Science Curriculum Overview 2024-2025

<table>
<tr><th></th><th colspan="2">Autumn</th><th colspan="2">Spring</th><th>Summer</th></tr>
<tr><td>EYFS</td><td colspan="2">Superheroes (What makes you a superhero? Who are our real life superheroes?)</td><td colspan="2">Bears (Are all Bears the same?)</td><td>Our Wonderful World - How can we care for our wonderful world?</td></tr>
<tr><td></td><td>Senses - tasting some vegetables (that appear in Supertato)

Describing what they see, hear and feel whilst outside - exploring the Nature garden (minibeast hunting, floating and sinking with sticks in the pond)

Magnets - exploring magnets and magnetic attraction and repulsion</td><td>Materials - which material would make the best superhero cape?
Explore how different materials sink and float (link to our discussion about real life Superheroes the RNLI in class assembly)

Human Body - how do we stay healthy? What foods should we eat? Parts of the body (read Funnybones).</td><td>Materials - melting
Exploring ice and how it can melt
Link to cold environments (where Polar Bears live and snow storm in Going on a Bear Hunt)

Animals (Bears in UOW) - what do they look like? Where do they live? What is their habitat? What do they eat?
Vocabulary - bears, cubs, paws, teeth, claws, fur, tails, camouflage, carnivores, herbivores and omnivores
Visitor - Peter to come and talk to us about his travels and where Polar Bears and Brown Bears live. Their different habitats.</td><td>Materials - changes to materials (cooking and making Biscuit Bear)
-combining different ingredients
-cooking them (how we use heat)
-cooling them down before we can ice them
-how to make icing and how it can sets and goes harder</td><td>Summer 1

Plants
Planting various seeds and discussing what they need to grow

Plant runner bean seeds in plastic bags and attach them to the classroom window.
Make predictions.
Observe and write a diary. What has grown first?

Sunflower life cycle - plant sunflowers and watch them grow

Summer 2

Minibeasts
Identifying different minibeasts and their habitats

Explore the life cycle of a butterfly.
Observe caterpillars in the classroom change over time.

Compare different materials (snail slimes).</td></tr>
<tr><td></td><td colspan="2">Autumn and Winter
Leaf Man - making our own Leaf men using Autumn leaves we have collected
Autumn walk with our buddies
Exploring the changes in weather</td><td colspan="2">Winter and Spring
Cold walks
Freezing and Melting
Planting Spring Bulbs</td><td>Spring into Summer
Planting beans - using plastic bags to watch the parts of the plant grow</td></tr>
<tr><td>Year 1</td><td colspan="2">Homes - When is a House a Home?</td><td colspan="2">Toys - How have toys changed over time?</td><td>Explorers - could you be a world explorer?</td></tr>
<tr><td></td><td colspan="2">Seasonal Changes
● To observe changes across the 4 seasons
● To observe and describe the weather associated with the seasons and how day length varies

Animals Inc. Humans
● To identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals
● To identify and name a variety of common animals that are carnivores, herbivores and omnivores
● To describe and compare the structure of a variety of common animals, (fish, amphibians, reptiles, birds and mammals, including pets)
● To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</td><td colspan="2">Seasonal Changes
● To observe changes across the four seasons
● To observe and describe weather associated with the seasons and how day length varies.

Plants
● To observe closely how seeds grow
● To carry out a simple test
● To Identify and name common wildflowers and garden plants, including deciduous and evergreen trees
● To Identify and describe basic structure of a plant
● Find out what plants need in order to grow successfully.</td><td>Seasonal Changes
● To observe changes across the four seasons
● To observe and describe weather associated with the seasons and how day length varies.

Materials
● Distinguish between an object and the material from which it is made
● Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
● Describe the simple physical properties of a variety of everyday materials
● Compare and group together a variety of everyday materials on the basis of their simple physical properties.

