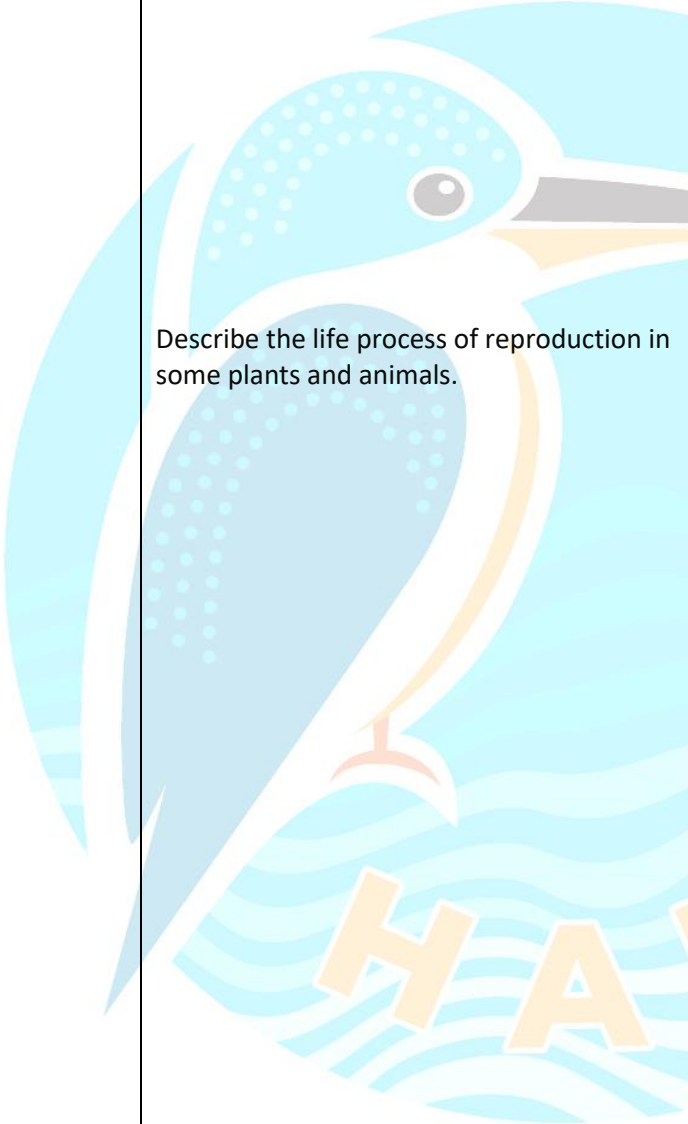


Year 5 Science

Topic	Curriculum information	Forest School link
<p>Living things and their habitats</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p> 	<p>Children talk about the life cycles of animals, birds and insects.</p> <p>All animals are born, grow, reproduce and die.</p> <p>Amphibians lay eggs, undergo metamorphosis hatching into aquatic tadpoles that over time grow legs and lose their tail before developing into adults.</p> <p>Insects lay eggs, undergo metamorphosis which can complete the process (into a butterfly). There may be several stages to their growth - larva, pupa, and adult.</p> <p>Birds lay eggs, the young grow in the egg before they hatch, they grow from chicks to adults as they are fed by their adult.</p> <p>Children learn through observation and questioning about plant reproduction at forest school. Plants use pollination, carried by wind or animals, to transfer pollen for fertilisation, producing seeds that germinate into new plants.</p> <p>Some plants spread along the ground and produce new plants and some plants you can take cuttings from and plant them to produce another plant (asexual reproduction).</p> <p>Pollination from bees carry the male parts of the flower to the female parts of the flower. The seeds produced through this process are then dispersed by animals or the wind and will grow where they land if the conditions are right (sexual reproduction).</p> <p>Male and female birds mate – female produces eggs</p> <p>Male and female deer mate – female gives birth to a fawn.</p> <p>Fish – lay hundreds of eggs as they don't all survive.</p>
<p>Animals, including humans</p>	<p>Describe the changes as humans develop to old age.</p>	<p>Children observe humans age and develop in day to day life, however during forest school they may talk about their families, including grandparents and talk about the difficulties they may have with certain activities that they themselves find 'easy' etc.</p>

