St Oswald's Science Knowledge Progression Map

Animals, including humans Explore the natural world finduling humans and plants. Identify, name, draw and plants. Identify and name a variety of common animals including pits, including humans. Identify and name a variety of common animals fish, amphibians, reptiles, birds and monivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including a product of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including perts). Describe the inportance of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including perts). Describe the manulas, including humans, nave offspring which grow into adults and wish deed the basic parts of the destriction from what they eat. including humans and their own food, they get their nutrition, and they cannot make their own food, they get their nutrition from what they eat. including humans including humans including humans including humans. Identify that humans and their simple functions of heart, bload vessels are blood vessels are blood vessels are blood vessels are blood. Skeptile on the way the dead of the residual to the reportance of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including and name a variety of common animals (fish, amphibians, reptiles, birds and mammals, including and name a variety of common animals (fish, amphibians, reptiles, birds and mammals, including and name a variety of common animals (fish, amphibians, reptiles, birds and mammals and their portance of a variety of common animals (fish, amphibians, reptiles, birds and mammals obtain their food from plants and other animals, using the idea Identify humans, of surfly the different types of teeth in humans and their simple functions. Identify the different types of teeth in humans and their simple functions. Identify that humans and variet		Reception (see EYFS links document)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
identify and name different sources of food. (Y2 - Living things and their habitats) things and their habitats) Give reasons for classify plants and animals bas on specific characteristi	including humans	links document) Explore the natural world around them, making observations and drawing pictures of animals and plants. Explore their own bodies and their senses. Learn to name the parts of the body and what we use them for. Learn about being healthy, including eating a range of foods and taking part in	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 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 Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including	Know that animals, including humans, have offspring which grow into adults Know the basic stages in a life cycle for animals, including humans. Find out 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. 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. (Y2 - Living	Identify that animals, including humans, need the right types and amount of nutrition, and they cannot make their own food; they get their nutrition from what they eat. Know how nutrients, water and oxygen are transported within animals and humans. Know about the importance of a nutritious, balanced diet. Identify that humans and some other animals have skeletons and muscles for support, protection and	Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers, predators	Describe the changes as humans develop to old age. Learn about the changes experienced in puberty (SRE) Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats) Describe the life process of reproduction in some plants and animals. (Y5 - Living	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans. 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. (Y6 - Living things and their habitats) Give reasons for classifying plants and animals based on specific characteristics. (Y6 - Living things and their

Living things	Know some similarities and	Identify and name a	Explore and compare the	Explore the part that	Recognise that living	Know the life cycle of	Classify living things into
and their	differences between the	variety of common wild	difference between things	flowers play in the life cycle	things can be grouped	different living things, e.g.	broad groups according to
habitats	natural world around them	and garden plants,	that are living, dead and	of flowering plants,	in a variety of ways.	Mammal, amphibian, insect	observable characteristics
	and contrasting	including deciduous and	things that have never been	including pollination, seed		bird.	and based on similarities
(Biology)	environments, drawing on	evergreen trees. (Y1 -	alive.	formation and seed	Explore and use		and differences, including
(Biology)	their experiences and what	Plants)		dispersal. (Y3 - Plants)	classification keys to	Describe he process of	micro-organisms, plants and
	has been read in class.		Identify that most living		help group, identify	reproduction in some	animals.
		Identify and describe the	things live in habitats to		and name a variety of	plants.	
	Learn about animals and	basic structure of a variety	which they are suited and		living things in their		Give reasons for classifying
	their homes, including pets,	of common flowering	describe how different		local and wider	Describe the process of	plants and animals based
	farm animals and wild	plants, including trees. (Y1	habitats provide for the		environment.	reproduction in some	on specific characteristics.
	animals.	- Plants)	basic needs of different kinds			animals.	
			of animals and plants, and		Recognise that		Recognise that living things
		Identify and name a	how they depend on each		environments can		produce offspring of the
		variety of common	other.		change and that this		same kind, but normally
		animals including fish,			can sometimes pose		offspring vary and are not
		amphibians, reptiles, birds	Identify and name a variety		danger to living		identical to their parents.
		and mammals. (Y1 -	of plants and animals in		things.		(Y6 - Evolution and
		Animals including	their habitats, including				inheritance)
		humans)	micro habitats.		Construct and interpret		
					a variety of food		Identify how animals and
		Identify and name a	Describe how animals obtain		chains, identifying		plants are adapted to suit
		variety of common	their food from plants and		producers, predators		their environment in
		animals that are	other animals, using the idea		and prey. (Y4 -		different ways and that
		carnivores, herbivores and	of a simple food chain, and		Animals, including		adaptation may lead to
		omnivores. (Y1 - Animals	identify and name the		humans)		evolution. (Y6 - Evolution
		including humans)	different sources of food.				and inheritance)
		Describe and compare the	Notice that animals,				
		structure of a variety of	including humans, have				
		common animals (fish,	offspring which grow into				
		amphibians, reptiles, birds	adults. (Y2 - Animals				
		and mammals, including	including humans)				
		pets). (Y1 — Animals,	including numeris)				
		including humans)					
		including numuris)					
		Observe changes across					
		the four seasons. (Y1 –					
		Seasonal change)					
		Scasorial crianges					

