

Year 4 Science

Topic	Curriculum information	Forest School link
Animals, including humans	<p>Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p>Not applicable in Forest School.</p> <p>There are times a tooth may be found in Forest school. Children may be curious about the different way's birds, insects, animals eat. This may encourage them to investigate this in the classroom or at home.</p> <p>Children talk about predators and prey in Forest school – Owls and snakes eat squirrels, badgers and foxes eat hedgehogs, cats, foxes and owls eat mice etc. They learn that it is all part of the food chains.</p>
<p>Living things and their habitats</p> <p>Living things and their habitats - conservation</p>	<p>Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Children enjoy grouping things in forest school during their play. They may group</p> <p>Animals - birds, insects, mammals, amphibians.</p> <p>By Where They Live (Habitat) - Ground dwellers - beetles, worms, moss. Tree dwellers - birds, squirrels, caterpillars. Water dwellers - frogs, pond insects.</p> <p>By Features - Animals with legs / no legs, plants with flowers / no flowers, animals with fur, feathers, or scales.</p> <p>Children recognise seasonal changes, weather changes include flooding/high winds etc. that could affect wildlife and its habitats,</p> <p>Children also talk about litter when they find some and how it can be harmful for the wildlife.</p> <p>Climate change can make winters warmer, which might confuse hibernating animals etc.</p>
States of matter	<p>Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>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).</p>	<p>Children will experience and experiment with states of matter for example:</p> <ul style="list-style-type: none"> • Solids - Sticks, leaves, rocks, soil, acorns, pinecones, ice (in winter!) <p>Children will learn that solid objects have a fixed shape and don't flow.</p> <ul style="list-style-type: none"> • Liquids - Rainwater, puddles, melted ice <p>Children will learn that liquids take the shape of their container (or puddle hole!) and can be poured.</p>

	<p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<ul style="list-style-type: none"> • Gases - Air (wind blowing through trees, bubbles in water, breath in cold air) <p>Smoke from a campfire, steam from hot drinks or boiling water outdoors.</p> <p>We do talk about the water cycle. Children ask about where the water goes from the puddles when they dry out and how warm the temperature needs to be for this to happen. There is a water cycle document stored In forest school for me to show the children if they ask further questions and want to know more.</p>
Sound	<p>Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the pitch of a sound and features of the object that produced it.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>Children are always listening to the sounds they hear in Forest School. They talk about how different animals hear and make sound. Crickets produce sounds by rubbing their front wings together, Grasshoppers rub their back legs against their forewings etc. They also ask questions about how we and animals hear what we hear and why some people and animals may not be able to hear.</p> <p>Children like to play beats on different objects in Forest School. They recognise that depending on the material, the strength and quickness they hit the object with, as well as the type of beater they are using, depends on the volume and pitch of the sound it creates.</p> <p>Children like to use loose parts like the pipes in Forest school to speak/shout etc through and another child is at the other end listening. Children learn that the length of the pipe depends on how loud or faint the sound reaches them.</p>
Electricity	<p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>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.</p>	<p>Not applicable at Forest school.</p> <p>Not applicable at Forest school.</p> <p>Not applicable at Forest school.</p>

	Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	Not applicable at Forest school.
	Recognise some common conductors and insulators, and associate metals with being good conductor.	Not applicable at Forest school.

Vocabulary:

Animals including humans: digestive system, oesophagus, stomach, small intestine, large intestine, saliva, peristalsis, absorb, liver, gall bladder, incisors, canines, molars, jaw, gum, enamel, plaque, tooth decay, cavity, fluoride, ecosystem, producer, consumer, prey, predator, food web, tundra, hide, interdependence and threatened.

Living things and their habitats: Conservation: ecosystem, Northern, Hemisphere, Southern, Hemisphere, migrate, monsoon, rainforest, deforestation, drought, biodiversity, recycling, fossil fuels, pollution, greenhouse gases, emissions, climate change, chemicals, sewage, contaminate, pesticides, water treatment, plant, conserve, drought, freshwater, pure, water butt, endangered, marine sanctuaries, protect, conservation areas and recycling.

States of matter: matter, solid, liquid, gas, volume, particle, bond, arranged, cooled, heated, particle, melting, melting point, temperature, thermometer, freezing, reverse, boiling, sublimation, deposition, evaporation, condensation, absorb, water vapour, process, water cycle, precipitation, surface runoff, transpiration and groundwater.

Living things and their habitats: habitat: microhabitat, conditions, adapted, camouflage, coastal, grassland, environment, climate, exposure, classify, characteristics, vertebrate, species, sub-groups, identify, criteria, classification keys, organism, adapted, region, features, colouring, blubber, ecosystem, oxygenated, flowering plant, non-flowering, plant and pond dipping.

Electricity: electricity, batteries, mains electricity, appliance, socket, circuit, series circuit, component, cell, voltage, current, power, battery, wire, bulb, conductor, insulator, metal, copper, rubber, switch, current, control, complete circuit, incomplete circuit, non-renewable energy, renewable energy, wind turbines, solar panels and hydropower.

Sound: vibration, medium, waves, eardrum, signals, source, energy, particles, echo, vacuum, materials, reflect, absorb, insulate, defenders, volume, decibels, decibel metre, amplitude, power, pitch, high pitch, low pitch, instruments, orchestra, energy, particles, travel, sound source and fade

