Hunstanton Primary School Science Progression Map

WHOLE SCHOOL CURRICULUM INTENT					
Develop understanding of our locality	Develop understanding of significant events, people and places in our locality	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism	Developing an understanding of the wider world	Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community	World issues tackled at a local level – how to make a difference
EYFS					
Unit: Autumn 1- All About Me 2023					
Links to Prior Learning	WHOLE SCHOOL INTENT				
	Tastes and flavours-food around world Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism				
Unit: Autumn 2- Celebrations					
Links to Prior Learning	WHOLE SCHOOL INTENT				
Changing seasons- Autumn- leaves falling.	Develop understanding of our locality World issues tackled at a local level – how to make a difference				
Unit: Spring 1 2024- Animals					
Links to Prior Learning	WHOLE SCHOOL INTENT				

Changing seasons- Winter	World issues tackled at a local level – how to make a difference	
Unit: Spring 2 2024- Growing		
Links to Prior Learning Changing seasons- Autumn, Winter, Spring	WHOLE SCHOOL INTENT	
	World issues tackled at a local level – how to make a difference Developing an understanding of the wider world	
Unit: Summer 1- Farms		
Links to Prior Learning	WHOLE SCHOOL INTENT	
Changing seasons- Autumn, Winter, Spring. Describe what they see, hear and feel.	World issues tackled at a local level – how to make a difference Developing an understanding of the wider world	
Unit: Summer 2		
Links to Prior Learning	WHOLE SCHOOL INTENT	
	Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community	

YEAR 1		
Unit: Animals including humans : Ourselves		
Links to Prior Learning	Objectives - Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS - body parts and senses.	**(K)** Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. **(WS)** Observing closely, using simple equipment **(WS)** Performing simple tests **(WS)** Identifying and classifying	Developing an understanding of the wider world - *through exploring with senses e.g. nature, new/exotic foods etc.*
Unit: Animals including humans : Our pets		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS - ask questions about where they live and the natural world, animal observations, understand growth, decay and changes over time and show care/concern for living things.	**(K)** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals **(K)** Identify and name a variety of common animals that are carnivores, herbivores and omnivores **(K)** Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) **(WS)** Observing closely, using simple equipment **(WS)** Identifying and classifying **(WS)** Gathering and recording data to help in answering questions.	Develop understanding of our locality - *native wildlife, sea creatures.*
Vocabulary	senses, hear, head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, names of animals experienced first-hand from each vertebrate group, parts of the human body including those within the school's RSE policy, senses, touch, see, smell, taste, hear, fingers, skin, eyes, nose, ears, tongue	
Unit: Seasonal change		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Observe changes across the four seasons **(K)** Observe and describe weather associated with the seasons and how day length varies. **(WS)** Observing closely, using simple equipment **(WS)** Using their observations and ideas to suggest answers to questions **(WS)** Gathering and recording data to help in answering questions. **(WS)** Asking simple questions and recognising that they can be answered in different ways	Global warming
Vocabulary	weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length	
Unit: Everyday materials : Let's build		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT

	(K) Distinguish between an object and the material from which it is made **(K)** Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock **(WS)** Observing closely, using simple equipment **(WS)** Identifying and classifying **(WS)** Performing simple tests **(WS)** Asking simple questions and recognising that they can be answered in different ways **(WS)** Using their observations and ideas to suggest answers to questions **(WS)** Gathering and recording data to help in answering questions.	Developing an understanding of the wider world
Unit: Everyday materials : Marvellous materials		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Describe the simple physical properties of a variety of everyday materials **(K)** Compare and group together a variety of everyday materials on the basis of their simple physical properties. **(WS)** Observing closely, using simple equipment **(WS)** Identifying and classifying **(WS)** Asking simple questions and recognising that they can be answered in different ways **(WS)** Using their observations and ideas to suggest answers to questions **(WS)** Gathering and recording data to help in answering questions. **(WS)** Performing simple tests	Materials and the environment Developing an understanding of the wider world
Vocabulary	object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through,	
Unit: Plants		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees **(K)** Identify and describe the basic structure of a variety of common flowering plants, including trees. **(WS)** Observing closely, using simple equipment **(WS)** Identifying and classifying **(WS)** Gathering and recording data to help in answering questions.	PLants and us Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community

