

Science curriculum and Forest schools link

Year 1

Year 1 Theme Science Focus	Autumn (14 wks) Me Animals inc humans (parts of the body and and senses) Seasonal change (Autumn)	Spring (12 wks) Place Materials Seasonal change (winter)	Summer (13 wks) Grow Seasonal change (Spring and Summer)
FS activities and learning	<p>Children are outside in all seasons so learn about the changes.Longest day is mid Summer (16hrs) and get shorter mid Winter (8hrs) (darker later/ earlier etc). Colder/rainier in winter. Hotter/ dryer in summer. These change numbers of minibeasts outside, seed/plant growth, leaves on trees and what we wear during these seasons - - warm clothes, hats, scarves, gloves. Cool clothes summer hat, put suncream on, drink more etc.</p> <p>Children learn about different woodland animals what they eat and where they live. How many legs these birds and animals have, their sight, wings, tails, ears etc. Skin coverings ie scales, feathers, hair - These are all key features that we use to identify them. What animals eat ie other animals plants or animals and plants. Herbivores (eats plants), carnivores (meat) or Omnivores (plants and meat)</p>	<p>Children are outside in all seasons so learn about the changes.Longest day is mid Summer (16hrs) and get shorter mid Winter (8hrs) (darker later/ earlier etc). Colder/rainier in winter. Hotter/ dryer in summer. These change numbers of minibeasts outside, seed/plant growth, leaves on trees and what we wear during these seasons - - warm clothes, hats, scarves, gloves. Cool clothes summer hat, put suncream on, drink more etc.</p> <p>Children explore natural materials in Forest schools mud, grsss, stones, bark, wood etc. We also have metal pans/trays and wooden spoons - properties of these ie shiny, rough, stretchy, etc. (year 2 - the material can be changed by bending, squashing and twisting. For example mud can be shaped by squashing, twisting, pressing and rolling depending on the thickness of the material.)</p>	<p>Children are outside in all seasons so learn about the changes.Longest day is mid Summer (16hrs) and get shorter mid Winter (8hrs) (darker later/ earlier etc). Colder/rainier in winter. Hotter/ dryer in summer. These change numbers of minibeasts outside, seed/plant growth, leaves on trees and what we wear during these seasons - - warm clothes, hats, scarves, gloves. Cool clothes summer hat, put suncream on, drink more etc.</p> <p>We talk about what trees and plants need in order to grow - Sun, Light, Water, soil etc.</p> <p>Children plant seeds etc and see the growth of trees, plants, flowers etc. Characteristics of plants are used to identify them. Some trees keep their leaves others drop them and then regrow them.</p> <p>Children learn about the birds/animals that visit Forest Schools and their habitats.</p>

			<p>(year 2 seeds and bulbs germinate and grow into seedlings which continue to grow into mature plants. Children see that these may have flowers which develop into berries, fruits etc. Children learn that seed/bulbs need to be planted outside at particular times of the year and will germinate and grow at different rates.</p> <p>Some plants prefer the shade and some in full sun. Children learn that plants need different amounts of water and space to grow well and stay healthy.)</p> <p>(year 2 Animals and humans have offspring who grow into adults these will be babies, kittens etc. Eggs that are hatched into young or other stages which then grow to adults. And that some young do not look like their parents eg tadpoles. Animals and humans need basic needs of feeding, drinking, breathing in order to survive.</p> <p>(Year 3 Children learn that many plants have roots, stems/trunks, leaves and flowers/blossom. Stem transports the water and nutrients/minerals around the plant. Leaves use sunlight and water to produce the plants food. Plants produce flowers which enable the plant to reproduce. Pollen - produced by the male part of the flower, is transferred to the female part of the flower - pollination.</p>
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Year 2