Materials and	Develop a sense of curiosity	Distinguish between the	Identify and compare the	Compare and group	Compare and group	Compare and group	
States of	and exploration through a	object and the material	suitability of a variety of	together different kinds of	materials together,	together everyday materials	
Matter	range of resources relating	from which it is made.	everyday materials,	rocks on the basis of their	according to whether	on the basis of their	
	to our topics, eg magnets,		including wood, metal,	appearance and simple	they are solids, liquids	properties, including their	
(Chemistry)	magnifying glasses, things	Identify and name a	plastic, glass, brick, rock,	physical properties. (Y3 -	or gases.	hardness, solubility,	
	to smell and taste etc, and	variety of everyday	paper and cardboard for	Rocks)		transparency, conductivity	
	through the continuous	materials, including wood,	particular uses.		Observe that some	(electrical and thermal),	
	provision areas such as	metal, plastic, glass, water		Describe in simple terms	materials change state	and response to magnets	
	sand, water, small world,	and rock.	Find out how shapes of solid	how fossils are formed	when heated or		
	construction etc.		objects made from some	when things that have lived	cooled, and measure	Know that some materials	
		Describe the simple	materials can be changed by	are trapped within rock.	and research the	will dissolve in liquid to	
	Understand some important	physical properties of a	squashing, bending, twisting	(Y3 - Rocks)	temperature at which	form a solution, and	
	processes and changes in	variety of everyday	and stretching.		this happens in	describe how to recover a	
	the natural world around	materials.		Compare and group	degrees Celsius.	substance from a solution	
	them, including changing			together a variety of			
	states of matter.	Compare and group		everyday materials on the	Identify the part	Use knowledge of solids,	
		together a variety of		basis of whether they are	played by evaporation	liquids and gases to decide	
		everyday materials on the		attracted to a magnet, and	and condensation in	how mixtures might be	
		basis of their simple		identify some magnetic	the water cycle and	separated, including	
		properties		materials. (Y3 - Forces and	associate the rate of	through filtering, sieving	
				magnets)	evaporation with	and evaporating	
					temperature.		
						Give reasons, based on	
					Recognise some	evidence from comparative	
					common conductors	and fair tests, for the	
					and insulators, and	particular uses of everyday	
					associate metals with	materials, including metals,	
					being good	wood and plastic	
					conductors. (Y4 -		
					Electricity)	Demonstrate that	
						dissolving, mixing and	
						changes of state are	
						reversible changes	
						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.	

Plants (Biology)	Explore the natural world around them, making observations and drawing pictures of animals and plants. Observe changes such as caterpillars turning into butterflies, the seasons changing, plants and flowers growing. They are supported to notice and talk about what is happening and why.	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. Identify and name the roots, trunk, branches and leaves of trees.	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. Identify and name a variety of plants and animals in their habitats, including microhabitats. (Y2 - Living things and their habitats)	Identify and describe the functions of different parts of the flowering plant: roots, stem/trunk/leaves and flowers Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, room to grow) and how they vary from plant to plants Investigate the way in which water is transported within plants. Explore the part flowers play in a flowering plants life cycle, including:	Recognise that living things can be grouped in a variety of ways. (Y4 - Living things and their habitats) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Y4 - Living things and their habitats) Recognise that environments can change and that this can sometimes pose	Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)	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. (Y6 - Living things and their habitats) Give reasons for classifying plants and animals based on specific characteristics. (Y6 - Living things and their habitats)
				pollination, seed formation and seed dispersal	dangers to living things. (Y4 - Living things and their habitats)		
Electricity (Physics)					Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. 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.		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.

					Recognise that a switch opens and closes the circuit and associate this with		
					whether or not a lamp lights in a simple series circuit.		
					Recognise some common conductors and insulators, and associate metals with being good conductors.		
					Know how to be safe when using electricity.		
Seasonal changes	Understand some important processes and changes in the natural world around	Observe and describe weather associated with the seasons and how day		Recognise that light from the sun can be dangerous and that there are ways to		Use the idea of the Earth's rotation to explain day and night and the apparent	
(Meteorology)	them, including the seasons. Observe changes such as caterpillars turning into butterflies, the seasons changing, plants and flowers growing. They are supported to notice and talk about what is happening and why.	length varies. Observe changes across the four seasons	Find out how the shapes of	protect their eyes. (Y3 - Light)		movement of the Sun across the sky. (Y5 - Earth and space)	
Forces and magnets			Find out how the shapes of solid objects made from some materials can be	Compare how things move on different surfaces.		Explain that unsupported objects fall towards the Earth because of the force	
(Physics)			changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)	Notice that some forces need contact between two objects, but magnetic forces can act at a distance.		of gravity acting between the Earth and the falling object. Identify the effects of air	
				Observe how magnets attract and repel each other and attract some materials and not others.		resistance, water resistance and friction, which act between moving surfaces. Recognise that some	
						mechanisms, including	