Vocabulary	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, names of trees in the local area, names of garden and wild flowering plants in the local area

YEAR 2		
Unit: Materials Matter		
Links to Prior Learning	Objectives - Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses **(WS)** Identifying and classifying **(WS)** Asking simple questions and recognising that they can be answered in different ways **(WS)** Observing closely, using simple equipment **(WS)** Performing simple tests **(WS)** Using their observations and ideas to suggest answers to questions **(WS)** Gathering and recording data to help in answering questions.	Natural versus manmade Developing an understanding of the wider world
Unit: Materials:Squash,bend, stretch Super Scientists		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
Y1 - name and identify observable properties of a variety of everyday materials, compare and group together.	**(K)** Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. **(WS)** Identifying and classifying **(WS)** Asking simple questions and recognising that they can be answered in different ways **(WS)** Observing closely, using simple equipment **(WS)** Performing simple tests **(WS)** Gathering and recording data to help in answering questions.	Developing an understanding of the wider world
Vocabulary	flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching opaque, transparent, translucent, reflective, non-reflective,	
Unit: Habitats		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) 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 **(K)** Identify and name a variety of plants and animals in their habitats, including micro-habitats **(WS)** Identifying and classifying **(WS)** Gathering and recording data to help in answering questions.	Looking after habitats -local study Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism

	(WS) Observing closely, using simple equipment **(WS)** Asking simple questions and recognising that they can be answered in different ways	
Vocabulary	living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, names of local habitats (e.g. pond, woodland etc.), names of micro-habitats (e.g. under logs, in bushes etc.), conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and micro-habitats studied	
Unit: Animals including humans: Ready, Steady Grow		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS-Y1 - body parts and senses. Y2 - animals produce offspring that turn into adults, basic survival needs, exercise, diet and hygiene	**(K)** Explore and compare the differences between things that are living, dead, and things that have never been alive **(K)** Notice that animals, including humans, have offspring which grow into adults **(WS)** Identifying and classifying **(WS)** Using their observations and ideas to suggest answers to questions **(WS)** Gathering and recording data to help in answering questions. **(WS)** Observing closely, using simple equipment	Developing an understanding of the wider world
Unit: Gardens and allotments - the secret of plants		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Observe and describe how seeds and bulbs grow into mature plants **(K)** Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. **(WS)** Observing closely, using simple equipment **(WS)** Asking simple questions and recognising that they can be answered in different ways **(WS)** Performing simple tests **(WS)** Using their observations and ideas to suggest answers to questions	Developing an understanding of the wider world
Vocabulary	light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling names of plants in local habitats and micro-habitats	
Unit: Animals including humans: Healthy animals		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) **(K)** 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.	Looking after all animals Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism

	(K) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **(WS)** Identifying and classifying **(WS)** Performing simple tests **(WS)** Gathering and recording data to help in answering questions.	
Vocabulary	offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g. chick/chicken, kitten/cat, caterpillar/butterfly), survive, survival, water, food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta, dairy)	

YEAR 3		
Unit: Animals including humans		
Links to Prior Learning	Objectives - Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS-Y1 - body parts and senses. Y2 - animals produce offspring that turn into adults, basic survival needs, exercise, diet and hygiene	**(K)** Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat **(K)** Identify that humans and some other animals have skeletons and muscles for support, protection and movement. **(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Asking relevant questions and using different types of scientific enquiries to answer them **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **(WS)** Using straightforward scientific evidence to answer questions or to support their findings.	Keeping healthy Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism
Vocabulary	nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	
Unit: Forces and Magnets		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Compare how things move on different surfaces **(K)** Notice that some forces need contact between two objects, but magnetic forces can act at a distance **(K)** Describe magnets as having two poles **(K)** Predict whether two magnets will attract or repel each other, depending on which poles are facing. **(K)** Observe how magnets attract or repel each other and attract some materials and not others **(K)** Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials	Developing an understanding of the wider world

