

## Science: ELG (UOW)

### Children at the expected level of development will:

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

### 2-3 years

- Can talk about the things they see, such as plants, animals, natural and found objects.
- To enjoy and explore the natural world e.g. through splashing in puddles, looking for mini beasts.
- To show respect for living things e.g. through watering plants, looking after seeds, careful handling of mini beasts and animals.

3-4 years	In Reception	Working Scientifically Skills
<p><b><u>Plants</u></b></p> <ul style="list-style-type: none"> <li>• Can plant and look after cress/ sunflowers/ bean plants</li> <li>• Can observe daffodils, draw flowers</li> <li>• Nature explorers – bark/leaf rubbings etc</li> <li>• Can name different colours of plants</li> </ul> <p><b><u>Animals including Humans</u></b></p> <ul style="list-style-type: none"> <li>• Can learn and sing songs about body parts</li> <li>• Can recognise different features of faces e.g. eyes, nose, mouth, ears</li> <li>• Can explore sensory tuff trays</li> <li>• Experience/ explore small world different animals and where they live</li> <li>• Can begin to name different farm animals</li> <li>• Observe caterpillars to butterflies (beginnings of life cycle/offspring)</li> </ul> <p><b><u>Seasonal Changes</u></b></p> <ul style="list-style-type: none"> <li>• Nature explorers throughout the year: explore local environment</li> <li>• Observe signs of Autumn/ Spring/ Summer</li> <li>• Can talk about the weather and name different weathers</li> </ul> <p><b><u>Living things and their habitats</u></b></p>	<p><b><u>Plants</u></b></p> <ul style="list-style-type: none"> <li>• Nature explorers: to begin to recognise the difference between a plant and a tree</li> <li>• To observe plants around the school</li> <li>• Can draw plants/ mark making (basics of parts of a plant)</li> <li>• Can grow runner beans/ observing</li> </ul> <p><b><u>Animals including Humans</u></b></p> <ul style="list-style-type: none"> <li>• Can drawing people including themselves</li> <li>• Label their drawings and name parts of the human body e.g. legs, arms, body, head.</li> <li>• Can describing textures in sensory tuff trays</li> <li>• Can begin to name/ sorting animals: farm/ zoo/ wild</li> <li>• Can begin to name a range of young animals</li> </ul> <p><b><u>Seasonal Changes</u></b></p> <ul style="list-style-type: none"> <li>• Nature explorers throughout the year</li> <li>• Can talk about the current season</li> <li>• Beginning to look at different temperatures e.g. melting</li> <li>• Begin to write/ draw the weather</li> </ul> <p><b><u>Living things and their habitats</u></b></p> <ul style="list-style-type: none"> <li>• Sustainability: To understand how to care for the environment</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Can observe changes over time.</b></li> <li>• <b>Can observe changes and patterns.</b></li> <li>• <b>Can identify and classify.</b></li> <li>• <b>Can perform simple tests with adult support.</b></li> <li>• <b>Can ask simple questions.</b></li> <li>• <b>Can record observations in ways that are important and meaningful to me.</b></li> <li>• <b>Explores how things work.</b></li> <li>• <b>Talks about different forces e.g. how the water pushes when you try to push something down.</b></li> </ul>

<ul style="list-style-type: none"> <li>• Sustainability: I can explore recycling by sorting household items</li> <li>• Can look after their classroom</li> <li>• Understands the need to respect and care for the natural environment and all living things.</li> </ul> <p><b>Everyday materials</b></p> <ul style="list-style-type: none"> <li>• Explore different materials including natural materials and talk about collections of these E.g. Three little pigs (materials of houses), Goldilocks (hot/cold)</li> <li>• Begin to explore floating and sinking (above and under water)</li> <li>• Explore ice (ice paintings, melting ice with water/salt)</li> <li>• Can explore how you can shine light through some materials but not others.</li> </ul>	<ul style="list-style-type: none"> <li>• Can look after their classroom/ school</li> <li>• Can build bug hotels including what minibeasts need in their habitat</li> </ul> <p><b>Everyday materials</b></p> <ul style="list-style-type: none"> <li>• Can select and use different materials for junk modelling (beginning to explore the suitability of materials in their own creations)</li> <li>• Can manipulate different materials (cutting/sticking etc)</li> <li>• To identify objects that float and sink, sorting these and talking about my choices.</li> </ul>	
<p style="text-align: center;"><b>Key Vocabulary:</b></p> <p style="text-align: center;"><b>Anchor:</b> family, light, flower, plant, animal, cow, sheep, pig, stick, leaf, hot, cold, rain, snow</p> <p style="text-align: center;"><b>Goldilocks:</b> grow, sink, float, rock, wood, job, water, family, living, push, pull</p> <p style="text-align: center;"><b>Step-on:</b> season, spring, summer, autumn, winter, country, England, material, shadow, people, force, melting, cooking, pattern, change</p>		

