

Broadwood Primary School Science - Progression map

EYFS

Understanding the world

3 and 4 year olds will be learning to:

- Use all senses in hands-on exploration of natural materials
- Explore collections of materials with similar and/or different materials
- Talk about what they see using a wide vocabulary
- Explore how things work
- Plant seeds and care for growing plants
- Understand the key features of the life cycle of a plant or an animal
- Begin to understand the need to care for the environment and living things
- Explore and talk about forces they can feel
- Talk about the differences between materials and changes they notice

Reception 4 to 5 year olds will be learning to:

- Explore the natural world around them
- Describe what they see, hear and feel whilst outside
- Recognise some environment's that are different to the one in which they live
- Understand the effect of changing seasons on the world around them

Children will begin to make sense of their physical world and their community. They will listen to a broad selection of stories, non-fiction, rhymes and poems to foster their understanding of our world. Children will 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.

National Curriculum statements in red are from other linked topics.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
Plants	Become familiar with	Observe and describe	Identify and describe	Y4 - Living things and	Y5 - Living things and	Y6 - Living things and		
	common names of	how seeds and bulbs	the functions of	their habitats	their habitats	their habitats		
	flowers and plant	into mature plants	different parts of	Recognise that living	Describe the life	Describe how living things		
	structures including		flowering plants:	things can be grouped	process of	are classified into broad		
	seeds	Find out and describe	roots, stem/trunk,	in a variety of ways.	reproduction in some	groups according to		
		how plants need	leaves and flowers		plants and animals.	common observable		
	Identify and describe	water, light and a	Explore the	Explore and use		characteristics and based		
	the basic structure	suitable temperature	requirements of plants	classification keys to		on similarities and		
			for life and growth	help group, identify		differences, including		

of a variety of	to grow and stay	(air, light, water,	and name a variety of	micro-organisms, plants
common flowering	healthy	nutrients from soil,	living things in their	and animals.
plants,		and room to grow)	local and wider	
including trees	Find out and describe	and how they vary	environment.	Give reasons for
Become familiar with	how plants	from plant to plant		classifying plants and
common names of	need water, light and		Recognise that	animals based on specific
flowers and plant	a suitable	Investigate the way in	environments can	characteristics.
structures.	temperature to grow	which water is	change and that this	
	and stay healthy.	transported within	can sometimes pose	
Identify and name a		plants	dangers to living	
variety of common	Understand the		things.	
wild and garden	requirements of	Explore the part that		
plants.	plants for	flowers play in the life		
	germination, growth	cycle of flowering		
Identify and name a	and survival, as well	plants, including		
variety of deciduous	as, the	pollination, seed		
and evergreen trees.	processes of	formation and seed		
	reproduction and	dispersal		
Understand how	growth in plants.			
plants change over		Skills		
time.	Observe and describe	Ask relevant questions		
	how seeds and bulbs	and using different		
Observe the growth of	grow into mature	types of scientific		
planted flowers	plants.	enquiries to answer		
		them		
Become familiar with	Find out and describe			
plant structures	how plants need	Set up simple practical		
	water, light and a	enquiries,		
Keep records of how	suitable temperature	comparative and fair		
plants change over	to grow and stay	tests		
time	healthy.			
	a			
Skills	Skills			
Observe closely, using	Observe closely, using			
simple equipment	simple equipment			
Perform simple tests	Perform simple tests			
Identify and classify				

