

Science
Curriculum Road Map Year 1



Seasonal Changes

Autumn 1

Children help Bill the Bear to wear the right clothes for different types of weather. They will learn to understand different weather symbols and read these while presenting their own weather forecast. They will also talk about how the weather makes them feel.

Why do we follow on with this unit?

The seasonal changes unit takes place in Autumn 1 so children can witness Autumnal changes. The building materials unit is the first materials unit as children explore different materials and think of words to describe them.

Building with Materials

Autumn 2

Children help Mrs Aitchoo to choose materials to build her house. They will do this by learning to identify suitable materials for a task. Children will explore different kinds of materials and use words to describe them. They will distinguish between objects and materials and describe a material's properties. Children will also investigate different magnetic objects.

What skills will we continue to build upon?

N/A

Everyday Materials

Spring 1

Children must help Mr and Mrs Mop to find some new cloths for wiping up spillages. Children will learn to distinguish natural and man-made materials and also learn about the properties of different materials. They will test different materials to find out which is the most absorbent and to find out which materials are waterproof.

Why do we follow on with this unit?

Children move on to identify the properties of different materials and test different materials.

What skills will we continue to build upon?

Describe the simple physical properties of a variety of everyday materials.



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Plants
Spring 2

Children will look at the different parts of a plant and name these. They will also learn about the different purposes of each part of the plant. Children will be able to identify and name different types of wild plants and garden plants and they will be able to distinguish between both. Children will learn the difference between an evergreen and a deciduous tree.

Why do we follow on with this unit?

Plants unit takes place in Spring 2, so children have the opportunity to observe plants and trees outside when they are blooming.

What skills will we continue to build upon?

Identifying and naming plants and body parts.

**Animals Including Humans -
our bodies**
Summer 1

Children learn to identify the basic parts of the human body and learn about our senses. They gather data to understand the differences in our bodies.

**Animals Including Humans -
animals**
Summer 2

Children learn all about different minibeasts and animals and explore their habitats and behaviours. They learn to classify animals in different ways.

Why do we follow on with this unit?

Children can utilise outdoor space to look for minibeasts and their habitats.

What skills will we continue to build upon?

Classifying similarities and differences.



Science
Curriculum Road Map Year 2



Building a Playhouse
Autumn 1

Children must help Charlie with his problems. They explore the properties of different fabrics. Children will test different materials to find out which is the best material for Charlie's windows, curtains and path. Children will also create a product to help keep Charlie safe in the dark. At the end of the unit, children decide which material to use for each part of Charlie's playhouse.

Why do we follow on with this unit?
Children continue to explore different materials and deepen their understanding of the properties of them.

What skills will we continue to build upon?
Identify and compare the suitability of a variety of everyday materials.

Playground Games
Autumn 2

Children must help Betty Bounce with her problem. They observe different types of balls and discuss the properties of each. Children investigate which ball they think will bounce the highest. Children then look at a range of bats/rackets - they discuss the properties such as what materials they are made from and the flexibility. Children investigate which bat will hit the ball the furthest.

Animals Including Humans
Spring 1

Children learn about the development of a chicken in an egg. They explore the differences between babies, young children and elderly people and know what animals need to survive. Children also learn what makes a healthy, balanced meal and what happens to our bodies during exercise.

Why do we follow on with this unit?
N/A

What skills will we continue to build upon?
N/A



Science
Curriculum Road Map Year 2



Plants

Spring 2

Children will recap the parts of a plant and tree and recap distinguishing between wild and garden plants and deciduous and evergreen trees. They will investigate what the best conditions are for growing bean seeds and they will predict how temperature affects plant growth. Children will learn about the life cycle of a plant and what plants need to grow. They will also learn about how humans use plants.

Why do we follow on with this unit?

Plants unit takes place in Spring 2, so children have the opportunity to observe plants and trees outside when they are blooming.

What skills will we continue to build upon?

Find out and describe what plants need to grow and stay healthy

Living Things and Their Habitats - habitats and food chains

Summer 1

Children will learn about things that are living, dead or never alive and be able to identify, explore and compare the differences between these things. Children will learn about a variety of different habitats around the world and also microhabitats and the animals, plants and insects that live there. They will learn to create a diorama for different habitats using research information.



Science

Curriculum Road Map Year 3



Rocks

Autumn 1

Children become petrologists and learn all about different types of rock and different ways to sort them. They learn about Mary Anning and create their own fossils. Children find out what soil is made from.

Why do we follow on with this unit?

N/A

What skills will we continue to build upon?

Compare and group together materials that are magnetic and compare and group together different kinds of rocks.

Forces and Magnets

Autumn 2

Children explore what force is and what magnets are and what they do. They investigate which materials are magnetic and what the uses of magnets are. Children investigate the different types of magnets including in real life. They also learn how the Earth is used as a magnet and how movement is affected by different surfaces.