Year 2 Theme Science Focus	Autumn (14 wks) Explore Materials	Spring (12 wks) People Plants Animals, including humans	Summer (13 wks) Plants Living things and their habitats Seasonal change (Spring and Summer)
FS activities and learning	<p><u>Use of everyday materials</u> Children explore natural materials in Forest schools mud, grss, stones, bark, wood etc. We also have metal pans/trays and wooden spoons - properties of these ie shiny, rough, stretchy, etc. The material can be changed by bending, squashing and twisting. For example mud can be shaped by squashing, twisting, pressing and rolling depending on the thickness of the material.)</p> <p><u>(Properties and changes or materials - year 5</u></p> <p>Mixtures can be separated by filtering, sieving and evaporation. Changes such as burning wood, rust form new materials and these are not reversible.)</p>	<p><u>plants.</u> Seeds and bulbs germinate and grow into seedlings which continue to grow into mature plants. Children see that these may have flowers which develop into berries, fruits etc. Children learn that seed/bulbs need to be planted outside at particular times of the year and will germinate and grow at different rates. Some plants prefer the shade and some in full sun. Children learn that plants need different amounts of water and space to grow well and stay healthy.</p> <p>(Year 3 Children learn that many plants have roots, stems/trunks, leaves and flowers/blossom. Stem transports the water and nutrients/minerals around the plant. Leaves use sunlight and water to produce the plants food. Plants produce flowers which enable the plant to reproduce. Pollen - produced by the male part of the flower, is transferred to the female part of the flower - pollination.)</p>	<p><u>Living things and their habitats</u> All objects are either living, dead or have been alive. Living things are plants and animals. Dead things are dead animals and plants and parts of plants and animals that are no longer attached - Children experience death in Forest Schools when we see dead birds or mice etc. Sometimes we observe them as they decay to see what happens to them over time. sometimes the children bury them, making little graves that they decorate and pray for the animal. Children are told not to pick flowers etc as they will then die. And at times find a birds wing which they then identify as that animal being dead and it may have been brought to Forest School by an animal ie a fox. Wood in Forest School is known as dead as it is no longer attached to a tree. Rocks, metal, plastic etc have never been alive.</p> <p>Animals and plants live in a habitat to which they are suited. Animals have features that help them move and find food. Plants have features that help them grow. The habitat provides the basic needs of the animals and plants - shelter, food and water. Within habitats there are different micro-habitats -</p>
		<p><u>Animals, including humans</u> Animals and humans have offspring who grow into adults these will be baies, kittens etc. Eggs that are hatched into young or other stages</p>	<p>in leaf litter, on the bark of trees, on leaves. Micro-habitats have different conditions - dark or light, damp or dry. The conditions affect which plants and animals live there. Plants and animals depend on each other for food and shelter etc.</p>

		<p>which then grow to adults. And that some young do not look like their parents eg tadpoles.</p> <p>Animals and humans need basic needs of feeding, drinking, breathing in order to survive.</p> <p>(Year 5 - When babies are young they grow rapidly. They are dependent on their parents.)</p>	<p>(Year 3/4 -Habitats can be changed naturally be flooding, fire, an earthquake etc. Humans also cause the environment to change in a positive way - setting up reservoirs but also in a negative way ie littering. These environments change with the seasons. Living things can be found in habitats at diferent times of the year.)</p> <p>(Year 5 - As part of a life cycle, plants and animals reproduce.</p> <p>Animals have offspring that grow into adults which are born live, such as babies, squirrels, deer etc. Other animals have have eggs ie chickens and snakes which hatch into young and grow into adults.</p> <p>Some young go through further changes before becoming adulte ie caterpillar to butterflies - metamorphosis.)</p> <p>(Year 6 - Plants can make thier own food where animals cannot.</p> <p>Plants can be divided into 2 main groups - flowering plants and non-flowering plants.)</p>
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Year 3