	Use their observations	Gather and record				
	and ideas to suggest	data to help in				
	answers to questions	answering questions.				
	answers to questions	answering questions.				
	Gather and record	Identifying and				
	data to help in	classifying				
	answering questions.	Classifyilig				
Animals	Identify and name a	Lifecycles	Identify that animals,	Describe the simple	Describe the changes	Identify and name the
	1	· 		functions of the basic		
Including	variety of common	Notice that animals,	including humans,		as humans develop to	main parts of the human
Humans	animals including fish,	including humans,	need the right types	parts of the digestive	old age	circulatory system, and
	amphibians, reptiles,	have offspring which	and amount of	system in humans	61.111	describe the functions of
	birds and mammals	grow into adults	nutrition, and that	Identify the different	Skills	the heart, blood vessels
	Identify and name a		they cannot make	types of teeth in		and blood Recognise the
	variety of common	Recognise the stages	their own food; they	humans and their	Report and present	impact of diet, exercise,
	animals that are	of the human lifecycle.	get nutrition from	simple functions	findings from	drugs and lifestyle on the
	carnivores, herbivores		what they eat Identify	Construct and	enquiries, including	way their bodies function
	and omnivores	Identify the offspring	that humans and	interpret a variety of	conclusions, causal	Describe the ways in
		and parent of an	some other animals	food chains,	relationships and	which nutrients and
	Describe and compare	animal.	have skeletons and	identifying producers,	explanations of and	water are transported
	the structure of a		muscles for support,	predators and prey	degree of trust in	within animals, including
	variety of common	Explore the lifecycle of	protection and		results, in oral and	humans
	animals (fish,	a chicken, butterfly	movement	Skills	written forms such as	
	amphibians, reptiles,	and frog.			displays and other	Skills
	birds and mammals		Skills	Set up simple practical	presentations	
	including pets)	Health and Survival	Ask relevant questions	enquiries,		Plan different types of
		Find out about and	and using different	comparative and fair		scientific enquiries to
	Identify, name, draw	describe the	types of scientific	tests		answer questions,
	and label the basic	basic needs of	enquiries to answer			including recognising and
	parts of the human	animals, including	them	Gather, record,		controlling variables
	body and say which	humans, for survival	Set up simple practical	classify and present		where necessary
	part of the body is	(water, food and	enquiries,	data in a variety of		Take measurements,
	associated with each	air)	comparative and fair	ways to help in		using a range of scientific
	sense		tests	answering questions		equipment, with
		Describe the	Set up simple practical			increasing accuracy and
	Skills	importance for	enquiries,	Record findings using		precision, taking repeat
	Observe closely, using	humans	comparative and fair	simple scientific		readings when
	simple equipment	of exercise, eating the	tests	language, drawings,		appropriate
	Identify and classify	right amounts		labelled diagrams,		

	Use their observations and ideas to suggest answers to questions Gather and record data to help in answering questions.	of different types of food, and hygiene Skills Observe closely, using simple equipment Asking simple questions and recognise that they can be answered in different ways Perform simple tests Identify and classify Use their observations and ideas to suggest answers to questions Gather and record	Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences,	keys, bar charts, and tables		Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Report and present findings Identify scientific evidence that has been used to support or refute ideas or arguments.
Living things and their habitats	Y1 – Plants 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,	data to help in answering questions. 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	similarities or changes related to simple scientific ideas and processes Y3 - Plants Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	Recognise that living things can be grouped in a variety of ways Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals Skills	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 Give reasons for classifying plants and animals based on specific
	including trees. Y1 - Animals including humans Identify and name a variety of common animals	Identify and name a variety of plants and animals in their		Recognise that environments can change and that this can sometimes pose	Plan different types of scientific enquiries to answer questions, including recognising	characteristics Skills

including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Y1 - Seasonal changes Observe changes across the four

seasons.

habitats, including microhabitats

Explore and compare the differences between things that are living, dead, and things that have never been alive

Identify and name a variety of plants and animals in their habitats, including microhabitats

Describe how animals obtain their food from plants and other animals using the idea of a simple food chain

Identify and name different sources of food

Skills

Observe closely, using simple equipment Perform simple tests Identify and classify Use their observations and ideas to suggest answers to questions

dangers to living things

Skills

Make systematic and careful observations and, where appropriate, taking accurate measurements. Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences, similarities or changes related to simple scientific ideas and processes Use straightforward scientific evidence to answer questions or to support their findings

and controlling variables where necessary

Report and present 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

Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
Use test results to make predictions to set up further comparative and fair tests

