

With the world as our parish, we evolve as a family so that children and adults flourish. Through a Christian lens, we all develop the skills, knowledge, hope, compassion and aspiration to be active in our local and global communities, celebrating, exploring and living life in all its fullness.

#### 2 Year Rolling Programme for

(links with our School Vision are in red)

Mixed-year groups	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year A – R/1 2021/22	. Animals including humans (Year 1) - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and animals Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Seasonal Changes (Year 1) - Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.  YEAR SKILLS - Asking questions and		Everyday materials (Year 1)  - Distinguish between an object and the material from which it is made.  - Identify and name a variety of everyday materials, including wood, plastic, glass, matal, water, and rock.  - Describe the simple physical properties of a variety of everyday materials.  - Compare and group together a variety of everyday materials on their simple physical properties.  YEAR SKILLS  - Observing closely, using simple equipment		Plants (Year 1) - 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 o common flowering plants, including trees.  YEAR SKILLS Identifying and classifying	H



	recognising that they can be answered in different ways.		
Why this? Why now?	In DT the children are designing and making a hedgehog house. This means they need to have the understanding of seasonal changes in order to create an effective house to weather all seasons. They also need to understand the needs of animals and how these differ to humans so they are able to create and cater for the animals intended. This is the children's first introduction into Animals and seasonal changes.	In Art the children are required to select appropriate tools and techniques to shape materials. By covering everyday materials in Science we are giving the children the foundations in order to understand what materials are made out of and used for,	This builds on from the Autumn term where the children looked at animals and seasons. The children now have an emerging understanding of what animals need to survive and can link this to plants as both are living things. Seasons can also be linked to plants as the children can explore plants and trees that can survive different weather conditions.
Year B — R/1 2020/21	Everyday materials (Year 1) - Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, matal, water, and rock.	Animals including humans (Year 1)  - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and animals.  - Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	Plants (Year 1) - Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Identify and describe the basic structure of a variety of common flowering plants, including trees



	- Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on their simple physical properties.  Seasonal Changes (Year 1) - Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.  YEAR SKILLS - Performing simple tests	YEAR SKILLS USing their observations and ideas to suggest answers to questions	YEAR SKILLS Gathering and recording data to help in answering questions
Why this? Why now?	In the previous year the children were given the opportunity to explore everyday materials and seasonal changes- This allows children to build on knowledge and use their skills to explore further how materials can be used in a range of ways. This links to junk modeling in DT. The seasons also link to Geography where the	Children have covered this in the previous year and can be built on with the existing knowledge they already have.	Children have covered this in a previous year and they can build on their already existing knowledge.  The whole Summer term topic is based around farming and growing and therefore plants allows children to explore different conditions needed for growing plants and food effectively. It also is able to link to sources of food for herbivores/ carnivores.



