



SCIENCE : CURRICULUM CONTENT AND PROGRESSION FRAMEWORK

Through a dynamic and comprehensive programme, using inspirational resources we aim to deliver outstanding science that enables the children to develop a solid grounding in the introductory principles of science

Topics/Themes/Texts: SNAP SCIENCE Scheme of work.

The key things we want children to know/be able to do

Sunflowers

Focus Areas to explore throughout the year

Animals including humans

- Look at animals from set habitats E.g. Farm animals, jungle animals, sea animals (link to English and books read)
- Names of animals and their babies
- Life cycles of butterflies and frogs
- Body Part names - sing songs (E.g. heads, shoulders, knees and toes)

Plants and Growing/Outdoor learning

- What does a plant need to grow talking about changes they notice when planting - make links to living things
- Seasonal changes set up within provision areas

Healthy Living - (link to Spring 1 Jigsaw 'Healthy Me')

- How to keep healthy/ look after ourselves/ why wash our hands etc
- Healthy foods and foods we need to eat in moderation

Materials

- Explore rich vocabulary linked to various materials - stretchy, gooey...
- Talk about what things are made from when using them- wood, plastic, metal- what do they feel/ look like?

Relevant ELGs:

Understanding the world (The world)

- Children know about similarities and differences in relation to places, objects, materials and living things.
- They talk about the features of their own immediate environment and how environments might vary from one another.
- They make observations of animals and plants and explain why some things occur, and talk about changes.

Physical Development (Health and Self-care)

- Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe



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| <h2 style="color: #0070C0;">Daffodils</h2> | |
| <p><u>Reception</u> <u>Focus Areas to explore throughout the year</u></p> <p><i>Animals including humans</i></p> <ul style="list-style-type: none"> ● Look at animals from set habitats E.g. Farm animals, jungle animals, sea animals (link to English and books read) ● Names of animals and their babies ● Life cycles of butterflies and frogs ● Body Part names - sing songs (E.g. heads, shoulders, knees and toes) <p><i>Plants and Growing/Outdoor learning</i></p> <ul style="list-style-type: none"> ● What does a plant need to grow talking about changes they notice when planting - make links to living things ● Seasonal changes set up within provision areas <p><i>Healthy Living - (link to Spring 1 Jigsaw 'Healthy Me')</i></p> <ul style="list-style-type: none"> ● How to keep healthy/ look after ourselves/ why wash our hands etc ● Healthy foods and foods we need to eat in moderation <p><i>Materials</i></p> <ul style="list-style-type: none"> ● Explore rich vocabulary linked to various materials - stretchy, gooey... ● Talk about what things are made from when using them- wood, plastic, metal- what do they feel/ look like? <p style="text-align: center;"><u>Year 1 Cycle one</u></p> <p style="color: red;">Year 1 approaching plants for the first time will need experience of observing plants in their natural habitat and support for naming and identifying plants and</p> | <p><u>Relevant ELGs:</u></p> <p><i>Understanding the world (The world)</i></p> <ul style="list-style-type: none"> ● Children know about similarities and differences in relation to places, objects, materials and living things. ● They talk about the features of their own immediate environment and how environments might vary from one another. ● They make observations of animals and plants and explain why some things occur, and talk about changes. <p><i>Physical Development (Health and Self-care)</i></p> <ul style="list-style-type: none"> ● Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe <p style="text-align: center;">Year 1</p> <p><u>Plants</u></p> <ul style="list-style-type: none"> ● Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees |



their parts. Draw on the **OCW Plants** lessons suggested in the Autumn and Spring terms before starting **Apprentice Gardener**.

Autumn Term

Year 1 Module 4 - **Everyday materials**

Lessons 1, 2, 3, 4

Year 1 Module 3 - **Using Our Senses**

Lessons 1, 2, 3, 4, 5, 6 & E1

Our Changing World modules

Year 1 **OCW Plants**

Lessons 1, 2

Year 1 **OCW Animal Antics**

Lesson 1

Year 1 **OCW Sensing Seasons (link with using our senses module)**

Lessons 2 & 3

Spring term

Year 1 Return to Module 4 - **Everyday materials**

Lessons 5, 7, 6, 10 & E1

Year 2 Module 2 - **The Apprentice Gardener**

Lessons 1, 2, 3, 4, 5, 6, 7, 8

Our Changing World modules

Year 1 **OCW Plants**

Lessons 3, 4

Year 1 **OCW Animal Antics**

Lesson 2

Year 1 **OCW Sensing Seasons**

Lesson 4

Summer

- Identify and describe the basic structure of a variety of common flowering plants, including trees.