Materials	Distinguish between	Identify and compare	Y3 - Rocks	Y4 - Space Incl States	Compare and group	Y6 - Evolution and
	an object and the	the suitability of a	Compare and group	of matter	together everyday	inheritance
	material from which it	variety of everyday	together different	compare and group	materials on the basis	Recognise that living
	is made Identify and	materials, including	kinds of rocks on the	materials together,	of their properties,	things have changed over
	name a variety of	wood, metal, plastic,	basis of their	according to whether	including their	time and that fossils
	everyday materials,	glass, brick, rock,	appearance and	they are solids, liquids	hardness, solubility,	provide information
	including wood,	paper and cardboard	simple physical	or gases	transparency,	about living things that
	plastic, glass, metal,	for particular uses Find	properties		conductivity (electrical	inhabited the Earth
	water, and rock	out how the shapes of	recognise that soils		and thermal), and	millions of years ago.
		solid objects made	are made from rocks		response to magnets	
	Describe the simple	from some materials	and organic matter			
	physical properties of	can be changed by			Know that some	
	a variety of everyday	squashing, bending,			materials will dissolve	
	materials	twisting and stretching			in liquid to form a	
					solution, and describe	
	Compare and group	Skills			how to recover a	
	together a variety of	Observe closely, using			substance from a	
	everyday materials on	simple equipment			solution	
	the basis of their	Perform simple tests				
	simple physical	Identify and classify			Use knowledge of	
	properties	Gather and record			solids, liquids and	
		data to help in			gases to decide how	
	Skills	answering questions.			mixtures might be	
	Observe closely, using				separated, including	
	simple equipment					
	Asking simple				Compare and group	
	questions and				together everyday	
	recognise that they				materials on the basis	
	can be answered in				of their properties,	
	different ways				including their	
	Perform simple tests				hardness, solubility,	
	Identify and classify				transparency,	
	Use observations and				conductivity (electrical	
	ideas				and thermal), and	
	to suggest answers to				response to magnets	
	questions				K H I	
					Know that some	
					materials will dissolve	

				in liquid to form a solution, and describe how to recover a substance from a solution Use knowledge of solids, liquids and	
				gases to decide how mixtures might be separated, including Skills	
				Take measurements, using a range of scientific equipment, with increasing accuracy and	
				precision, taking repeat readings when appropriate Report and present findings	
				Identify scientific evidence that has been used to support or refute ideas or arguments.	
Earth and Space (incl States of matter)	Y1 - Seasonal changes Observe changes across the four seasons. Observe and describe weather associated		Compare and group materials together, according to whether they are solids, liquids or gases	Describe the movement of the Earth and other planets relative to the sun in the solar system	
	with the seasons and how day length varies.		Observe that some materials change state when they are heated or cooled, and measure or research	Describe the movement of the moon relative to the Earth	

			the temperature at which this happens in degrees Celsius (°C) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation Skills Ask relevant questions and using different types of scientific enquiries to answer Set up simple practical enquiries Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, Report on findings from enquiries, Record data and results of increasing complexity	Describe the sun, Earth and moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky Skills Take measurements, using a range of scientific equipment, with increasing accuracy and precision Use test results to make predictions to set up further comparative and fair tests Report and present 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	
Light	Y1 - Animals, including humans Identify, name, draw and label the basic	Recognise that they need light in order to see things and that		presentations	Recognise that light appears to travel in straight lines

parts of the human body and say which part of the body is associated with each sense.

dark is the absence of light

Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect their eyes

Recognise that shadows are formed when the light from a light source is blocked by an opaque object

Find patterns in the way that the size of shadows change

Skills

Gather, record, classify and present data in a variety of ways to help in answering questions Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
Use straightforward scientific evidence to answer questions or to support their findings

