Curriculum Intent

The intent of our curriculum is that it will secure our vision that at Nyewood Church of England Infant School our children are confident, happy and independent learners who take an active role together in God's world.

Science Intent

At Nyewood CE Infant School each unique child will see themselves as a scientist; they will ask questions, observe, investigate and record their findings about the world around them.

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Knowledge and	Emerging Towards Expectations	Working At	Exceeding		
Skills Area		Expectations	Expectations		
	Autumn Term				
Understanding the	Children know	Children know	Children know		
World	How to look at things with care.	How to use their sense to make observations, using good looking	How to use their sense to look at the world around them		
-1		and listening skills.	(sight/hearing/touch)		
The Natural World	The world around them is made up of different living		2.5		
	things.	What is normal and different weather for where we live in the world.	Different words to describe weather.		
	How to use their 'good listening' ears.		That a year is separated into days, weeks, months and		
		Words to describe the weather we experience.	seasons.		
	How to use kind and caring hands.	·			
		Children can	Children can		
	Children can	Explore the natural world around them, noticing differences.	Explore the natural world around them talking about		
	Explore the natural world around them		similarities and differences between different habitats.		
		Understand the effect of changing seasons on the natural world			
	Talk about the things they see, hear and feel while outside.	around them	Name the 4 seasons and the differences they might bring.		
Knowledge and	Emerging Towards Expectations	Working At	Exceeding		
Skills Area		Expectations	Expectations		
		Spring Term			
Understanding the	Children know	Children know	Children know		
World	That different parts of the world (both in this country and	How the weather effects our world.	That books can hold information about the Natural world.		
	in different countries) might look different.		, i		
The Natural World		When things are cold they freeze, when hot we need to take	A range of different animal names from this country and		
	About different habitats, such as beaches, woodlands,	precautions to looks after all living things.	others.		
	cities and Arctic / Antarctic places.				
		How to use ALL of their senses to explore the world around us.	Children can		
	Children can				

	Recognise some environments that are different to the o in which they live	How to use scientific tools such as magnifying glasses. How to put meanings to the marks they make, and how to take care to create careful drawings. Books can give you information about the Natural World. Children can Explore the natural world around them, making observations and drawing pictures of animals and plants. Talk about the natural world, including the seasons and changing states of matter	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals, including pets. Name the seasons and describe seasonal changes. Observe and describe the types of weather associated with the four different seasons
Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding Expectations
2.2.2.2		Summer Term	
Understanding the	Children know	Children know	Children know
World	That books carry meanings, and that this meaning can be facts.	That different animals live in different parts of the world.	A variety of different animal names and species.
The Natural World	How to use good looking and listening skills. Including using magnifying glasses. Children can Explore the natural world around them, making observations and drawing pictures of animals and plant Explore books to find out information.	world around them and contrasting environments, drawing on their experiences and what has been read in class	That different living things eat different things. Children can Describe and compare the observable features of animals from a range of groups Identify what different animals eat
Key Vocabu	animal names, baby animal names, o	ouch, sight, hot, cold, wet, dry, freezing, snow, habitats, sunny, warm, a grow, growth, plant, seed, tree, flower, on land, in water, jungle, desert, mp, run, grow, large, big, huge, small, tiny, little, shoot, leaf, petal, root	north/south pole, information, book, computer, fur, stripes,

	Year 1			
Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding Expectations	
		OVERACHING THROUGHOUT THE YEAR	, **********************************	
Working Scientifically	Asking Questions Explore the world around them and raise their own simple questions Ask people questions and use simple secondary sources to find answers Observing Closely Find out by watching, listening, tasting, smelling and touching Observe closely using simple equipment With help, observe changes over time Performing Tests Begin to recognise different ways in which they might answer scientific questions Experience different types of science enquiries, including practical activities Use simple measurements and equipment (e.g. hand lenses, egg timers) to gather data Identifying and classifying Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them With guidance, they should begin to notice patterns and relationships Recording Findings With help, record and communicate their findings in a range of ways and begin to use simple scientific language	Ask simple questions when prompted Suggest ways of answering a question Observing Closely Discuss what they can see, touch, smell, hear or taste Use simple equipment to help them make observations Performing Tests Perform a simple test Describe/ explain what they have done Identifying and Classifying Identify and classify things they observe Think of some questions to ask Answer some scientific questions Give a simple reason for their answer Explain what they have found out Recording Findings Show their work using pictures, labels and captions Record their findings using standard units Record some information in a chart or table, or using ICT	Ask simple questions Recognise that questions can be answered in different ways Observing Closely Find out by watching, listening, tasting, smelling and touching Performing Tests Give reasons for their answers Identifying and Classifying Discuss similarities and differences Explain what they have found out using scientific vocabulary? Recording Findings Make accurate measurements using nonstandard measurements i.e. unifix	