Year Group	Plants	Animals Including Humans	Everyday materials	Seasonal Changes	Climate Change	Working Scientifically Skills
Year One	<ul style="list-style-type: none"> <li>I know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>I know how to identify and describe the basic structure of a variety of common flowering plants (including trees) including stem, roots and petals.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to identify and name a variety of common animals including fish, amphibians, reptiles, mammals and birds.</li> <li>I know how to identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>I know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</li> <li><b>RSHE</b> – I know how to identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</li> <li>I know how to describe the simple physical properties of a variety of everyday materials.</li> <li>I know how to distinguish between an object and the material from which it is made, describe their properties, identify and group everyday materials based on physical properties.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to observe and describe changes across the four seasons.</li> <li>I know how to observe and describe weather associated with the seasons and how day length varies.</li> <li>I know that it is not safe to look directly at the sun, even when wearing dark glasses.</li> </ul>	<ul style="list-style-type: none"> <li>I know that planet earth provides plants and animals (including humans) with the basic needs for life e.g. water, oxygen, food, shelter, warmth.</li> <li>I know what a climate is and can give an example of a climate e.g. polar climate.</li> <li>I know that the earth's climate is changing as the population increases.</li> </ul>	Pupils can: <ul style="list-style-type: none"> <li>Observe changes over time and observe patterns.</li> <li>Identify and classify.</li> <li>Perform simple tests.</li> <li>Perform a fair test with adult support.</li> <li>Ask simple questions and recognise that they can be answered in different ways.</li> <li>Use observations and ideas to suggest answers to questions.</li> <li>Communicate ideas in different ways.</li> <li>Use simple equipment to observe closely.</li> <li>Gather and record data to help in answering questions.</li> </ul>
<b>Year One Key Vocabulary:</b>						
<b>Anchor</b> - petal, root, bulb, seed, trunk, branches, stem, fruit, head, neck, arm, elbow, leg, knee, face, ears, eyes, hair, mouth, teeth, hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy, brick, paper, fabrics, elastic, foil, wood, plastic, glass, metal, rock, object, fish, birds, seasons, weather, winter, spring, summer, autumn, changes						
<b>Goldilocks</b> – stalk, mammal, carnivore, herbivore, omnivore, habitat, material, waterproof, length, vary, properties, senses, touch, taste, smell, sight, wing, claw, feathers, fur, scales						
<b>Step-on</b> - deciduous, evergreen, amphibians, reptiles, absorbent, opaque/transparent, observe, compare, record, temperature, climate, population						

	Plants	Animals Including Humans	Everyday materials	Living things and their habitats	Climate Change	Working Scientifically Skills
<b>Year Two</b>	<ul style="list-style-type: none"> <li>I know how to describe the basic needs of plants (water, light and a suitable temperature) for survival and the impact of changing these.</li> <li>I know how to observe and describe how seeds and bulbs grow into mature plants.</li> <li>I know how to find out and describe what plants need to grow and stay healthy.</li> </ul>	<ul style="list-style-type: none"> <li><b>RSHE</b> - I can describe the relationship between adult animals and their offspring.</li> <li><b>RSHE</b> - I know how to name and locate parts of the human body, including those related to the senses and describe them.</li> <li>I know how to describe the basic needs of animals for survival (water, food and air) and the main changes as offspring from young animals, including humans, grow into adults.</li> <li>I know how to group animals according to what they eat, describe how animals get their food from other animals and/or plants, and use simple food chains to describe these relationships.</li> <li><b>RSHE</b> - I know how to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to sort and classify a range of materials.</li> <li>I know how to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for a particular use.</li> <li>I can describe how the shapes of solid objects made from some materials can be changed by applying forces in different directions e.g. squashing, bending, twisting and stretching</li> </ul>	<ul style="list-style-type: none"> <li>I know how to identify and name a variety of plants and animals in their habitats, including micro-habitats</li> <li>I know how to 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.</li> <li>I know how to 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.</li> <li>I know how to explore and compare the differences between things that are living, dead, and things that have never been alive.</li> </ul>	<ul style="list-style-type: none"> <li>I know the importance of the planet's oceans and seas for sustaining life.</li> <li>I know that plastic isn't biodegradable and can describe some of the effects of plastic on the planet's marine life.</li> <li>I can suggest ways in which plastic pollution of the planet's oceans can be reduced.</li> </ul>	<ul style="list-style-type: none"> <li>Pupils can:</li> <li>Use simple equipment to observe closely including changes over time.</li> <li>Use observations and ideas to suggest answers to questions noticing similarities, differences and patterns.</li> <li>Identify, group and classify.</li> <li>Perform simple comparative tests.</li> <li>Gather and record data to help in answering questions including from secondary sources of information.</li> <li>Ask simple questions and recognise that they can be answered in different ways using scientific language.</li> <li>Communicate my ideas, what I can do and what I can find out in different ways.</li> </ul>

### **Year Two Key Vocabulary:**

**Anchor** – seaside, woodland, ocean, rainforest, desert, polar, living, dead, alive, depend , basic needs, plants, seeds, temperature, adult, exercise, egg, chick, chicken, egg, caterpillar, butterfly, tadpole, frog, lamb, sheep, baby, toddler, child, teenager, adult, growth, object, flexible

**Goldilocks** – habitat, food chain , life cycle, offspring, survival, hygiene, germs, bulbs, observe, record, compare, equipment, absorbent, transparent, opaque, producer, predator

**Step-on** - micro-habitat, germination, reproduction, excretion, pupa, spawn, adolescent, nutrition, data, classify, identify, protein, carbohydrate