	children will explore		
	different features of		
	the Uk and other		
	countries.		
<b>Year A – 1/2</b>	Everyday materials	Animals including humans	Plants (Year 2)
	(Year 1)	(Year 1)	- Observe and describe how
2021/22	- Distinguish between	- Identify and name a variety	seeds and bulbs grow into
	an object and the	of common animals including	mature plants.
	material from which it	fish, amphibians, reptiles,	- Find out and describe how
	is made.	birds and animals.	plants need water, light and a
	- Identify and name a	- Identify and name a variety	suitable temperature to grow
	variety of everyday	of common animals that are	and stay healthy.
	materials, including	carnivores, herbivores and	
	wood, plastic, glass,	omnivores.	YEAR SKILLS
	matal, water, and rock.		Performing simple tests
	- Describe the simple	Living things and their	
	physical properties of a	habitats (Year 2)	
	variety of everyday	- Explore and compare the	
	materials.	differences between things	
	- Compare and group	that are living, dead, and	
	together a variety of	things that have been alive.	
	everyday materials on	- Identify that most living	
	their simple physical	things live in habitats to	
	properties.	which they are suited and describe how different	
	YEAR SKILLS	habitats provide for the	
	Asking simple questions	basic needs of different	
	and recognising that	kinds of animals and plants.	
	they can be answered	and how they depend on each	
	in different ways.	other.	
	a., for all ways.	- Identify and name a variety	
		of plants and animals in their	
		habitats, including	
		micro-habitats.	
		- 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.  Plants (Year 1)  - Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.  - Identify and describe the basic structure of a variety of common flowering plants, including trees  YEAR SKILLS Observing closely, using simple equipment	
Why this? Why now?	During their time in Polar Bears the children have been introduced to everyday materials. The topic for the Autumn term is toys and through art the children will explore textiles/ fabrics and thread for sewing. This allows children to further explore the best materials used for toys or creating an effective toy.	During their time in Polar Bears the children have been introduced to animals however Living Things and their Habitat is a new topic to explore. The topic for this term is allowing humans to give animals a voice and therefore by looking at living things and their habitats gives children the opportunity to understand what is needed to survive and thrive. Children are now building on and further classifying animals, their habitats and what is living and dead. Plants has also previously been covered in Polar Bears but this can now be linked into creating effective areas for animals.	Again plants have been covered previously and in the Spring term but this time the children have been able to build on this with new knowledge. This links to their geography outcome where they need to identify key physical features- vegetation and types of soil. By researching different physical features children will be able to identify the best conditions needed for plants to thrive and survive.



Year B – 1/2 2020/21	Seasonal Changes (Year 2)  - Observe changes across the four seasons.  - Observe and describe weather associated with the seasons and how day length varies.  Living things and their habitats (Year 2)  - Explore and compare the differences between things that are living, dead, and things that have been alive.  - Identify that most 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.  YEAR SKILLS Identifying and classifying .	Use of everyday materials (Year 2)  - Identify and compare suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.  - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.  YEAR SKILLS Using their observations and ideas to suggest answers questions	Living things and their habitats (Year 2) -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 foodIdentify and name a variety of plants and animals in their habitats, including micro-habitats.  Animals including humans (Year 1) - 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.  YEAR SKILLS Gathering and recording data to help in answering questions
Why this? Why now?	This year the children are building on their prior knowledge on seasons and living	This year the children are building on their prior knowledge on use of everyday materials. This	Children are now moving on to explore how and where animals get their food from and looking at a simple food



	things and their habitats. In Geography the children are comparing contrines (Uk/ Africa) allowing them to discuss seasonal changes or differences to one another. Living things and their habitats links to the trees that grow the cocoa beans- the children will be able to explore their needs in order to grow in certain counties and why we are unable to do this in the UK.	builds on just identifying materials to now allowing them to compare each of them. This links to DT where the children will be able to compare the best resources in order to make a transport vehicle. This objective is a much more hands on approach building on from just classifying to exploring and justifying.	chain. This links to the topic of animals who used to be involved in the big top and how they can become malnourished from being kept in captivity.
Year A – 3/4 2021/22	Light (Year 3) -Recognise that they need light in order to see things and that 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	Rocks (Year 3) -Compare/ group different kinds of rocks on the basis of their appearance and simple physical propertiesRelate simple physical properties of some rocks to their formation (igneous/ sedimentary)Describe in simple terms how fossils are formed when things that have lived are trapped within rockRecognise that soils are made from rocks and	Plants (Year 3) - Identify/ describe the functions of different parts of flowering plants (inc. roots, stem/ trunk, leaves and flower) - Identify requirements for plants for life and growth and how they vary from plant to plant (air, light, water, nutrients, from soil and room to grow) Investigate the way in which water is transported within plants.



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when the light from a light source is blocked by an opaque object.

- Find patterns in the way that the size of shadows change.

#### Forces and Magnets (Year 3)

- -Compare how things move on different surfaces (friction).
- Notice that some forces need contact between two objects and that magnetic forces can act at a distance.
- Observe how magnets attract or repel each other and attract some materials and not others.
- 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.

organic matter to form igneous, sedimentary and metamorphic rock.

#### YEAR SKILLS:

- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.

-Explore the part that flowers play in the life cycle of flowering plants (inc. pollination, seed formation and seed dispersal).