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			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 two poles. Predict whether two magnets with attract or repel each other, depending on which poles are facing.	levers, pulleys and gears, allow a smaller force to have a greater effect.	
Rocks (Geology)	Distinguish between an object and the material from which it is made. (Y1 - Everyday materials) Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials) Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials) Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials)	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties 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		Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. (Y6 - Evolution and inheritance)

Light	Identify, name, draw and	Recognise that they need		Compare and group	Recognise that light appears
Ligni	label the basic parts of the	light in order to see things		together everyday materials	to travel in straight lines.
(0)	human body and say	and that dark is the		on the basis of their	to travet in straight lines.
(Physics)	which part of the body is	absence of light.		properties, including their	Use the idea that light
	associated with each	absence of light.		hardness, solubility,	travels in straight lines to
	sense. (Y1 - Animals,	Notice that light is reflected		transparency, conductivity	explain that objects are seen
	including humans)	from surfaces.		(electrical and thermal),	because they give out or
	including numans)	from surfaces.			
	D 11 11 1 1	D : 11 . 1: 1 . C		and response to magnets.	reflect light into the eye.
	Describe the simple	Recognise that light from		(Y5 - Properties and	F 1 · d · d ·
	physical properties of a	the sun can be dangerous		changes of materials)	Explain that we see things
	variety of everyday	and that there are ways to			because light travels from
	materials. (Y1 - Materials)	protect their eyes.			light sources to our eyes or
		_			from light sources to objects
		Recognise that shadows are			and then to our eyes.
		formed when the light from			
		a light source is blocked by			Use the idea that light
		a solid object.			travels in straight lines to
					explain why shadows have
		Find patterns in the way			the same shape as the
		that the sizes of shadows			objects that cast them.
		change.			
					Know how simple optical
					instruments work, e.g.
					periscope, telescope,
					binoculars, mirror,
					magnifying glass etc.
Sound	Identify, name, draw and		Identify how sound is		
	label the basic parts of the		made, associating		
(Physics)	human body and say		some of them with		
(ritgsies)	which part of the body is		vibrating.		
	associated with each				
	sense. (Y1 - Animals,		Recognise that		
	including humans)		vibrations from sounds		
	,		travel through a		
			medium to the ear.		
			Find patterns between		
			the pitch of a sound		
			and features of the		
			object that produced		
			it.		
			Find patterns between		
			the volume of a sound		
			and the strength of the		
			and the strength of the		

				vibrations that		
				produced it.		
				Recognise that sounds		
				get fainter as the		
				distance from the		
				sound source		
				increases.		
Earth and	Observe changes across				Describe the movement of	
Space	the four seasons. (Y1 –				the Earth, and other	
'	Seasonal changes)				planets, relative to the Sun	
(Physics)					in the solar system.	
(Frigsics)	Observe and describe				3	
	weather associated with				Describe the movement of	
	the seasons and how day				the Moon relative to the	
	length varies. (Y1 —					
					Earth.	
	Seasonal changes)					
					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.	
Evolution and		Identify that most living	Describe in simple terms	Recognise that	Describe the life process of	Recognise that living things
Inheritance		things live in habitats to	how fossils are formed	environments can	reproduction in some plants	have changed over time and
		which they are suited and	when things that have lived	change and that this	and animals. (Living things	that fossils provide
(Riologu)		describe how different	are trapped within rock.	can sometimes pose	and their habitats - Y5)	information about living
(Biology)		habitats provide for the	(Y3 - Rocks)	dangers to living		things that inhabited the
		basic needs of different kinds		things. (Y4 - Living		Earth millions of years ago.
		of animals and plants, and	Explore the part that	things and their		and managed ago.
				habitats)		Recognise that living things
		how they depend on each	flowers play in the life cycle	παυιτατε)		
		other. (Y2 - Living things	of flowering plants,			produce offspring of the
		and their habitats)	including pollination, seed			same kind, but normally
			formation and seed			offspring vary and are not
		Notice that animals,	dispersal. (Y3 - Plants)			identical to their parents .
		including humans, have				
		offspring which grow into				Identify how animals and
		adults. (Y2 - Animals,				plants are adapted to suit
		including humans)				their environment in
		including numaris)				
						different ways and that
						adaptation may lead to
						evolution.