	Autumn Term		
Seasonal changes	Children know	Children know	Children know
	That the weather can be different on different days and in different places.	That the weather changes depending on what time of year it is.	The season names, and when they fall in a year.
		The names of the 4 seasons, and when these seasons fall in a	How to use descriptive language to explain what they are
	How to dress for different types of weather.	year.	seeing.
		That a day has 24 hrs in it, and that some of the day is daytime	That different parts of the world have different weather.
	How to use their senses to make observations about what they see around	and some is night time.	Children can
	them.	Children can	Observe features in the environment and explain that these
	Children can	Observe changes across the four seasons	are related to a specific season
	Name some of the seasons.	Observe and describe weather associated with the seasons and how day length varies.	Observe and talk about changes in the weather
	Observe and describe the current weather.		Talk about weather variation in different parts of the world
	Demonstrate some understanding of how the weather changes with the seasons		
Everyday Materials	Children know	Children know	Children know
	That objects are made of different materials.	Materials can be changed to make different objects.	That materials can be changed by different things such as heat (both hot or cold)
		How to use all of their sense to make observations, including	
	How to use describing words to talk about what they see.	making comparisons.	How to explain differences and similarities by comparing and using words such as 'because'.
		How to group objects and can explain why they have done	
	How to use their senses to help make observations.	something.	Children can Describe things that are similar and different between
		Children can	materials
	Children can	distinguish between an object and the material from which it is	
	Name some materials	made	Explain what happens to certain materials when they are heated, e.g. bread, ice, chocolate
	Know the properties of some materials and can suggest some of the purposes	identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock	Explain what happens to certain materials when they are
	they are used for.		cooled, e.g. jelly, heated chocolate
		describe the simple physical properties of a variety of everyday materials	
		compare and group together a variety of everyday materials on the basis of their simple physical properties.	

Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding Expectations
		Spring Term	
Seasonal changes	Children know That the weather can be different on different days and in different places. How to dress for different types of weather.	Children know That the weather changes depending on what time of year it is. The names of the 4 seasons, and when these seasons fall in a year. That a day has 24 hrs in it, and that some of the day is daytime	Children know The season names, and when they fall in a year. How to use descriptive language to explain what they are seeing. That different parts of the world have different weather.
	How to use their senses to make observations about what they see around them. Children can Name some of the seasons. Observe and describe the current weather.	and some is night time. Children can Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.	Children can Observe features in the environment and explain that these are related to a specific season Observe and talk about changes in the weather Talk about weather variation in different parts of the
	Demonstrate some understanding of how the weather changes with the seasons		world
Animals, including humans	Children know That there are different types of animals (for example, wild or pet animals). How to use good looking skills to help make observations. That living things need to eat to survive.	Children know That there are different living things in our world. How to look carefully at things, using all of their sense. How and where to look up information about the living things in our world.	Children know Animals have different needs, body parts and skills. How to make observations and talk about similarities and differences. How to ask questions to help them differentiate different living organisms.
	A human body is made up of different parts. Children can Name and identify some familiar animals.	Children can 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	Children can Begin to classify animals according to a number of given criteria Point out differences between living and non-living things
	Describe some observable features of familiar animals noticing some similarities and differences.	describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	Name some parts of the human body that cannot be seen Say why certain animals have certain characteristics

	Identify what some familiar animals eat. Name and locate some parts of the body. Name some of the different senses and begin to relate them to parts of the body	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Name a range of wild animals
Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding Expectations
		Summer Term	
Seasonal changes	Children know	Children know	Children know
•	That the weather can be different on different days and in different places.	That the weather changes depending on what time of year it is.	The season names, and when they fall in a year.
		The names of the 4 seasons, and when these seasons fall in a	How to use descriptive language to explain what they are
	How to dress for different types of weather.	year.	seeing.
	How to use their senses to make	That a day has 24 hrs in it, and that some of the day is daytime and some is night time.	That different parts of the world have different weather.
	observations about what they see around		Children can
	them.	Children can Observe changes across the four seasons	Observe features in the environment and explain that these are related to a specific season
	Children can		
	Name some of the seasons.	Observe and describe weather associated with the seasons and how day length varies.	Observe and talk about changes in the weather
	Observe and describe the current weather.		Talk about weather variation in different parts of the world
	Demonstrate some understanding of how		work
	the weather changes with the seasons		
Plants	Children know	Children know	Children know
	That there are different types of plants.	Some names of plants, and understand that there are different types of plants/flowers/trees.	The names of the different parts of a plant and understands that each part has a job to play.
	Plants/trees are living things that are		
	made up of different parts.	How to look carefully at plants to see similarities and differences.	Children can
	Children can Identify and name some familiar plants.	How to use scientific equipment such as magnifying glasses.	Begin to describe what each part of a plant does (e.g. roots, stem, leaves, petals, pollen) on a range of plants
	33 7 1	How to describe what they are looking at.	, , , , , , , , , , , , , , , , , , , ,