- 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 and plant.

#### Animals, including humans (Year 3)

- 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.
- Identify that humans and some other animals have skeletons and muscles for support, protection and movement.

#### (Year 4)

- Decribe simple functions of the basic parts of the digestive system in humans.
- Identify the different types of teeth in humans



	-Describe how magnets have two poles- one that attracts and one that repels Predict and observe how magnets attract or repel each other and attract some materials and not others, depending on which poles are facing Investigate the magnetic materials and know that magnets can work through materials.  YEAR SKILLS: - Asking relevant questions and using different types of scientific enquires to answer them Setting up simple practical enquires, comparative and fair tests.		and their simple functions.  - Construct and interpret a variety of food chains, identifying producers, predators and prey.  YEAR SKILLS:  - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.  - Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
Why this? Why now?	Children are covering light for the first time in their school career- learning news skills that are built on in Forest School when	This is the first time the children have studied rocks. This topic is able to interlink when the children look at the physical features in Geography- Allowing them to	Again, this links with the Geography learning of this term where the children will study types of settlements, land use and the distribution of food, minerals and water.



	creating lanterns for the light festivals they have looked at in their R.E lessons. Forces and magnets is also new learning for the children but allows them to build on this in Forest School when thinking about keeping the lanterns together, stable and if a magnet can be attracted to any of the materials they are using.	look, compare and contrast natural resources	By linking these together the children will gain a better understanding of what animals (including humans) need to survive and what allows plants to flourish.  Animals including humans also links with the topic back in time as the children are able to explore the basic needs of animals and how these have evolved- also a small pre-teach ready for evolution in Year 5/6	5
Year B – 3/4 2020/21	States of matter (Year 4)  - Compare and group materials into solids, liquids and gases. Observe and explain that some materials change state when heated/ cooled and measure or reach temperature at which this happens in degrees Celsius. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.  Living things and their habitats (Year 4)	Electricity (Year 4) -Identify common appliances that run on electricityConstruct a simple series circuit, identifying and naming its basic parts (inc. batteries, wires, bulbs, switches and buzzers) Identify whether 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. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple circuit. Recognise some common conductors and insulators and associate metals with being good conductors.	Sound (Year 4) Identify how sounds are made, associating some of them with something vibratingRecognise that vibrations from sounds travel through a medium to the ear 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.  YEAR SKILLS Use straightforward scientific evidence to answer questions or to support their findings.	



	- 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 wider environment Recognise that environments can change and that this can sometimes pose dangers to living things.	YEAR SKILLS Identify differences, similarities or changes related to simple scientific ideas and processes	
	YEAR SKILLS: - Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.		
Why this? Why now?	This is the first introduction to states of matter where the children are exposed to new learning- This links to the topic 'What Makes the world angry' as the children are specifically looking at their environment and how this can changesometimes this can pose danger to living things.	This is the first introduction to electricity- it will be covered in more depth in Year 5/6. The topic is WW2 which enables the children to look at how electricity was used then and now.	The children are exploring another new topic this term-this can be linked to their topic where they are able to look at how sounds can be made and how each one is different or can be heard differently. It also interlinks with music where they will be appraising music from the genre 'jazz.'



Year A – 5/6 2021/22	Earth and Space (Year 5)  - Describe the movement of earth and other planets relative to the sun in the solar system.  - Describe the movement of the moon relative to the earth.  - Describe the sun, earth and moon as approximately spherical bodies.  - Use the idea of the earth rotation to explain day and night and the apparent movement of the sun across the sky.  YEAR SKILLS Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	Light (Year 6) Recognise that light appears to travel in straight lines.  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 our eyes.  Using the idea that light travels in straight lines, explain why shadows have the same shape as the object that cast them.  Explain that light can be broken into colours and different colours can be combined to appear as a new colour.  YEAR SKILLS Take measurements, using a range of equipment, with increasing accuracy, taking repeat readings when appropriate.	Electricity (Year 6) Associate the brightness of a lamp or the volume of a buzzer and the voltage of batteries (cells) used in the circuit.  Compare and give reasons for variations in how components function (inc. the brightness of a bulb, loudness of buzzers and position of on/off switches).  Use recognised symbols when representing a simple circuit diagram knowing the names of all components.  Identify what causes a short circuit or a circuit to fuse.  YEAR SKILLS Record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
Why this? Why now?	Earth and space is a new piece of learning for the children but is the underpinning topic	Light has already been covered previously in Cycle A of Year 3/4 In this topic the children	Electricity has been covered in Cycle B in Year 3/4 however this is building on existing knowledge and furthering