Change this for next academic school year. Swap materials into Spring 2 when Year 1 are learning about toys and the materials they were made from.</td></tr>
<tr><td>Year 2</td><td colspan="2">Traditional Tales - How can you bring a traditional tale to life?</td><td colspan="2">London - How did London adapt and change after the Great Fire?</td><td>Conservation - why should we care for our world?</td></tr>
<tr><td></td><td>Everyday Materials (The Three Little Pigs)
● To know that materials can be</td><td>Plants (Links to Jack and The Beanstalk)</td><td colspan="2"><u>Everyday Materials</u>
● Comparing Suitability - To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper,</td><td>Living things and their habitats
● Explore and compare the differences between things that are living, dead, and things that have never been alive</td></tr>
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<tr><td></td><td>used in a variety of ways
• To know that different, everyday objects can be made from the same material
• To group materials together and make a group of recordings
• To know that every material has many properties which can be recognised by our senses
• To use appropriate vocabulary to describe materials
• To suggest how to rest whether materials are waterproof
• To explore ways of answering the question
• To use what happened to draw a conclusion</td><td>• To observe and describe how seeds and bulbs grow into mature plants
• To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</td><td colspan="2">and cardboard for particular uses, by exploring the purposes of different objects.
• Investigate which drinking receptacle is best for a given purpose – ratings.
• Egg drop experiment – thinking about packaging. What materials are used for certain purposes and why? Think of and design new packaging for the egg to protect it.
• Reversible and Irreversible experiments – changing states of solids, liquids, and gases.</td><td colspan="2">• 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
• Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different</td></tr>
<tr><td rowspan="2">Year 3</td><td colspan="2">Rainforests - Why should we care about rainforests? Are they as important today as they were to people in the past?</td><td colspan="2">Inventions - How does technology change the world?</td><td colspan="2">Egypt - What can we learn from the Ancient Egyptians?</td></tr>
<tr><td>Plants
• To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
• To explore the requirements of plants for life and growth (air, light, water, nutrients from solid and room to grow
• To investigate how water is transported in plants
• To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal by understanding pollination and fertilisation.</td><td>Animals Inc. Humans
• To identify that animals, including humans, need the right types and amount of nutrition
• To understand that animals cannot make their foods; they get nutrition from what they eat
• To identify that humans and some other animals have skeletons and muscles for support, protection and movement
• To be introduced to the main body parts associated with the skeleton and muscles
• To explore ideas about what would happen if humans did not have skeletons
• To compare and contrast the diets of different animals</td><td>FORCES AND MAGNETS
• What is friction?
• How magnets can operate at a distance
• Attraction & repulsion -Poles</td><td>LIGHT
Recognise that they need light to see things
Notice that light is reflected from surfaces
Safety around light and protecting eyes
Shadows - how they are formed
How shadows change</td><td>LIGHT
• Recognise that they need light to see things
• Notice that light is reflected from surfaces
• Safety around light and protecting eyes
• Shadows - how they are formed
• How shadows change</td><td>Rocks and Soils
• 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 material</td></tr>
<tr><td rowspan="2">Year 4</td><td colspan="2">Romans - what is the legacy of the Romans?</td><td colspan="2">History - Would you rather live in the Stone Age, Iron Age or Bronze Age?</td><td colspan="2">Are children’s experiences of childhood similar or different in cultures around the world?</td></tr>
<tr><td>Plants
• To explore the requirements of plants for life and growth (air, light, water, nutrients from solid and room to grow (investigation)
• To investigate how water is transported in plants
• To explore the part that flowers</td><td>Sound
• Identify how sounds are made, associating some of them with something vibrating
• Identify how sounds are made, associating with something vibrating; recognising vibrations from sounds telling through a medium to the ear; recognise that sounds get fainter as</td><td colspan="2">Animals incl humans
• Describe the simple functions of the basic parts of the digestive system in humans
• Explain the process of digestion using scientific language
• Identify different types of teeth in humans and their simple functions
• Discuss how to keep teeth healthy
• Make simple predictions in response to an investigation
• Make observations and explain ideas in response to an investigation
• Construct food chains and explain them using scientific terminology</td><td colspan="2">States of Matter
• Compare/group materials into solids, liquids and gases
• Observe changes when materials heated/cooled
• Record/observe temp at which materials change
• Water cycle - evaporation & condensation

Living Things and their Habitats
• Sort living things into groups
• Use keys
• Identify invertebrates/vertebrates by characteristic</td></tr>
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	play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal by understanding pollination and fertilisation.	distance from sound source increases ● Notice patterns between pitch and volume of a sound and the features of an object that produced it ● To use understanding of pitch and volume of a sound and the features of an object that produced it ● Use understanding of pitch and volume to explore questions about soundwaves ● Use understanding of the world to ask and answer questions about the hearing of humans and other animals ● To begin to understand that sound travels slower than light		● Identify dangers to wildlife in local habitats
Year 5/6	**WW2 - what was life for a child during WW2?**		**Africa - What is life like in Africa and how does it differ to life in the UK?**	**Living Things and their Habitats: how can we protect our diverse and wild world?**
	Animals Inc. Humans ● To 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 ● Consider the impact of a rationing diet and any health issue this may cause (discuss vitamins, collection of Rose Hips during Wartime).		**Evolution and Inheritance (with connections to Africa topic)** ● Classify living things along with their habitats and adaptive traits ● Use fossil records and describe similarities and differences compared to their living relatives in regard to evolution ● Make comparisons between a modern-day human and fossil skeletons of those believed to be ancestors in human evolution	**Animals Including Humans** ● Identify and name the main parts of the human circulatory system. ● 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. **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 microorganisms, plants and animals. ● Give reasons for classifying plants and animals based on specific characteristics.