	(WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **(WS)** Using straightforward scientific evidence to answer questions or to support their findings. **(WS)** Identifying differences, similarities or changes related to simple scientific ideas and processes **(WS)** Asking relevant questions and using different types of scientific enquiries to answer them	
Vocabulary	force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	
Unit: What plants need		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant **(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables **(WS)** Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **(WS)** Identifying differences, similarities or changes related to simple scientific ideas and processes **(WS)** Setting up simple practical enquiries, comparative and fair tests	Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community

	(WS) Using straightforward scientific evidence to answer questions or to support their findings. **(WS)** Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	
Vocabulary	photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport	
Unit: Parts of plants		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers **(K)** Investigate the way in which water is transported within plants **(K)** Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. **(WS)** Asking relevant questions and using different types of scientific enquiries to answer them **(WS)** Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Using straightforward scientific evidence to answer questions or to support their findings.	Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community
Vocabulary	photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport	
Unit: Rocks		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties **(K)** Describe in simple terms how fossils are formed when things that have lived are trapped within rock **(K)** Recognise that soils are made from rocks and organic matter.	Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community

	(WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Setting up simple practical enquiries, comparative and fair tests	
Vocabulary	rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorbs water, fossil, bone, flesh, minerals, marble, chalk, granite, sandstone, slate, types of soil (e.g. peaty, sandy, chalky, clay)	
Unit: Light		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS - explore torches and how they work. - explore Space and the planets - talks about how fireworks work. Include firework safety.	**(K)** Recognise that they need light in order to see things and that dark is the absence of light **(K)** Notice that light is reflected from surfaces **(K)** Recognise that shadows are formed when the light from a light source is blocked by a solid object **(K)** Recognise that light from the sun can be dangerous and that there are ways to protect their eyes **(K)** Find patterns in the way that the size of shadows change. **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions **(WS)** Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	World issues tackled at a local level – how to make a difference
Vocabulary	light, light source, Sun, sunlight, dangerous, dark, absence of light, surface, shadow, reflect, mirror,	

YEAR 4		
Unit: Animals including humans		
Links to Prior Learning	Objectives - Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS-Y1 - body parts and senses. Y2 - animals produce offspring that turn into adults, basic survival needs, exercise, diet and hygiene Y3 - nutrition and skeletons	**(K)** Describe the simple functions of the basic parts of the digestive system in humans **(K)** Identify the different types of teeth in humans and their simple functions **(WS)** Asking relevant questions and using different types of scientific enquiries to answer them **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions **(WS)** Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism
Vocabulary	digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, large intestine, rectum, anus, incisor, canine, molar, premolar, herbivore, carnivore, omnivore, producer, predator, prey	
Unit: States of matter		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Compare and group materials together, according to whether they are solids, liquids or gases **(K)** 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) **(K)** Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **(WS)** Identifying differences, similarities or changes related to simple scientific ideas and processes **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **(WS)** Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Developing an understanding of the wider world
Vocabulary	solid, liquid, gas, heating, cooling, state change, melting, freezing, melting point, boiling, boiling point, evaporation, condensation, temperature, water cycle electrical conductor, electrical insulator, metal, non-metal	
Unit: Electricity		

Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
	(K) Identify common appliances that run on electricity **(K)** Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers **(K)** Identify 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 **(K)** Recognise some common conductors and insulators, and associate metals with being good conductors. **(K)** Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit **(WS)** Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables **(WS)** Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **(WS)** Using straightforward scientific evidence to answer questions or to support their findings. **(WS)** Asking relevant questions and using different types of scientific enquiries to answer them **(WS)** Identifying differences, similarities or changes related to simple scientific ideas and processes	Power sources good/bad World issues tackled at a local level – how to make a difference
Vocabulary	electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol	
Unit: Living things and their habitats		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
eyfs - Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. y1 - identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals - describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) - identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	**(K)** Recognise that living things can be grouped in a variety of ways **(K)** Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment **(WS)** Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables **(WS)** Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism

- identify and describe the basic structure of a variety of common flowering plants, including trees y3 - identify that humans and some other animals have skeletons and muscles for support, protection and movement (vertebrates)	**(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions **(WS)** Using straightforward scientific evidence to answer questions or to support their findings.	
Vocabulary	classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate	
Unit: Dangers to living things		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
eyfs - Shows care and concern for living things and the environment. y1 - identify and name a variety of common animals that are carnivores, herbivores and omnivores y2 - 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 microhabitats y3 - identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat - explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant	**(K)** Recognise that environments can change and that this can sometimes pose dangers to living things. **(K)** Construct and interpret a variety of food chains, identifying producers, predators and prey. **(WS)** Asking relevant questions and using different types of scientific enquiries to answer them **(WS)** Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Using straightforward scientific evidence to answer questions or to support their findings.	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism World issues tackled at a local level – how to make a difference
Unit: Sound		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
eyfs-y1 - exploration of body parts and the senses: ears for hearing.	**(K)** Identify how sounds are made, associating some of them with something vibrating **(K)** Recognise that vibrations from sounds travel through a medium to the ear **(K)** Find patterns between the pitch of a sound and features of the object that produced it **(K)** Find patterns between the volume of a sound and the strength of the vibrations that produced it **(K)** Recognise that sounds get fainter as the distance from the sound source increases.	Developing an understanding of the wider world

	(WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **(WS)** Setting up simple practical enquiries, comparative and fair tests **(WS)** Identifying differences, similarities or changes related to simple scientific ideas and processes	
Vocabulary	sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, quiet, loud, insulation	

YEAR 5		
Unit: Properties of materials		
Links to Prior Learning	Objectives - Knowledge and Skills	WHOLE SCHOOL INTENT
Y1 - name and identify observable properties of a variety of everyday materials, compare and group together. Y2 - suitability of a variety of everyday materials - materials changing shapes (bending, squashing...) Y4 - conductors (metals) and insulators	**(K)** Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets **(K)** Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **(WS)** Using test results to make predictions to set up further comparative and fair tests	Developing an understanding of the wider world - *Where certain materials come from in the world e.g. wood to make paper/toilet paper, gold & diamonds etc...* World issues tackled at a local level – how to make a difference - *sustainability and recycling of materials.*
Unit: Changes of materials		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
Y4 - 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)	**(K)** Demonstrate that dissolving, mixing and changes of state are reversible changes **(K)** Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. **(K)** Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating **(K)** Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	Developing an understanding of the wider world

	(WS) Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Using test results to make predictions to set up further comparative and fair tests **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	
Vocabulary	thermal insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	
Unit: Animals including humans		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS-Y1 - body parts and senses. Y2 - animals produce offspring that turn into adults, basic survival needs, exercise, diet and hygiene Y3 - nutrition and skeletons Y4 - digestion and teeth	**(K)** Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird **(K)** Describe the changes as humans develop to old age. **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **(WS)** Using test results to make predictions to set up further comparative and fair tests **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments.	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism
Vocabulary	puberty, the vocabulary to describe sexual characteristics in line with the school's RSE policy life cycle, foetus, baby, child, adolescent, adult, reproduce, sexual, sperm, fertilises, egg, live young	
Unit: Living things and their habitats (Plants)		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
Year 3 plants:	**(K)** Describe the life process of reproduction in some plants and animals.	World issues tackled at a local level – how to make a difference

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers - explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and 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, including pollination, seed formation and seed dispersal	**(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **(WS)** Using test results to make predictions to set up further comparative and fair tests **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments.	
Vocabulary	life cycle, reproduce, sexual, fertilises, asexual, plantlets, runners, tubers, cuttings	
Unit: Earth and space		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS - explore Space and the planets	**(K)** Describe the Sun, Earth and Moon as approximately spherical bodies **(K)** Describe the movement of the Earth, and other planets, relative to the Sun in the solar system **(K)** Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. **(K)** Describe the movement of the Moon relative to the Earth **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Using test results to make predictions to set up further comparative and fair tests	Valuing and developing a deeper understanding of Norfolk Know that we have a role in the local area/ community
Vocabulary	Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit	
Unit: Forces		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT

Children are likely to have some concept of the difference between earth and space in the way that astronauts 'float' around - this is a good way to explain how gravity affects us on earth.	**(K)** Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object **(K)** Identify the effects of air resistance, water resistance and friction, that act between moving surfaces **(K)** Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Using test results to make predictions to set up further comparative and fair tests **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Developing an understanding of the wider world
Vocabulary	force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	

YEAR 6		
Unit: Light		
Links to Prior Learning	Objectives - Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS - explore torches and how they work. Y3 - light enables us to see, dark is absence of light. - light is reflected off different surfaces. - light from the sun and protecting eyes. - how shadows are formed and their shape/size.	**(K)** Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes **(K)** Recognise that light appears to travel in straight lines **(K)** Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye **(K)** Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	Developing an understanding of the wider world
Vocabulary	straight lines, light rays	
Unit: Evolution and inheritance		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
Y3 - describe in simple terms how fossils are formed when things that have lived are trapped within rock	**(K)** Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago **(K)** Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents **(K)** Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism
Vocabulary	offspring, sexual reproduction, vary, characteristics, adapted, inherited, species, evolve, evolution	
Unit: Electricity		

Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
Y4 - common electrical appliances - simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers - complete circuits and switches - will a lamp light? - common conductors (metals) and insulators.	**(K)** Use recognised symbols when representing a simple circuit in a diagram. **(K)** Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit **(K)** Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Using test results to make predictions to set up further comparative and fair tests **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate	Developing an understanding of the wider world
Vocabulary	circuit diagram, circuit symbol, voltage	
Unit: Living things and their habitats		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS - ask questions about where they live and the natural world, animal observations, understand growth, decay and changes over time and show care/concern for living things. Y1 - vertebrates - groups and features - carnivores, herbivores and omnivores - naming wild and garden plants, including deciduous and evergreen trees, flowering plants. Y2 - living, dead or never been alive - recognise what a habitat is/provides - identifying living things in their habitats - food chains - seeds - bulbs - mature plants	**(K)** Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals **(K)** Give reasons for classifying plants and animals based on specific characteristics. **(WS)** Identifying scientific evidence that has been used to support or refute ideas or arguments. **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **(WS)** Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism World issues tackled at a local level – how to make a difference

- what plants need to be healthy Y3 - plants: parts of a flower/plant, requirements for life and growth of plants (and how they vary between plants), how water is transported in plants, seed dispersal and pollination. Y4 - grouping living things using classification keys. Environmental changes and how they pose danger to living things.	**(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Using test results to make predictions to set up further comparative and fair tests	
Vocabulary	flowering, non-flowering, mosses, ferns, conifers vertebrates, fish, amphibians, reptiles, birds, mammals, warm-blooded, cold-blooded, invertebrates, insects, spiders, snails, worms, flowering, non-flowering, mosses, ferns, conifers	
Unit: Animals including humans		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
EYFS-Y1 - body parts and senses. Y2 - animals produce offspring that turn into adults, basic survival needs, exercise, diet and hygiene Y3 - nutrition and skeletons Y4 - digestion and teeth Y5 - life cycles	**(K)** Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood **(K)** Describe the ways in which nutrients and water are transported within animals, including humans. **(K)** Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function **(WS)** Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **(WS)** Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **(WS)** Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	Acceptance & Understanding - developing knowledge of the wider world today – exposure to multiculturalism
Vocabulary	heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, cycle, circulatory system, diet, drugs, lifestyle	
Unit: *Child lead enquiry*		
Links to Prior Learning	Objectives – Knowledge and Skills	WHOLE SCHOOL INTENT
TBC	**UKS2 Working Scientifically objectives:** During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: ● planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	

	● taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ● recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ● using test results to make predictions to set up further comparative and fair tests ● reporting and presenting findings from enquiries, including conclusions, causal ● relationships and explanations of and degree of trust in results, in oral and written ● forms such as displays and other presentations ● identifying scientific evidence that has been used to support or refute ideas or arguments.	