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

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

Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

Skills

Plan different types of scientific enquiries to answer questions, including recognising and controlling variables Take measurements, using a range of scientific equipment, with increasing accuracy and precision, Use test results to make predictions to set up further comparative and fair tests Identify scientific evidence that has been

				used to support or refute ideas or arguments.
Forces and	Y2 - Uses of everyday	Compare how things	Compare how things	
Magnets	materials Find out	move on different	move on different	
	how the shapes of	surfaces Notice that	surfaces Notice that	
	solid objects made	some forces need	some forces need	
	from some materials	contact between 2	contact between 2	
	can be changed by	objects, but magnetic	objects, but magnetic	
	squashing, bending,	forces can act at a	forces can act at a	
	twisting and	distance	distance Observe how	
	stretching.		magnets attract or	
		Observe how magnets	repel each other and	
		attract or repel each	attract some materials	
		other and attract	and not others	
		some materials and	Compare and group	
		not others	together a variety of	
			allow a smaller force	
		Compare and group	to have a greater	
		together a variety of	effect	
		Compare how things	Skills	
		move on different		
		surfaces	Plan different types of	
			scientific enquiries to	
		Notice that some	answer questions,	
		forces need contact	including recognising	
		between 2 objects,	and controlling	
		but magnetic forces	variables where	
		can act at a distance	necessary	
			Take measurements,	
		Observe how magnets	using a range of	
		attract or repel each	scientific equipment,	
		other and attract	with increasing	
		some materials and	accuracy and	
		not others	precision, taking	
			repeat readings when	
			appropriate	

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

Describe magnets as having 2 poles Predict whether 2 magnets will attract or repel each other, depending on which poles are facing

Skills

Set up simple practical enquiries Make systematic and careful observations, taking accurate measurements using standard units, using a range of equipment Gather, record, classify and present data in a variety of ways to help in answering questions Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions

Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Use test results to make predictions to set up further comparative and fair tests Report and present 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 Identify scientific evidence that has been used to support or refute ideas or arguments.

Associate the brightness
of a lamp or the volume
of a buzzer with the
number and voltage of
cells used in the circuit
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 Use recognised
symbols when
representing a simple
circuit in a diagram
Skills
Plan different types of
scientific enquiries to
answer questions,
including recognising and
controlling variables
where necessary
Take measurements,
using a range of scientific
equipment, with
increasing accuracy and

			Recognise some	precision, taking repeat
			common conductors	readings when
			and insulators, and	appropriate
			associate metals with	арргорнисс
			being good conductor	Record data and results
			being good conductor	of increasing complexity
			Skills	using scientific diagrams
			Ask relevant questions	and labels, classification
			and using different	keys, tables, scatter
			types of scientific	graphs, bar and line
			enquiries to answer	graphs
			them	
				Report and present
			Set up simple practical	findings from enquiries,
			enquiries,	including conclusions,
			comparative and fair	causal relationships and
			tests	explanations of and
			Report on findings	degree of trust in results,
			from enquiries	in oral and written forms
			Identify differences,	such as displays and
			similarities or changes	other presentations
			related to simple	Identify scientific
			scientific ideas and	evidence that has been
			processes	used to support or refute
				ideas or arguments.
Sound	Y1 - Animals,		Identify how sounds	
	including humans		are made, associating	
	Identify, name, draw		some of them with	
	and label the basic		something vibrating	
	parts of the human			
	body and say which		Recognise that	
	part of the body is		vibrations from	
	associated with each		sounds travel through	
	sense.		a medium to the ear	
			Find patterns between	
			the pitch of a sound	
			and features of the	