	Begin to Identify and name the main parts of a plant.	How to draw and record what they see.	
		Children can Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	
		Identify and describe the basic structure of a variety of common flowering plants, including trees.	
		Draw diagrams showing the parts of different plants including trees.	
		Keep records of how plants have changed over time, for example the leaves falling off trees and buds opening.	
Key Vocabulary	SEASONAL CHANGES - rain sun snow wir snowing, hailing, sleet, frost, fog, mist, icy, ANIMALS INCLUDING HUMANS - head, eyebrows, eyelashes, nose, hair, mouth, tee scales, feathers, fur, beak, senses, hearing, s MATERIALS - wood, plastic, glass, metal, v waterproof/not waterproof, absorbent/not of	eciduous, leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trand cloud hot cold day, night, Season, spring, summer, autumn, winter rainbow, thunder, lightning, storm, light, dark arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth, Body, th, tongue, feet, toes, fingers, nails, ankle, calf, thigh, hips, waist, trusteling, touching, smelling, tasting, smooth, bright, dim, loud, quiet evater, and rock, brick, paper, fabrics, elastic, foil, hard/soft, stretchy/sabsorbent, opaque/transparent answers, equipment, gather, measure, record, results, sort, group, te	r, weather, warm, cool, sunny, cloudy, windy, rainy, , head, neck, arms, elbows, legs, knees, face, ears, eyes, ınk, chest, shoulders, back, hands, wrist, tail, wing, claw, fin, stiff, shiny/dull, Rough/smooth, bendy/not bendy,

		Year 2	
Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding
			Expectations
		OVERACHING THROUGHOUT THE YEAR	
Working Scientifically	Asking Questions	Asking Questions Explore the world around them and raise their own simple	Asking Questions
	Ask simple questions Recognise that questions can be answered	questions	Raise their own relevant questions about the world around them
	in different ways	questions	Participate in a range of scientific experiences including
	th aggerent wags	Observing Closely	different types of science enquiries to answer questions
	Observing Closely	Use - sight, touch, smell, hearing or taste to help answer	Start to make their own decisions about the most
	Find out by watching, listening, tasting,	questions	appropriate type of scientific enquiry they might use to
	smelling and touching	Use some scientific words to describe what they have seen and	answer questions
		measured	
	Performing Tests	Compare several things	Observing Closely
	Give reasons for their answers	, , , , , , , , , , , , , , , , , , ,	Suggest ways of finding out through listening, hearing,
		Performing Tests	smelling, touching and tasting
	Identifying and Classifying	Carry out a simple fair test	3.
	Discuss similarities and differences	Explain why it might not be fair to compare two things	Performing Tests
	Explain what they have found out using	Say whether things happened as they expected	Say whether things happened as they expected and if not
	scientific vocabulary?	Suggest how to find things out	why not
		Use prompts to find things out	
	Recording Findings		Identifying and Classifying
	Make accurate measurements using	Identifying and Classifying	Suggest more than one way of grouping animals and
	nonstandard measurements i.e. unifix	Organise things into groups	plants and explain their reason
		Find simple patterns (or associations)	
		Identify animals and plants by a specific criteria, e.g. lay eggs or	Recording Findings
		not; have feathers or not	Use information from books and online information to find
			things out
		Recording Findings	
		Use text, diagrams, pictures, charts, tables to record their	
		observations	
		Measure using simple equipment	
		Autumn Term	
Uses of Everyday Materials	Children know	Children know	Children know
	How to use their sense especially sight and	The names of different types of materials.	Names of a range of different materials.
	touch to explore different materials.		
		That different objects can be made up of different materials, and	Different ways of grouping objects.
	What things get hot/cold.	that those materials don't always look the same.	
		_	About the natural world and the man made world.
	Children can	How to manipulate different objects.	