Year 3 Theme Science Focus	Autumn (14 wks) Origins Rocks Light	Spring (12 wks) Movement Forces and movement Animals, including humans	Summer (13 wks) Conflict Plants
FS activities and learning	<p><u>Rocks</u></p> <p>Rock is a natural occurring material. Different types of rocks - sandstone, limestone, slate etc which have different properties. Rocks can be hard or soft. They have different sizes of grain or crystal. They may absorb water.</p> <p>Rocks are different shapes and sizes - stones, pebbles and boulders. Soil is made up of pieces of ground down rock possibly mixed with plant and animal materials (organic matter). These features affect the properties of the soil. Some rocks contain fossils - fossils were formed millions of years ago. When plants and animals died they fell to the seabed. They became covered and squashed by other material. Over time the dissolving animal and plant matter is replaced by minerals from the water.</p> <p><u>Light</u></p> <p>Fire is a source of light.</p> <p>The sun is a source of light. The light from the sun can damage our eyes so we mustn't look directly at it. We protect our eyes by wearing sunglasses and hats.</p> <p>Shadows - we chase each other's shadows, place objects in the light source from the sun to form shadows that we can then draw round etc.</p>	<p><u>Forces and Movement</u></p> <p>Push or pull force. When an object moves on a surface, the texture of the surface and the object affect how it moves - metal pan on mud, metal tray on wood walking on ice etc. It can either help the object to move or hinder the object's movement.</p> <p>For some forces to act there must be contact e.g. a hand pushing a swing, the wind pushing the trees, pushing force to push down the see-saw.</p> <p><u>Forces - Year 5</u></p> <p>A force causes an object to start moving, stop moving, speed up, slow down or change direction.</p> <p>Everything is pulled to the earth by gravity.</p> <p>Pulleys, levers and gears are all mechanisms. Can be used to move objects/transport objects. These can be used as part of a swing or children have made a lift in forest schools using a tree and they lever themselves up using the rope etc.</p> <p><u>Animals, including humans</u></p> <p>(Year 5 - When babies are young they grow rapidly. They are dependent on their parents.)</p>	<p><u>plants.</u></p> <p>Children learn that many plants have roots, stems/trunks, leaves and flowers/blossom. Stem transports the water and nutrients/minerals around the plant. Leaves use sunlight and water to produce the plant's food. Plants produce flowers which enable the plant to reproduce. Pollen - produced by the male part of the flower, is transferred to the female part of the flower - pollination.</p>

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Year 4

Year 4 Theme Science Focus	Autumn (14 wks) Folk Living things and their habitats. Sound	Spring (12 wks) Compare States of matter	Summer (13 wks) Us Animals, including humans. Electricity
FS activiteis and learning	<p><u>Living thinkgs and their habitats</u></p> <p>Animals and plants live in a habitat to which they are suited. Animals have features that help them move and find food. Plants have features that help them grow. The habitat provides the basic needs of the animals and plants - shelter, food and water.</p> <p>Within habitats there are different micro-habitats - in leaf litter, on the bark of trees, on leaves. Micro-habitats have different conditions - dark or light, damp or dry. The conditions affect which plants and animals live there. Plants and animals depend on each other for food and shelter etc.</p> <p>Habitats can be changed naturally by flooding, fire, an earthquake etc. Humans also cause the environment to change in a positive way - setting up reservoirs but also in a negative way ie littering. The environments change with the seasons. Living things can be found in habitats at different times of the year.</p> <p>(Year 5 - As part of a life cycle, plants and animals reproduce.</p> <p>Animals have offspring that grow into adults which are born live, such as babies, squirrels, deer etc. Other animals have eggs ie chickens and snakes which hatch into young and grow into adults.</p> <p>Some young go through further changes before becoming adults ie caterpillar to butterflies -</p>	<p><u>States of matter</u></p> <p>A solid keeps its shape and has a fixed volume.</p> <p>A liquid has a fixed volume but changes in shape to fit the container. A liquid can be poured and keeps a level, horizontal surface.</p> <p>Granular and powdery solids like sand can be confused with liquids because they pour, however when poured they form a heap.</p> <p>Melting is a state of change from solid to liquid.</p> <p>Boiling is a state of change from liquid to gas that happens when a liquid is heated to a specific temperature and bubbles of the gas can be seen in the liquid.</p> <p>Water boils when heated to 100°C</p> <p>Evaporation is the same state change as boiling (liquid to gas), but happens slowly at lower temperatures and only at the surface of the liquid.</p> <p>We cook on an open fire so these things are discussed then.</p> <p>Evaporation happens more quickly if the temperature is higher, the liquid is spread out or it is windy.</p> <p>Condensation is the change back from a gas to liquid caused by cooling.</p> <p>Water at the surface of seas, rivers etc evaporates into water vapour (a gas). This rises, cools and</p>	<p><u>Animals, including humans</u></p> <p>Year 5 - When babies are young they grow rapidly. They are dependent on their parents.</p>
	<p>metamorphosis.)</p> <p>(Year 6 - Plants can make their own food where animals cannot.</p> <p>Plants can be divided into 2 main groups - flowering plants and non-flowering plants.)</p>	<p>condenses back into a liquid forming cloud. When too much water has condensed, the water droplets in the cloud get too heavy and fall back down as rain, snow, sleet etc and drain back into the rivers etc.</p> <p>This is known as precipitation. THE WATER CYCLE.</p>	