Animals including Humans

Spring 1

Children learn all about the skeleton, understanding the different between vertebrate and invertebrate. They explore the difference between bones and muscles. Children learn about the key food groups and what animals and humans need.

Why do we follow on with this unit?
N/A

What skills will we continue to build upon?
N/A



Science
Curriculum Road Map Year 3



Plants - parts of a plant
Spring 2

Children learn how water is transported through a plant and investigate whether temperature affects the rate it is transported.

Why do we follow on with this unit?

Plants units takes place in Spring 2 and Summer 1, so children can use and observe flowers and plants in the outdoor areas.

What skills will we continue to build upon?

Explore the requirements of plants for life and growth.

Plants - seed dispersal
Summer 1

Children identify parts of a flower and learn about the function of a flower - pollination and fertilisation. They learn how seeds are dispersed in different ways describe the life cycle of a flowering plant.

Light
Summer 2

Children learn what light is and investigate how it travels. They learn where light comes from and how it can be reflected. Children investigate which material would be best to be used as curtains to keep sunlight out. They learn about the relationship between the distance of a light source and the size of the shadow and also observe how coloured beams mix.

Why do we follow on with this unit?
Children have learned that light is needed for plants to grow but where does light come from?

What skills will we continue to build upon?
Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.



Science



Curriculum Road Map Year 4

States of Matter

Autumn 1

Children explore the properties of solids, liquids and gases and the similarities and differences. They investigate how solids, liquids and gases change state and how they can create new products using this knowledge. Children focus on the water cycle and learn how water changes state in this. They also research melting points of different materials.

Why do we follow on with this unit?

The electricity unit could be linked in with Christmas and Diwali and lights that are used in these celebrations.

What skills will we continue to build upon?

N/A

Electricity

Autumn 2

Children identify appliances that use electricity and research where electricity comes from while also learning how to stay safe around electricity. Children create a simple series circuit, identifying and naming the basic parts. They investigate which materials are conductors and which are insulators and use this knowledge to add a switch to their circuit. Children will use all their knowledge to create their own burglar alarm.

Sound

Spring 1

Children will use musical instruments to demonstrate how sound is produced by vibrations. They will find patterns between the volume of a sound and the strength of the vibrations and then explore what happens to the volume of a sound as the distance from the sound increases. Children will investigate and learn how sound travels through a medium to their ear. They will understand what pitch means and look for patterns between the pitch of a sound and the features of the object that produced it.

Why do we follow on with this unit?

Children will have used buzzers as part of their electricity circuits. How do we hear the sound from the buzzer?

What skills will we continue to build upon?

N/A



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Animals Including Humans
Spring 2

Children learn about producers, predators and prey and how these are part of a food chain. They also learn the names of different teeth, their functions and how to look after our teeth. Children learn all about the digestive system.

Why do we follow on with this unit?

What skills will we continue to build upon?

Living Things and Their Habitats - environmental
Summer 1

Children consider how their local environment has changed and why. They must decide whether it would be a good idea to use green space to build a new adventure playground, weighing up the advantaged and disadvantages. Children learn about natural and man-made changes and the effect of greenhouse gases on climate change. They learn how living things are impacted by changes and what they can do to help.

Living Things and Their Habitats - groupings/classification
Summer 2

Children learn to identify the seven characteristics of living things. They learn to classify animals, insects and plants into different groups. Children create their own branching database.

Why do we follow on with this unit?
Children use their knowledge of living things from the first unit in Summer 1 to support them to group and classify.

What skills will we continue to build upon?
Identify and name a variety of living things in their local and wider environment.



