I should eat. I can plan a healthy, balanced meal. I know that exercise is important to keep our heart and lungs healthy, and that it keeps our muscles strong and flexible. I know that exercise is important to keep us from getting overweight. I can carry out my own research using simple sources to find out what a particular animal needs in order to survive 	 I know that some eggs have hard shells and some eggs have soft shells. I can identify a variety of animals that give birth to live young and those that lay eggs. I can explain the stages a human goes through to grow from a baby to an adult. I know that all animals need food, water and air to stay alive, and that some animals breathe oxygen with their lungs while fish that live under water take in oxygen through their gills. I know that animals need to live in different environments to get the food, water and oxygen they need. I know that it is important to eat a healthy balance of foods because different foods are useful to our bodies for different things. I can use the food pyramid and balanced plate model to find out how much carbohydrate, fruits and vegetables, protein, dairy, fats and sugars I should eat. I can plan a healthy, balanced meal. I know that exercise is important to keep our heart and lungs healthy, and that it keeps our muscles strong and flexible. I know that exercise to work my whole body using different apparatus.
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			• I can carry out my own research using simple sources to find out what a particular animal needs in order to survive
2	Spring		
2	Summer		

<u>Year</u>	<u>Term</u>	Scheme of Work	Materials	Working Scientifically
EYFS	Autumn			
EYFS	Spring			
EYFS	Summer			
1	Autumn	Everyday Materials	 I know what a material is. I know the difference between a material and an object. I can name a variety of materials. I can describe a material's properties using adjectives. I can explain why some materials are better suited for different purposes than others. I can follow instructions to perform a simple test to see whether a material is waterproof or not. I can use my observations to suggest which materials would be best for an umbrella. 	 I know what a material is. I know the difference between a material and an object. I can name a variety of materials. I can describe a material's properties using adjectives. I can explain why some materials are better suited for different purposes than others. I can follow instructions to perform a simple test to see whether a material is waterproof or not. I can use my observations to suggest which materials would be best for an umbrella.
1	Spring			
1	Summer			
2	Autumn	Exploring Everyday Materials	 I can use a range of appropriate vocabulary to describe the properties of different materials. I know the difference between a natural and a man-made material. 	 I can use a range of appropriate vocabulary to describe the properties of different materials. I know the difference between a natural and a man-made material.

 I know that the same product, e.g. a table, can be made from a variety of different materials, and can suggest suitable materials for each object. I can explain how glass, pottery and paper are made. I know that some materials can change shape permanently, some can change shape and go back to their original shape, and some can't change shape. 	 I know that the same product, e.g. a table, can be made from a variety of different materials, and can suggest suitable materials for each object. I can explain how glass, pottery and paper are made. I know that some materials can
 I can name a variety of materials that can change shape, can change shape temporarily and cannot change shape. I know that there are lots of different types of plastic that can be used for different purposes. I can explore the suitability of plastic and metal for different purposes, and explain why each material has been chosen for 	 change shape permanently, some can change shape and go back to their original shape, and some can't change shape. I can name a variety of materials that can change shape, can change
 each different purpose. I know that paper and cardboard are made from wood and can describe the benefits of using paper and cardboard over wood for different purposes. I can name some objects that can all be made from wood, plastic and metal, e.g. chairs. I can suggest appropriate materials for an object to be made from, based on what the object will be used for and who will use it. I can suggest different ways of sorting materials based on their 	 shape temporarily and cannot change shape. I know that there are lots of different types of plastic that can be used for different purposes. I can explore the suitability of plastic and metal for different purposes, and explain why each material has been chosen for each different purpose.
 I can suggest different ways of sorting materials based on their properties and characteristics. I can sort materials into those that are natural and those that are man-made. I can experiment with what happens to different materials when you bend, twist, stretch and squash them, recording my observations. I can make predictions about how materials will behave. I can experiment with ways of making a paper bridge that is 	 I know that paper and cardboard are made from wood and can describe the benefits of using paper and cardboard over wood for different purposes. I can name some objects that can all be made from wood, plastic and metal, e.g. chairs.
strong enough to hold a toy car	• I can suggest appropriate materials for an object to be made from, based on what the object will be used for and who will use it.

2 Spring		 I can suggest different ways of sorting materials based on their properties and characteristics. I can sort materials into those that are natural and those that are natural and those that are natural and those that are manmade. I can experiment with what happens to different materials when you bend, twist, stretch and squash them, recording my observations. I can make predictions about how materials will behave. I can experiment with ways of making a paper bridge that is strong enough to hold a toy car
2 Summer	 	

Year	Term	Scheme of Work	Living Things and their Habitats	Working Scientifically
<u></u>	<u></u>			
EYFS	Autumn			
EYFS	Spring			
EYFS	Summer			
1	Autumn			
1	Spring			
1	Summer			
2	Autumn			
2	Spring			
2	Summer	Living in Habitats	 I know the difference between things that are living, things that are dead and things that have never been alive. I can name the seven life processes that all living things need to be able to do to stay alive. I know that all living things will eventually die. I know what a habitat is. 	 I know the difference between things that are living, things that are dead and things that have never been alive. I can name the seven life processes that all living things need to be able to do to stay alive.