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Year 5

Year 5 Theme Science Focus	Autumn (14 wks) Life and Death Properties and change of materials	Spring (12 wks) Beyond Earth and space Forces	Summer (13 wks) Legacy Living things and their habitats Animals, including humans
FS activities and learning	<p><u>Properties and changes of material</u></p> <p>Mixtures can be separated by filtering, sieving and evaporation.</p> <p>Changes such as burning wood and rust form new materials and these are not reversible.</p>	<p><u>Earth and Space</u></p> <p>The Sun is a star.</p> <p>Earth takes 365 1/4 days to complete its orbit around the sun. As Earth rotates half faces the sun (day) and half is facing away from the sun (night).</p> <p>The moon orbits the Earth. It takes about 28 days to complete its orbit.</p> <p><u>Forces</u></p> <p>A force cause an object to start moving, stop moving, speed up, slow down or change direction. Everything is pulled t the earth by gravity.</p> <p>Pulleys, levers and gear are all mechanicm. Can be used to move objects/transport objects. These can be used as part of a swing or children have made a lift in forest schools using a tree and they lever themselves up using the rope etc.</p>	<p><u>Living things and their habitats.</u></p> <p>Animals have offspring that grow into adults which are born live, such as babies, squirrels, deer etc. Other animals have eggs ie chickens and snakes which hatch into young and grow into adults.</p> <p>Some young go through further changes before becoming adults ie caterpillar to butterflies - metamorphosis.</p> <p>(Year 6 - Plants can make their own food where animals cannot.</p> <p>Plants can be divided into 2 main groups - flowering plants and non-flowering plants.)</p> <p><u>Animals, including humans</u></p> <p>Year 5 - When babies are young they grow rapidly. They are dependent on their parents.</p>

Science curriculum and Forest schools link

Year 6

Year 6 Theme Science Focus	Autumn (14 wks) Sanctuary Light Electricity	Spring (12 wks) Adversity Animals, including humans	Summer (13 wks) Evolution Evolution and inheritance Living things and their habitats
FS activities and learning	<p><u>Light</u></p> <p>Objects that block light will cause shadows. Shadows - we chase each others shadows, place objects in the light source from the sun to form shadows that we can then draw round etc.</p>		<p><u>Evolution and inheritance</u></p> <p>All living things have offspring of the same kind, as features in the offspring are inherited from the parents. Due to reproduction the offspring are not identical to their parents and vary from each other.</p> <p>Planbts and animals have characteristics that make them suited (adapted) to their environment. If the environment changes rapidly some variations of a species may not suit the new environment and die. If the environment changes slowly, animals qnd plants with variations that are best suited survive in greater numbers to reproduce and pass their characteristics on to their young. Over time, these characteristics become more dominant within the population. Over a very long period of time, these characteristics may be so different to how they were originally that a new species is created - EVOLUTION</p> <p>Fossils give us evidence of what lived on earth millions of years ago and provide evidence to support the theory of evolution.</p> <p><u>Living things and their habitats.</u></p> <p>Plants can make their own food where animals cannot.</p> <p>Plants can be divided into 2 main groups - flowering plants and non-flowering plants.</p>

