Rawmarsh Ryecroft Infants School – Curriculum Progression Map

Science	***Values and Vision*** **"Secure, happy and successful"** **Resilience** – I always keep going **Respect** – I value everybody and everything **Care** – I look after my world and the people in it. **Achievement** – I try to be the best I can be **Community** – I am proud of where I belong

Intent	**Implementation**	**Impact**
Children will receive a high-quality science curriculum which provides the foundations for understanding the world and inspires children to want to find out more about the world in which we live. We believe all children should be taught essential aspects of knowledge, methods and processes. We aim for pupils to build up a body of key foundation knowledge and concepts that will foster a sense of excitement and curiosity about natural phenomena. We want children to understand that science can be used to explain what is occurring, make predictions about how things behave and analyse the outcome.	Here at Rawmarsh Ryecroft Infant School we encourage children to be curious, make observations and connections about themselves and the world around them. We have a practical hands on approach to science learning where we encourage children to ask thought provoking questions, make close observations and use their senses to find out about why things happen in certain ways. We support children to develop their scientific vocabulary when talking about observations, findings and ideas. Science is linked through our half termly themes and cross curricular links have been made where possible. Children's evidence is recorded in their science curriculum books.	Our children will develop a real sense of awe and wonder about the world they live in. They will have a good understanding of the key scientific concepts and skills and be able to communicate their learning effectively using scientific vocabulary.

Taught Curriculum - Objectives and Vocabulary

	FS2	Year 1	Year 2
Objectives	**Working Scientifically**		
	ELG UTW (The World) To be able to identify similarities and differences. To make observations and talk/ explain changes.	**National Curriculum** To ask simple questions and recognise that they can be answered in different ways. To observe closely, using simple equipment. To perform simple tests To identify and classify. To use their observations and ideas to suggest answers to questions. To gather and record data to help in answering questions.	**National Curriculum** To ask simple questions and recognise that they can be answered in different ways. To observe closely, using simple equipment. To perform simple tests To identify and classify. To use their observations and ideas to suggest answers to questions. To gather and record data to help in answering questions.

Vocabulary	Experiment, **Predictions,** Similarities, Differences, Changes	Classify , **Sort , Compare,** Same, Different , **Observe** Properties, **Investigate**	Explain , Experiment , **Predict, Fair Test**
	Plants		
Objectives	**ELG EA and D** **ELG UTW** ***TNW*** - To explore the natural world around them, making observations and drawing pictures of animals and plants.	**National Curriculum** **Plants** To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees To identify and describe the basic structure of a variety of common flowering plants, including trees	**National Curriculum** **Plants** To observe and describe how seeds and bulbs grow into mature plants To find out and describe how plants need water, light. and a suitable temperature to grow and stay healthy.
Vocabulary	**Animals, Plants**	**As FS2 and:** Changes , **Trees,** Ever green , Deciduous , **Plant , Stem Root , Leaves**	**As FS2 and Year 1 and:** **Plants , Grow , Water , Light , Soil , Healthy ,** Seeds Beans, Observe , Discuss , Record , Findings , **Light, Water, Temperature**
	Animals Including Humans		
Objectives	**ELG EA and D** ***TNW*** - To explore the natural world around them, making observations and drawing pictures of animals and plants.	**National Curriculum** To identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals To identify and name a variety of common animals that are carnivores, herbivores and omnivores To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	**National Curriculum** To notice that animals, including humans, have offspring which grow into adults. To find out about and describe the basic needs of animals, including humans, for survival (water, food and air) To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
Vocabulary	**Animals, Insects , Egg, Plants ,** Touch , Taste , Smell, Hear See, Experiment, Similarities, Differences, Changes	**As FS2 and:** **Body Parts, Carnivores, Herbivores Omnivores,** Amphibians, Mammals, Reptiles Fish, Birds, **Sight, Sound, Smell , Taste, Touch**	**As FS2 and Year 1 and:** Grow , **Alive ,** Living , Animals , **Humans , Eat , Food Exercise, Healthy, Clean , Wash , Hygiene,** Survive
	Materials		