Animals including humans

- 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 pets)
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Everyday 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.

Seasonal Changes

- observe changes across the four seasons
- Observe and describe weather associated with the seasons and how day length varies.

Year 2

Living things and their habitats

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



Continue Year 2 Module 2 - **The Apprentice Gardener**

Lessons 9, 10,

Year 2 Module 5 – **Take Care**

Lessons 1, 2, 3, 4

Our Changing World modules

Year 1 **OCW Plants**

Revisit lessons 3 & 4, teach Lesson 5

Year 1 **OCW Sensing Seasons**

Revisit lessons 2 & 3

Year 1 Cycle two

Year 1 children who are approaching materials for the first time will need support in introducing the concept of what a material is, identifying and naming some everyday material; the language used to describe the differences between materials and recognising the difference between an object and a material from which it is made. Draw on lesson 1 from Year 1 Module 4 **Everyday Materials** to support this of materials,

Autumn term

Year 2 Module 1 - **What is in your habitat?**

Lessons 1,2,3

Year 2 Module 3 - **Materials: Good Choices**

Lessons 1, 3, 4, 5, 6, 7

Year 2 **Our Changing World (teach with What's in your habitat?)**

Lessons 1, 2, 3

Spring term

Year 2 Module 4 – **Materials: Shaping Up**

Lessons 1, 2, 3, 4

Year 1 Module 2 - **Looking at Animals**

Lessons 1, 2, 3, 4, 7, 6, E1 & E4

Year 2 **Our Changing World**

- 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 sources of food.

Plants

- 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.

Animals including humans

- Notice that animals, including humans, have offspring which grow into adults
- Find out about 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.

Uses of 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
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.



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| <p>Lessons 5 & 6</p> <p><u>Summer term</u></p> <p>Year 2 Module 6 – Growing Up</p> <p>Lessons 1, 2, 3, 4,</p> <p>Year 1 Module 1 - Plant Detectives</p> <p>Lessons 1, 2, 3, 4, 5</p> <p>Year 2 Our Changing World</p> <p>Lessons 6 & 7</p> <p>Lesson 4 (teach with Growing Up)</p> | |
| <h2>Roses</h2> | |
| <p style="text-align: center;"><u>Cycle one</u></p> <p>Year 1 approaching plants for the first time will need experience of observing plants in their natural habitat and support for naming and identifying plants and their parts. Draw on the OCW Plants lessons suggested in the Autumn and Spring terms before starting Apprentice Gardener.</p> <p><u>Autumn Term</u></p> <p>Year 1 Module 4 - Everyday materials</p> <p>Lessons 1, 2, 3, 4 5, 7, 6, 10 & E1</p> <p>Year 1 Module 3 - Using Our Senses</p> <p>Lessons 1, 2, 3, 4, 5, 6 & E1</p> <p>Our Changing World modules</p> <p>Year 1 OCW Plants</p> <p>Lessons 1, 2</p> <p>Year 1 OCW Animal Antics</p> <p>Lesson 1</p> | <p>Year 1 Plants</p> <ul style="list-style-type: none"> ● 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. <p>Animals including humans</p> <ul style="list-style-type: none"> ● 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 pets) ● Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. |



Year 1 **OCW Sensing Seasons (link with using our senses module)**

Lessons 2 & 3

Spring term

Year 1 Module 3 - **Using Our Senses**

Lessons 1, 2, 3, 4, 5, 6 & E1

Year 2 Module 2 - **The Apprentice Gardener**

Lessons 1, 2, 3, 4, 5, 6, 7, 8

Our Changing World modules

Year 1 **OCW Plants**

Lessons 3, 4

Year 1 **OCW Animal Antics**

Lesson 2

Year 1 **OCW Sensing Seasons**

Lesson 4

Summer

Continue Year 2 Module 2 - **The Apprentice Gardener**

Lessons 9, 10,

Year 2 Module 5 – **Take Care**

Lessons 1, 2, 3, 4

Our Changing World modules

Year 1 **OCW Plants**

Revisit lessons 3 & 4, teach Lesson 5

Year 1 **OCW Sensing Seasons**

Revisit lessons 2 & 3

Cycle two

Everyday 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.