<p>Forces</p>	<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.</p>	<p>Children are aware of gravity and may talk about it when playing in Forest School. ~Children talk about how It is an invisible force that keeps us grounded on Earth and holds the Moon in orbit around our planet, and keeps the planets in orbit around the Sun.</p> <p>Not applicable in Forest School.</p> <p>Children learn about levers when investigating ways they can lift/move large objects for example logs. They use a stick to help lever it off the ground etc.</p>
<p>Earth and space</p>	<p>Describe the movement of the Earth and other planets relative to the sun in the solar system.</p> <p>Describe the movement of the moon relative to the Earth.</p> <p>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.</p>	<p>Not applicable to Forest School.</p> <p>Not applicable to Forest School.</p> <p>Not applicable to Forest School.</p> <p>Children notice when they can see the moon in the sky during the day. They talk about how the moon orbits the earth and that's why we see it during certain times in the day – predominantly night.</p>
<p>Properties and materials</p> <p>Changes of materials</p>	<p>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.</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p>	<p>Children will group together natural resources during their play at Forest School.</p> <p>Children explore materials when playing in forest school – especially in the mud kitchen making mud pies, potions etc. They add water to mud to turn it into a liquid, however if it is liquid form and they want it thicker they add mud to thicken it etc.</p>

	<p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>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.</p>	<p>Children use sieves to separate materials – stones in fine mud, wet mud to remove lumps etc.</p> <p>Children talk about how rainwater in Forest school evaporates and that's why the puddles and water that has been collected disappears. Children share that it forms clouds, then it rains when the clouds empty.</p> <p>Not applicable to Forest School.</p> <p>Not applicable to Forest School.</p> <p>Children learn that wood that is burnt changes into charcoal and ash and that these changes are irreversible.</p>
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Vocabulary:

Animals Including Humans: foetus, dependent, adolescent, puberty, reproduce, gestation, pregnant, duration, extreme, breeding, womb, umbilical chord, embryo, trimester, midwife, growth spurt, childhood, motor skills, milk teeth, constant, adolescence, puberty, hormones, mood swing, develop, lifestyle, keratin, elasticity, cataracts and neurodegenerative.

Earth and space: terrestrial planet, gas giant planets, Solar System, spherical, orbit, astronomy, heliocentric, geocentric, dwarf planet, orbit, axis, poles, season, hemisphere, orbit, sundial, time zone, gnomon, dial, shadow, moon phase, waxing, waning, eclipse, rocky planet, gas planet, moon, orbit and solar system.

Materials: Conductive, magnetic, durable, transparent, versatile, thermal, conduction, molecules, degrees Celsius (°C), insulator, hardness, force, iron, steel, stone, dissolve, solute, insoluble, soluble, solvent, solute, solvent, solution, substance, saturation, pure substance, mixture, filtering, sieving, evaporation, pure substance, solute, solvent, solution, evaporate, reversible, mixture, physical change, melting, evaporate, irreversible, chemical change, compare, effervescence, product, fair test, variable, control carriable, corrosion, rusting, combustion, fuel, oxygen, extinguish, smother, reaction, predict, acid, bicarbonate of soda and carbon dioxide.

Living things and their habitats: reproduction, asexual, fertilisation, tuber, genes, pouch, mammary glands, placental mammal, monotreme mammal, marsupial, metamorphosis, caterpillar, amphibian, larva, pupa, egg, fledgling, egg tooth, hatch, embryo, documentary, naturalist, primatologist, endangered, natural sciences, living organism, reproduction, life cycle, vertebrate and warm-blooded.

Forces: Sir Isaac Newton, gravity, astronomy, weight, mass, Galileo Galilei, air resistance, opposing, streamlined, upthrust, buoyant, sink, friction, resistance, lubricant, Newton meter, Newton, lever, load, pivot, fulcrum, pulley, mechanism, gear, mesh, rack and pinion and bevel gear.