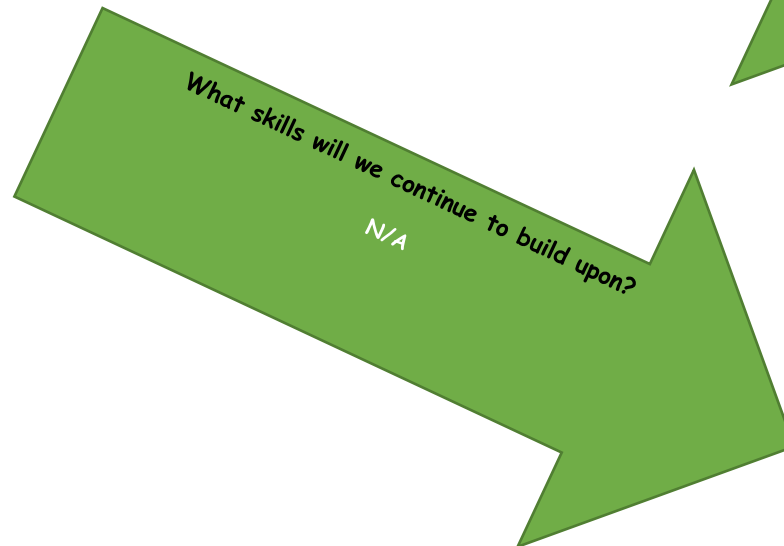
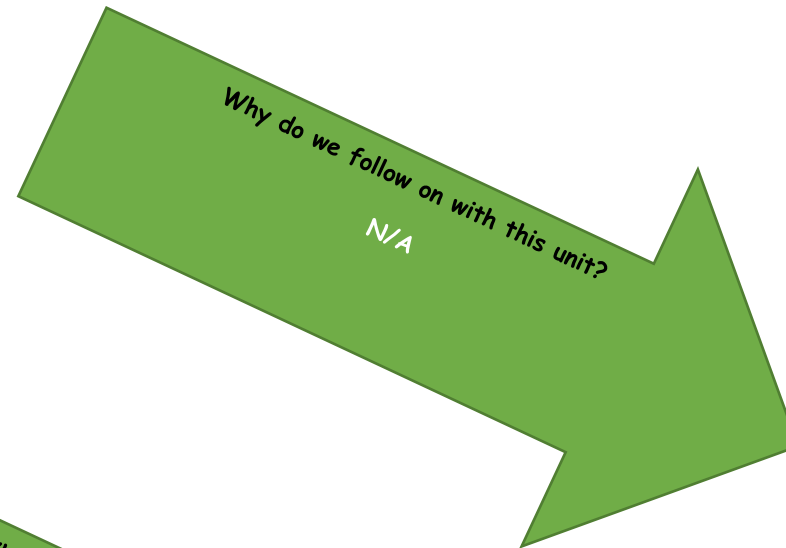


Curriculum Road Map Year 5

Properties of Materials and Reversible Changes

Autumn 1 + 2

Children discuss the properties of different materials using the precise definitions. They investigate the conductivity of different materials and compare and group together everyday materials. Children use their knowledge of solids, liquids and gases to separate mixtures. They explain why some changes result in the formation of new materials.



Animals Including Humans

Spring 1

Children learn about the human life cycle and the key stages of foetal development. They learn about what happens to the body as it gets old and also the changes that occur during puberty.



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Earth and Space
Spring 2

Children make a scaled model of the solar system. They make observations on orbits and how long each planet might take in Earth years to orbit the Sun, they then build an orrery. Children think about how they can evidence that the Earth is spherical. They set up an investigation to demonstrate that the Earth spins on its own axis. Children also describe the movement of the Moon and explain why we have day and night on planet Earth.

Why do we follow on with this unit?

Children learned in the Earth and Space unit about the gravitational pull of the earth and the moon and how they keep everything from floating away. This knowledge will support them in the Forces and Gravity unit.

What skills will we continue to build upon?

Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object

Forces and Gravity
Summer 1

Children will be part of a team of forces experts and offer advice and guidance to anyone who might want to recover the meteorite. They identify the effects of different types of forces and investigate the impact of levers, pulleys and gears on forces.

All Living Things and Their Habitats -
Summer 2

Children will learn to name the different parts of a dissected flower and explain their functions including the key sexual parts. They will learn how plants disperse seeds and how they reproduce asexually and sexually. Children will learn about vegetative propagation. They will then look at life cycles of insects, amphibians, mammals, birds and reptiles.

Why do we follow on with this unit?
N/A

What skills will we continue to build upon?
N/A





Curriculum Road Map Year 6

Animals Including Humans

Autumn 1

Children learn to identify the key parts of the circulatory system and to understand how and where blood flows around the body and why. They understand the differences between cells, tissues and muscles and how nutrients and water are transported around the body. Children learn about the impact of healthy lifestyle and drugs on the human body.

Why do we follow on with this unit?

The electricity unit is linked with a festive light celebration such as Christmas or Diwali. Children create a festive light decoration.

Electricity

Autumn 2

Children learn to construct series and parallel circuits. They use recognised symbols when representing a simple circuit in a diagram and can draw an accurate circuit diagram. Children create festive light decorations. They investigate, design and make a dimmer switch.

What skills will we continue to build upon?

N/A

Living Things and Their Habitats

Spring 1

Children learn all about the classification of organisms system created by Carl Linnaeus and learn how to classify living things into broad groups giving reasons for their choices. They use a branching classification key. Children create a new creature that fits within a specific classification and learn all about microorganisms.

Why do we follow on with this unit?
N/A

What skills will we continue to build upon?
N/A



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Evolution and Inheritance

Spring 2

Children will learn to identify inherited and environmental characteristics in living things including those of themselves and peers.

They learn what variation and adaptation mean and how living things adapt to extreme environments. Children recap on fossils and learn about what fossils can tell us. They also learn about how humans have evolved over time.

Why do we follow on with this unit?

N/A

What skills will we continue to build upon?

N/A

Light

Summer 1

Children demonstrate and understand that light travels in straight lines and from light sources. They can explain how light reflects using a periscope. Children investigate shadows, how they change and why shadows have the same shape as the objects that cast them. Children can explain what transparent, translucent and opaque mean, why they are used and how light is affected by them. They understand split light and coloured light mixing.