Objectives	***TNW*** - To explore the natural world around them, making observations and drawing pictures of animals and plants. ***TNW*** - To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	**National Curriculum** To distinguish between an object and the material from which it is made. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock To describe the simple physical properties of a variety of everyday materials To compare and group together a variety of everyday materials on the basis of their simple physical properties	**National Curriculum** To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular. Uses To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
Vocabulary	Experiment, **Predictions,** Similarities, Differences, Changes	**As FS2 and:** Rough, Shiny, Smooth, bendy, Hard, Soft, **Wood Plastic, Glass, Metal, Fabric, Water, Rock** Ice , Melt, Freeze, Prediction, Experiment, Observation results	**As FS2 and Year 1 and:** Liquid , Classify , Sort , **Stretch , Twist , Break Bend ,** Explain , Record , Data , **Opaque , Transparent Translucent, ,Materials,** Compare, Discus, **Properties** Record , Experiment , Observe , Conduct , Result
	Seasonal Changes		
Objectives	***TNW*** - To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	To observe changes across the 4 seasons To observe and describe weather associated with the seasons and how day length varies	
Vocabulary	Changes, **Natural**	**As FS2 and:** Changes , Trees, Plants, Ever green , Deciduous , **Spring Summer, Autumn , Winter**	
	Living Things and their Habitats		
Objectives	***TNW*** - To explore the natural world around them, making observations and drawing pictures of animals and plants. ***TNW*** - To 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. ***TNW*** - To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.		**Living Things and their habitats** To identify that most living things live in habitats to which they are suited and describe how habitats provide the basic needs of different kinds of animals and plants, and how they depend on it each other. To identify and name a variety of plants and animals in their habitats, including microhabitats. To explore and compare the differences between things that are living, dead, and things that have never been alive

			To 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
Vocabulary	**Animals, Insects , Egg , Plants ,** Experiment, **Predictions** Similarities, Differences, Changes, **Natural**		**As FS2 and:** Insects , Grow, **Environment ,** Home , **Plants , Alive Living , Animals , Humans , Eat , Food , Habitat Animals ,** Life , Survive

Progression Map - As Scientists we need to be able to ….

	FS2	Year 1	Year 2
Working Scientifically	I can say what is the same and what is different. I can talk about what I see using scientific words. **I can explore the natural world.** **I can make predictions.**	**I can ask simple questions and recognise that they can be answered in different ways.** I can observe closely using simple equipment. **I can perform simple tests.** I can name things such as materials, animals and plants and sort them into different categories for example things made out of wood, evergreen trees and carnivores etc. I can talk about my observations and ideas and use them to answer simple questions. I can use simple measurements and equipment such as magnifying glasses, egg timers to gather data. **I can talk about what I have found out and how I found it out.** I can gather simple data and record it to help me with answering questions.	**I can ask simple questions and understand there is more than one answer.** I can observe closely using simple equipment and use these to answer questions. **I can perform simple tests thinking how to make it fair.** I can name things such as materials, animals and plants and sort them into different categories. I can use standards measurements and equipment such as magnifying glasses, egg timers to gather data then record this information and use it to answer questions. I can talk about what I have found out and how I found it out, linking it to prior learning. **I can communicate my findings in a range of ways and begin to use simple scientific vocabulary.**

		With support I can communicate my findings in a range of ways and begin to use simple scientific vocabulary.	
Progression Map - As Scientists we need to know ….			
Plants	**I know what plants need to live.**	I Know which trees are deciduous and evergreen and can name some. **I know the parts of a plant and tree and can label them.** I know and can talk about how plants are similar and can make comparisons. I know the 4 seasons and what changes between the seasons in terms of trees and plants. **I am beginning to know what a plant needs to stay alive.**	**I know what a living thing needs to survive.** I know what makes living things different to non-living things. **I know what plants need to grow and change. (Light, water, temperature)**
Animals Including Humans	**I know how to care for chicks and butterflies.**	I know some common fish, amphibians, reptiles, birds and mammals. **I know what a carnivore, herbivore and an omnivore is.** **I know the five senses.** I know the difference between the sense and body part. **I know the names of the main body parts.**	**I know which foods are healthy and that exercise is important.** **I know how disease can be spread and how to stop it spreading.** I know that animals and humans have babies and how they turn into adults. I **know what animals and humans need to stay alive.**
Everyday Materials	**I know why things freeze and melt**	**I know that there are different types of materials, and I can talk about their properties.** I know why objects are made the way they are. **I know how to describe objects and what they are made of e.g., a cup is made out of plastic because it is strong and won't break if dropped.** Materials include wood, plastic, glass, metal, water and rock.	**I know how to describe the properties of everyday materials.** I know everyday materials, their particular uses and use scientific language to explain this. **I know the properties of everyday materials and understand why they are used for certain things.** I know that some materials can be altered by squashing, bending, twisting and stretching and can describe ways of making materials or objects change. Materials include wood, plastic, glass, metal, water and rock.

Seasonal changes	**I know that the world changes in the different seasons.**	**I know the 4 seasons and what changes between each season in terms of trees/weather.** I know why the weather is different in the different seasons. I know why the days are longer in the summer months.	
Living Things and there habitats.	**I know how to care for chicks and butterflies.** I know what happens during the life cycle of living things.		**I know how animals are adapted to suit their environment.** I know a variety of plants and the habitats in which they live, including microhabitats. I know that some animals and plants need each other to stay alive. **I know if things are alive, dead or have never been alive.** **I know what a simple food chain looks like and understand how the chain fits together.** I know what happens if the chain is broken- i.e., no grass, no cows. I can identify simple features and use these to classify into groups