	object that produced	
	it	
	it.	
	Find patterns between	
	the volume of a sound	
	and the strength of	
	the vibrations that	
	produced it	
	Recognise that sounds	
	get fainter as the	
	distance from the	
	sound source	
	increases	
	Skills	
	Ask relevant questions	
	and using different	
	types of scientific	
	enquiries to answer	
	them	
	Set up simple practical	
	enquiries,	
	comparative and fair	
	tests	
	Report on findings	
	from enquiries,	
	including oral and	
	written explanations,	
	displays or	
	presentations of	
	results and	
	conclusions	
	Identify differences,	
	similarities or changes	
	related to simple	

	 		and a section of the section of	
			scientific ideas and	
			processes	
			Use straightforward	
			scientific evidence to	
			answer questions or to	
			support their findings	
Rocks		Compare and group		
		together different		
		kinds of rocks on the		
		basis of their		
		appearance and		
		simple physical		
		properties		
		p. operaco		
		Describe in simple		
		terms how fossils are		
		formed when things		
		that have lived are		
		trapped within rock.		
		Recognise that soils		
		are made from rocks		
		and organic matter		
		Skills		
		Set up simple practical		
		enquiries,		
		comparative and fair		
		tests		
		Gather, record,		
		classify and present		
		data in a variety of		
		ways		
		Record findings using		
		simple scientific		
		language, drawings,		
		labelled diagrams,		
		keys etc		
		reys ell		

		Use results to draw		
		simple conclusions,		
		make predictions for		
		new values, suggest		
		improvements and		
		raise further questions		
Evolution	Y2 - Living things and	Y3 - Rocks	Y4 - Living things and	Recognise that living
	their habitats	Describe in simple	their habitats	things have changed over
	dentify that most	terms how fossils are	Recognise that	time and that fossils
	iving things live in	formed when things	environments can	provide information
	nabitats to which they	that have lived are	change and that this	about living things that
	are suited and	trapped within rock.	can sometimes pose	inhabited the Earth
	describe how different	trupped within rock.	dangers to living	millions of years ago
	habitats provide for		things.	minoris or years ago
	the basic needs of		umigs.	Recognise that living
	different kinds of			things produce offspring
	animals and plants,			of the same kind, but
	and how they depend			normally offspring vary
	on each other.			and are not identical to
	on each other.			their parents
				then parents
				Identify how animals and
				plants are adapted to suit
				their environment in
				different ways and that
				adaptation may lead to
				evolution
				Skills
				Record data and results
				of increasing complexity
				using scientific diagrams
				and labels, classification
				keys, tables, scatter
				graphs, bar and line
				graphs
				Identify scientific
				evidence that has been

						used to support or refute ideas or arguments.		
Seasonal	Observe changes		Y3 - Light		Y5 - Earth and space	<u> </u>		
Changes	across the 4 seasons		Recognise that light		Use the idea of the			
			from the sun can be		Earth's rotation to			
	Observe and describe		dangerous and that		explain day and night			
	weather associated		there are ways to		and the apparent			
	with the seasons and		protect their eyes.		movement of the Sun			
	how day length varies				across the sky.			
	Skills							
	Perform simple tests							
	Use their observations							
	and ideas to suggest							
	answers to questions							
	Gather and record							
	data to help in							
	answering questions.							
Looking						Further develop working		
After the						scientific skills. Explore:		
Environment						the core concepts – 'so		
						what the climate is, how it changes, the difference		
						between a man-made		
						and natural environment		
						and where different types		
						of animals live'.		
						Challenge children to		
						recall the knowledge and		
						skills they have covered		
						in the previous lesson(s).		
						During year 3 children		
						completed a unit on		
						Scientific Enquiry.		
Scientific	1	Year 3 - Identify and learn the scientific skills they will need to apply during each unit of learning during key stage 2. Ask relevant questions and use						
Enquiry	different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful							
	observations and, where appropriate, take accurate measurements using standard units, and use a range of equipment, including thermometers and							

data loggers. Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

Identify differences, similarities or changes related to simple scientific ideas and processes. Use straightforward scientific evidence to answer questions

or to support their findings.