

# Whole school Curriculum Progression Map: SCIENCE

| Aspect              | EYFS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KS1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                               | KS2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                     | Three and Four-Year-Olds<br>Reception<br>Early Learning Goals                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Year 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Year 2                                                                                                                                                                                                                                                                                                                                                                                                                                        | Year 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Year 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Year 5                                                                                                                                                                                                                                                                                                                                                                                             | Year 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Big Idea: Humankind |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Human Body          | <p><b>Nursery</b><br/>The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. Identify some of the different body parts from pictures.</p> <p><b>Reception</b><br/>The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. Different body parts are used for different things, such as the eyes are used to see. Draw pictures of the human body and name some of the different body parts.</p> <p>Use all their senses in hands-on exploration of</p> | <p><b>PROJECT: Human Senses</b><br/>The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. The five senses are hearing, sight, smell, taste and touch. Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch. Draw and label the main parts of the human body and say which body part is associated with which sense.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p> | <p><b>PROJECT: Human Survival</b><br/>Human offspring go through different stages as they grow to become adults. These include baby, toddler, and child, teenager, adult and elderly. Describe the stages of human development (baby, toddler, and child, teenager, adult and elderly).</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Notice that animals, including humans, have offspring which grow into adults.</p> | <p><b>PROJECT: Skeletal and Muscular Systems</b><br/>Humans have a skeleton and muscles for movement, support and protecting organs. Major bones in the human body include the skull, ribs, spine, humerus, ulna, radius, pelvis, femur, tibia and fibula. Major muscle groups in the human body include the biceps, triceps, abdominals, trapezius, gluteals, hamstrings, quadriceps, deltoids, gastrocnemius, latissimus dorsi and pectorals. Describe how humans need the skeleton and muscles for support, protection and movement.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Identify that humans and some other animals have</p> | <p><b>PROJECT: Digestive System</b><br/>The digestive system is responsible for digesting food and absorbing nutrients and water. The main parts of the digestive system are the mouth, oesophagus, stomach, small intestines, large intestines and rectum. The mouth starts digestion by chewing food and mixing it with saliva. The oesophagus transports the chewed food to the stomach, where it mixes with stomach acid and gets broken down into smaller pieces. In the small intestine, nutrients from the food are absorbed by the body. In the large intestine, water is absorbed by the body. The remaining undigested waste is stored in the</p> | <p><b>PROJECT: Human Reproduction and Ageing</b><br/>Humans reproduce sexually, which involves two parents (one female and one male) and produces offspring that are different from the parents. Describe the process of human reproduction.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b><br/>Describe the life process of reproduction in some plants and animals.</p> | <p><b>PROJECT: Circulatory System</b><br/>The circulatory system includes the heart, blood vessels and blood. The heart pumps blood through the blood vessels and around the body. There are three types of blood vessel: arteries, veins and capillaries. They each have a different-sized hole (lumen) and walls. The blood carries gases (oxygen and carbon dioxide), water and nutrients to where they are needed. The red blood cells carry oxygen and carbon dioxide around the body. The blood also contains white blood cells, which protect the body from infection. Name and describe the purpose of the circulatory system and the</p> |

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|                       | <p><b>natural materials (UW)</b></p> <p>Talk about what they see, using a wide vocabulary. (UW)</p> <p>Explore the natural world around them. (UW)</p> <p>Begin to show accuracy and care when drawing. (PD)</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants. (UW)</p> |                                                                                                                                                                                                                                                                     |                                                                                                                                                                 | <p><b>skeletons and muscles for support, protection and movement.</b></p>                                                                                     | <p>rectum before excretion through the anus. Describe the purpose of the digestive system, its main parts and each of their functions.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b></p> <p>Describe the simple functions of the basic parts of the digestive system in humans.</p> |                                                                                                                                                                                               | <p>functions of the heart, blood vessels and blood.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b></p> <p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> |
| <b>Key Vocabulary</b> | <p>head, arms, legs, nose, eyes, ears, mouth, hands and feet, see, hear, touch, smell, taste</p>                                                                                                                                                                                                                                    | <p>amphibians, fish, reptiles, mammals, birds (+ 1 example of each) herbivore, omnivore, carnivore head, nose, ear, neck, shoulder, arm, elbow, wrist, hand, back, chest, hip, leg, knee, ankle, foot wing, beak, tail, fin sight, smell, touch, taste, hearing</p> | <p>reproduce, adult, baby, offspring, kitten, calf, puppy, food chain, prey, predator, camouflage,</p>                                                          | <p>skeleton, skull, bones, muscles, movement, support, protection, nutrition</p>                                                                              | <p>mouth, tongue, teeth, oesophagus, stomach, small intestine, large intestine, nutrients, absorb, canine, incisor, molar producer, consumer, apex predator</p>                                                                                                                                       | <p>womb, foetus, embryo, gestation, baby, toddler, teenager, elderly growth, development, puberty</p>                                                                                         | <p>function, circulatory system, heart, valve, blood vessel, vein, artery transport, oxygenated, deoxygenated</p>                                                                                                                                                  |
| <b>Staying Safe</b>   | <p><b>Nursery</b></p> <p>It is important to listen to adults and follow simple rules to stay safe. Follow</p>                                                                                                                                                                                                                       | <p><b>PROJECT: Seasonal Changes, Chop, slice and mash</b></p> <p>It is important to stay safe. Some ways to stay safe include staying safe in strong sunlight (sun</p>                                                                                              | <p><b>PROJECTS: Remarkable Recipes and Human Survival</b></p> <p>Humans need water, food, air and shelter to survive. Describe what humans need to survive.</p> | <p><b>PROJECT: Light and Shadows</b></p> <p>Light from the Sun is damaging for vision and the skin. Protection from the Sun includes sun cream, sun hats,</p> | <p><b>PROJECT: Electrical Circuits and Conductors</b></p> <p>Working with electrical circuits can be dangerous. Precautions include not touching electrical components with wet</p>                                                                                                                   | <p><b>PROJECT: Properties and Changes of Materials</b></p> <p>Very hot and very cold materials can burn skin. Heating materials should be done safely. Explain the precautions needed for</p> | <p><b>PROJECT: Light Theory</b></p> <p>Lasers are intense beams of light and they should never be pointed at people's faces or aircraft. Explain the dangers of</p>                                                                                                |