	• I know that all living things need to live in a habitat that can	I know that all living things will
	provide them with the things they need to stay alive.	eventually die.
	• I can suggest what type of animals might live in a variety of	• I know what a habitat is.
	different habitats.	• I know that all living things need to
	 I can match animals to their correct habitat. 	live in a habitat that can provide
	• I can identify and name some of the plants and animals that live	them with the things they need to
	in a seaside habitat.	stay alive.
	 I know that the plants and animals in a habitat are all 	• I can suggest what type of animals
	dependent on each other for survival.	might live in a variety of different
	• I can describe some habitats and their features in other parts of	habitats.
	the world, such as rainforest, desert and Arctic habitats.	• I can match animals to their correct
	• I can describe why some animals are well suited to their	habitat.
	rainforest, desert or Arctic habitats.	• I can identify and name some of the
	• I can describe what a microhabitat is.	plants and animals that live in a
	• I can identify some of the minibeasts that live in microhabitats.	seaside habitat.
	• I know that plants and animals in a habitat are linked to each	• I know that the plants and animals
	other through food chains.	in a habitat are all dependent on
	• I know that plants get their energy from the sun.	each other for survival.
	• I can construct some simple food chains for a variety of	• I can describe some habitats and
	habitats.	their features in other parts of the
	• I can classify things that are living, things that are dead and	world, such as rainforest, desert and
	things that have never been alive.	Arctic habitats.
	• I can explore and observe microhabitats in the local	• I can describe why some animals
	environment.	are well suited to their rainforest,
	• I can experiment with ways of separating a variety of materials	desert or Arctic habitats.
	from water, choosing suitable equipment for the task	• I can describe what a microhabitat
	from water, choosing suitable equipment for the task	
		is.
		• I can identify some of the
		minibeasts that live in microhabitats.
		• I know that plants and animals in a
		habitat are linked to each other
		through food chains.
		 I know that plants get their energy
		from the sun.
		• I can construct some simple food
		chains for a variety of habitats.

	 I can classify things that are living, things that are dead and things that have never been alive. I can explore and observe microhabitats in the local environment. I can experiment with ways of separating a variety of materials from water, choosing suitable equipment
	for the task

<u>Year</u>	<u>Term</u>	Scheme of Work	Seasonal Change	Working Scientifically
EYFS	Autumn			
EYFS	Spring			
EYFS	Summer			
1	Autumn			
1	Spring	Seasonal Change	 I know that the weather is always changing and that we have many different types of weather. I know that there are four seasons in the UK. I can name the months each season occurs in. I can identify the main features of each of the different seasons. I can describe different clothing that is appropriate to wear during each season. I can identify differences between each of the four seasons. I can describe how animals are affected by each of the four seasons. I can describe some of the ways humans adapt to the different seasons, e.g. by what we wear, eat and do. I know that some foods are seasonal. I know that the number of hours of daylight changes throughout each of the four seasons. I know that there are more hours of sunlight during the summer than during the winter. 	 I know that the weather is always changing and that we have many different types of weather. I know that there are four seasons in the UK. I can name the months each season occurs in. I can identify the main features of each of the different seasons. I can describe different clothing that is appropriate to wear during each season. I can identify differences between each of the four seasons. I can describe how animals are affected by each of the four seasons, and how their behaviour changes during each one.

		 I can transfer data from a tally chart into a pictogram to show what seasonal clothing was worn. I can use collected data to answer questions 	 I can describe some of the ways humans adapt to the different seasons, e.g. by what we wear, eat and do. I know that some foods are seasonal. I know that the number of hours of daylight changes throughout each of the four seasons. I know that there are more hours of sunlight during the summer than during the winter. I can transfer data from a tally chart into a pictogram to show what seasonal clothing was worn. I can use collected data to answer questions
1	Summer		
2	Autumn		
2	Spring		
2	Summer		

<u>Year</u>	<u>Term</u>	Scheme of Work	Super Scientists	Working Scientifically
2	Summer	Super Scientists	 I know that Edison invented the first light bulb that could last for more than 12 hours. I know that a circuit needs a bulb, battery and wire to work. I know that a circuit needs to be complete for it to work. I know the symbols for wire, bulb and battery. I can create a simple working circuit. I can answer questions I have generated and suggest how to find answers to questions that I haven't answered yet 	 I know that Edison invented the first light bulb that could last for more than 12 hours. I know that a circuit needs a bulb, battery and wire to work. I know that a circuit needs to be complete for it to work. I know the symbols for wire, bulb and battery. I can create a simple working circuit.

	I can answer questions I have	
	generated and suggest how to find	
	answers to questions that I haven't	
	answered yet	