Seasonal Changes

- observe changes across the four seasons
- Observe and describe weather associated with the seasons and how day length varies.

Year 2

Living things and their habitats

- Explore and compare the differences between things that are living, dead, and things that have never been alive
- 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 sources of food.

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Animals including humans



Year 1 children who are approaching materials for the first time will need support in introducing the concept of what a material is, identifying and naming some everyday material; the language used to describe the differences between materials and recognising the difference between an object and a material from which it is made. Draw on lesson 1 from Year 1 Module 4 **Everyday Materials** to support this of materials,

Autumn term

Year 2 Module 1 - **What is in your habitat?**

Lessons 1,2,3

Year 2 Module 3 - **Materials: Good Choices**

Lessons 1, 3, 4, 5, 6, 7

Year 2 **Our Changing World (teach with What's in your habitat?)**

Lessons 1, 2, 3

Spring term

Year 2 Module 4 – **Materials: Shaping Up**

Lessons 1, 2, 3, 4

Year 1 Module 2 - **Looking at Animals**

Lessons 1, 2, 3, 4, 7, 6, E1 & E4

Year 2 **Our Changing World**

Lessons 5 & 6

Summer term

Year 2 Module 6 – **Growing Up**

Lessons 1, 2, 3, 4,

Year 1 Module 1 - **Plant Detectives**

Lessons 1, 2, 3, 4, 5

Year 2 **Our Changing World**

- Notice that animals, including humans, have offspring which grow into adults
- Find out about 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.

Uses of 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
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.



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| Lessons 6 & 7 Lesson 4 (teach with Growing Up) | |
| <h2 style="color: #0070C0;">Tulips</h2> | |
| <p style="text-align: center;"><u>Cycle one:</u></p> <p><u>Autumn</u></p> <p>Year 3 Module 2 – Rock Detectives Lessons 1, 2, 3, 6, 7, 9, 10 Year 3 Module 3 – Can You See Me? Lessons 1, 2, 3, 5, 6, 7, EL2 Our Changing World Year 3 Lessons 1, 2 and 3 twice this term all together in one lesson Year 3 Lesson 4 once this term Year 3 Lesson 5 in early September</p> <p><u>Spring</u></p> <p>Year 4 Module 2 – Good Vibrations Lessons 1, 2, 3, 4, 5, 6, 7 Year 3 Module 1 - How Does Your Garden Grow? Lessons 1, 2, 3, 4, 5, 6</p> <p>Our Changing World Year 3 Lessons 1, 2 and 3 twice this term all together in one lesson Year 3 Lesson 4 once this term Year 3 Lesson 5 in early Spring</p> <p><u>Summer</u></p> <p>Year 3 Return to Module 1 - How Does Your Garden Grow? Lessons 7, 8, 9, 10, 11, 12 Year 4 Module 3 – Switched On Lessons 1, 2, 3, 4, 5, 6</p> | <p style="text-align: center;">Year 3</p> <p>Rocks</p> <ul style="list-style-type: none"> ● 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. <p>Forces and Magnets</p> <ul style="list-style-type: none"> ● Compare how things move on different surfaces ● Notice that some forces need contact between two objects, but 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 ● Describe magnets as having two poles ● Predict whether two magnets will attract or repel each other, depending on which poles are facing. <p><u>Light</u></p> <ul style="list-style-type: none"> ● 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 |



Our Changing World

Year 3 Lessons 1, 2 and 3 twice this term all together in one lesson
 Year 3 Lesson 4 once this term
 Year 3 Lesson 5 twice in Summer

CYCLE TWO

Autumn

Year 3 Module 4 – **The Power of Forces**
 Lessons 1, 2, 3, 4, 5, 6, 7
 Year 4 Module 1 – **In a State**
 Lessons 1, 2, 3, 4, 5, 7, 8 (teach 7 & 8 together) 9
 Year 4 **Our Changing World**
 Lesson 1 teach in September

Spring

Year 3 Module 5 – **Amazing Bodies**
 Lessons 2, 3, 4, 6, 7, 8
 Year 4 Module 4 – **Where Does All That Food Go?**
 Lessons 2, 8, 9, 3, 4
 Year 4 **Our Changing World**
 Lesson 2 teach in early January