	Describe things that are similar and different between materials Explain what happens to certain materials when they are heated, e.g. bread, ice, chocolate Explain what happens to certain materials when they are cooled, e.g. jelly, heated chocolate	Children can 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	Children can Describe the properties of different materials using words like, transparent or opaque, flexible, etc. Sort materials into groups and say why they have sorted them in that way Say which materials are natural and which are manufactured
Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding Expectations
		Spring Term	
Animals Including Humans	Children know That there are wild animals, farm animals and pets. Names of some animals Where to look to find out information. Children can Name and identify some familiar animals. Describe some observable features of familiar animals noticing some similarities and differences. Identify what some familiar animals eat. Name and locate some parts of the body. Name some of the different senses and begin to relate them to parts of the body.	Children know Some animal names. Some parts of both animal and human bodies by their correct scientific name. That they can look in books and on computers to find out information. That to stay healthy we have to do a number of things, for example healthy diet, exercise and sleep. Children can Notice that animals, including humans, have offspring which grow into adults 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.	Children know Names of different animals both the adult and they baby. That around the world different animals live in different places. How to find out information. Children can Explain that some baby animals are born live or in eggs. Explain that the needs of a baby animal might be different to those of an adult.

Living things and their habitats	Children know	Children know	Children know
	The names of some living animals.	That living things can die/decay.	Understand that different habitats have different features.
	That around the world different countries look different.	Where to look to find out information.	Different animals names and their features.
	That animals including humans need	How to use scientific equipment.	Children can Name some characteristics of an animal that help it to live
	things to survive, such as food/water/shelter.	Children can	in a particular habitat.
	All living things grow and change and die.	Explore and compare the differences between things that are living, dead, and things that have never been alive	Describe what animals need to survive and link this to their habitats.
	Children can Identify things that are living and dead.	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	
	Match certain living things to the habitats they are found in.	depend on each other	
	Describe some key things that a habitat can provide e.g. shelter.	Identify and name a variety of plants and animals in their habitats, including micro-habitats	
	Understand that living things go through a life process/life cycle.	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	
	Read and understand a simple food chain.	name afficient sources of jood	
Knowledge and Skills Area	Emerging Towards Expectations	Working At Expectations	Exceeding Expectations
		Summer Term	
Plants	Children know	Children know	Children know
	The names of different parts of a plant.	That plants need things to thrive.	The names of some common plants and what they need to survive.
	That different parts of a plant have different roles.	How to use all of their senses to make observations.	The names of different parts of plants.
	How to use their senses to look carefully at things.	How to use some scientific equipment, such as magnifying glasses.	Children can Describe what plants need to survive and link it to where
	Children can	Children can	they are found Explain that plants grow and reproduce in different ways

	Begin to describe what each part of a plant does (e.g. roots, stem, leaves, petals, pollen) on a range of plants	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.	
Key Vocabulary	PLANTS - seeds, bulbs, water, light, growth, healthy, shoot, seedling LIVING THINGS - Suited suitable habitat micro-habitat food chain shelter feature leaf litter ANIMALS - Body, head, neck, arms, elbows, legs, knees, face, ears, eyes, eyebrows, eyelashes, nose, hair, mouth, teeth, tongue, feet, toes, fingers, nails, ankle, calf, thigh, hips, waist, trunk, chest, shoulders, back, hands, wrist, tail, wing, claw, fin, scales, feathers, fur, beak, senses, hearing, seeing, touching, smelling, tasting, smooth, bright, dim, loud, quiet, high, low offspring, life cycles, basic needs air, survival, exercise, food types (fruit and veg, bread, rice, pasta, milk, dairy, foods high in fat and sugar, meat, fish, eggs, beans), hygiene allergy vitamins portion balanced active perspire germs grow, change, adults, water, food Nutrition, food types, carbohydrates, protein, vitamins and minerals, fat, sugar, fruits and veg, dietary fibre, water, balanced diet, slelton, muscles, support, protection, movement, names of bones, vertebrate, invertebrate MATERIALS- transparent or opaque, flexible, natural, manufactured Suitable/unsuitable, use, object, material, property, wood, plastic, glass, metal water, rock, fabrics, hard, soft, stretchy, flexible, waterproof, absorbent, transparent, translucent, opaque, shape, change, twist, squash, bend, stretch, roll, squeeze		aring, seeing, touching, smelling, tasting, smooth, bright, roods high in fat and sugar, meat, fish, eggs, beans), hygiene ter, balanced diet, slelton, muscles, support, protection, property, wood, plastic, glass, metal water, rock, fabrics,