	for the Autumn term. The children will learn these objectives through a range of subjects including research in English, creating a revolving cam toy in DT and day and night through a range of countries in Geography.	build on light and how it travels, how it helps us to see and how it is broken into the colours we see. Think can be linked to art where the children use a range of colours, materials and textures to create a natural sculpture.	their learning. They now are creating a more complex circuit using a buzzer and a light. The understanding of where light comes from can be linked back to the Spring term's learning. Children are now being asked to write a reason as to how certain components work and identifying how it works all together.	
Year B – 5/6 2020/21	Forces and Magnets (Year 5)  - Explain that unsupported objects fall towards the earth because of the force of gravity (drag force).  - Identify the effect of gravity air, resistance, water resistance, water resistance and friction that act between moving surfaces.  - Know how to measure the size of a force using newton's.  - Recognise that some mechanisms (inc. levers, pulleys and gears) allow a	Evolution and inheritance (Year 6)  -Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years agoRecognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parentsIdentify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Properties and changes of materials (Year 5)  -Compare/ group material based on comparative tests and fair tests (incl. hardness, solubility, conductivity and insulation, behaviour with magnets).  -Give reasons, based on evidence from comparative and fair tests, for the particular use of everyday materials (inc. wood, metal and plastic)  -Explain how 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 describe how mixtures might be separated (inc. through filtering, sieving and evaporating).	



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smaller force to have a greater effect.

#### YEAR SKILLS

Using test results to make predictions to set up further comparative and fair tests.

### Living Things (Year 5/6)

Recognise that environments can change and that this can sometimes pose dangers to living things.

#### Year 5

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
- Describe the life processes of reproduction in some plants and animals.

#### Year 6

- -Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences (inc. micro-organisms, plants and animals).
- Give reasons for classifying plants and animals based on specific characteristics.

#### Animals and humans (Year\_5/6)

Year 5

 Describe the changes as humans develop old 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 (inc.changes associated with burning and

action of acid on bicarbonate

- Demonstrate that dissolving.

#### YEAR SKILLS

of soda).

- Identifying scientific evidence that has been used to support or refute ideas or arguments.



age.  - Draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty.
Year 6 - 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, drugs and lifestyle on the way bodies function.
Describe the way in which nutrients and water are transported within animals including humans.
YEAR SKILLS Reporting and presenting findings from enquires, including conclusions, casual relationships and explanations of and degree in trust in results, in oral and written forms such as displays and other presentations.



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Why	this?
Why	now?

Forces and magnets have been covered before in Cycle A (Y3/4) This builds on existing knowledge by asking the children to explain in much more detail what has happened and why. This interlinks with the topic 'Where is home?' As the children are able to explore gravity and air resistance through building shelters. They are also able to text the strength of their shelters.

This is a science heavy topic for Y5/6 as their topic is 'How do Species adapt?' Evolution is a new topic for the children to explore however it interlinks with research they will undertake throughout the project. For example the 'Galapagos turtle' and how it has evolved. Animals and humans and Living Things and their habitats have previously been covered in Year 2.3 and 4 this is building on their skills and allowing them to now classify in relevant groups, talk about growing and developing in a range of animals and understand their own body and compare it to other animals.

Properties and changes in materials builds on materials they have already looked at. This is building on now looking at solids, liquids and gasses and how they separate or dissolve. This is linking to the topic Fashion and being sustainable with our materials-reversible and irreversible changes and how materials are best suited for use-conductors and insulators.