Summer

Year 4 Return to Module 4 – **Where Does All That Food Go? (Teach with Who Am I?)**
 Lessons 6, 7
 Year 4 Module 6 – **Who Am I?**
 Lessons 1, 2, 3, 4
 Year 4 Module 5 – **Human Impact**
 Lessons 1, 2, 3, 4, 5
 [NOTE: BT & JT needs checking when new lesson numbers are finalised as lots of changes being made and check where the food chains lessons are]
 Year 4 Return to Module 1 – **In a State (teach with Human Impact)**

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

Plants

- Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- 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 to plant
- Investigate the way in which water is transported within plants
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Animals including humans

- 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

Living things and their habitats

- Recognise that living things can identify how sounds are made, associating some of them with something vibrating recognise that 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 vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases. be grouped in a variety of ways
- Explore and use classification keys to help group, identify and name a of living things in their local and wider environment



Lessons 10, 11
 Year 4 **Our Changing World**
 Lesson 3

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

Animals including animals

- 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 and prey.

States of matter

- Compare and group materials together, according to whether they are solids, liquids or gases
- Observe that some materials change state when they are heated or cooled, and measure or research 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 with temperature.

Sound

- Identify how sounds are made, associating some of them with something vibrating
- Recognise that 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 vibrations that produced it
- Recognise that sounds get fainter as the distance from the sound source increases.

Electricity

- 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



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| | <ul style="list-style-type: none"> • 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 • Recognise that a switch opens and closes a 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. |
| <p>Lilies</p> | |
| <p style="text-align: center;"><u>Cycle one:</u></p> <p><u>Autumn</u> Year 6 Module 6 – Light Up Your World Lessons 1, 2, 3, 4, 5 Year 5 module 3 – Get Sorted Lessons 1, 2, 3, 4, 5 Year 5 Module 4 – Everyday Materials (teach with Get Sorted as Materials Topic 1) Lessons 1, 2, 4, 5, 6</p> <p><u>Spring</u> Year 6 Module 5 – Danger: Low Voltage! Lessons 1, 2, 3, 4, 5, 6 Year 5 Module 1 – Circle of Life Lessons 1, 3, 4, 5, 6, 7</p> | <p style="text-align: center;">Year 5</p> <p><u>Animals, including humans</u></p> <ul style="list-style-type: none"> • Describe the changes as humans develop to old age. <p><u>Properties and changes of materials</u></p> <ul style="list-style-type: none"> • Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets • 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 through filtering, sieving and evaporating |



Year 5 Module 2 – **Reproduction in Plants and Animals** (teach with **Circle of Life**)
Lessons 4, 5,

Summer

Year 5 Revisit Module 2 – **Reproduction in Plants and Animals**

Lessons 1, 2, 3, 6, 7, 8

Year 6 Module 3 – **Body Health**

Lessons 1, 2, 4, 5, 7

Our Changing World

Year 5 Lesson 1

Cycle two

Year 5 children approaching the materials modules in this cycle will need experience of identifying and classifying everyday materials based on their properties. Draw in **Get Sorted** lesson 1 and **Everyday Materials** lesson 1 to support this.

Autumn

Year 6 Module 4 – **Everything Changes?**

Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Year 5 Module 8 – **The Earth and Beyond**

Lessons 1, 2, 3, 6, 8

Our Changing World

Year 6 Lessons 1 and 2 (more than once)

Spring

- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- 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.

Earth and space

- Describe the movement of the 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’s rotation to explain day and night and the apparent movement of the sun across the sky.

Forces

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- Identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Year 6

Living things and their habitats



Year 6 Module 2 – **Body Pump**

Lessons 1, 2, 4, 5

Year 5 Module 7 – **Feel the Force**

Lessons 1, 2, 4, 5, 7, 8, 9, 10

Our Changing World

Year 6 Lesson 4 (more than once)

Summer

Year 6 Module 1 – **Nature Library**

Lessons 1, 2, 3, 4, 5, 6, 7

Year 5 Module 5 – **Marvellous Mixtures**

Lessons 1, 2, 3, 4

Year 5 Module 6 – **Materials: All Change** (teach with **Marvellous Mixtures** as Materials Topic 2) Lessons 1, 2, 3, 4, 5

Our Changing World

Year 6 Lesson 5 (more than once)

- 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.

Animals including humans

- 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.

Evolution and inheritance

- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
- Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
- Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Light

- 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 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.

Electricity

- 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.