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|  | <p>simple rules with the help of an adult.</p> <p><b><u>Reception</u></b><br/> <b>PROJECTS: Sunshine and Sunflowers, Starry Night</b><br/> Rules help to keep us safe in different environments and when using certain equipment. Follow instructions when in different environments and when handling simple equipment, such as scissors.</p> <p>Understand a question or instruction that has two parts, such as "Get your coat and wait at the door". (CL)</p> <p>Talk about what they see, using a wide vocabulary. (UW)</p> <p>Increasingly follow rules, understanding why they are important. (PSED)</p> <p>Remember rules without needing an adult to remind them. (PSED)</p> <p>Be increasingly independent in meeting their own</p> | <p>cream, sun hat and sunglasses), crossing roads (stop, look and listen), in the kitchen (not touching hot or sharp objects) and with household chemicals (not touching, drinking or eating). Describe ways to stay safe in some familiar situations.</p> <p><b>Links to D&amp;T and PSHE</b></p> | <p><b><u>NC Objectives</u></b><br/> <b>Animals including humans</b><br/> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p> | <p>sunglasses and staying indoors or in the shade. Explain why light from the Sun can be dangerous.</p> <p><b><u>NC Objectives</u></b><br/> <b>Light</b><br/> Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> | <p>hands and not putting batteries in mouths. Explain the precautions needed for working safely with electrical circuits.</p> <p><b>Links to D&amp;T</b></p> | <p>working safely when heating, burning, cooling and mixing materials.</p> <p><b>Links to D&amp;T</b></p> | <p>using lasers and ways to use them safely.</p> <p><b>Links to PSHE</b></p> |
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|  | <p>care needs, e.g. brushing teeth, using the toilet, washing and drying their hands thoroughly. • Make healthy choices about food, drink, activity and toothbrushing. (PSED)</p> <p>Understand the effect of changing seasons on the natural world around them (UW)</p> <p>Understand how to listen carefully and why listening is important. (CL)</p> <p>Know and talk about the different factors that support their overall health and wellbeing: - regular physical activity - healthy eating - toothbrushing - sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian (PSED)</p> <p>Understand some important processes and changes in the natural world around them,</p> |  |  |  |  |  |  |
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|                   | <p>including the seasons and changing states of matter (UW)</p> <p>Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. (CL)</p> <p>Explain the reasons for rules, know right from wrong and try to behave accordingly. (PSED)</p> |                                                                                                                                                                               |                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                          |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                           |
| Key Vocabulary    | Instructions, adults, safe, environment                                                                                                                                                                                                                                                                                                                          | stay safe, strong sunlight, sun cream, sun hat, sunglasses, hot, sharp object, household chemicals                                                                            | survival, water, air, food                                                                                                                                                                              | Dangerous, protection, shade, vision, damaging                                                                                                                                                                          | Electrical circuits, household objects, dangerous, precautions, batteries, safely                                                                                        | Materials, safety measures, heating, burning, cooling, mixing                                                                                                                                                                     | Lasers, intensity,                                                                                                                                                                                                                        |
| Healthy Lifestyle | <p><b>Nursery</b></p> <p>Washing their hands after going to the toilet and before eating helps people to stay healthy. Wash and dry hands after</p>                                                                                                                                                                                                              | <p><b>PROJECT: Chop, slice and mash</b></p> <p>Hand washing and good hygiene are important parts of a healthy lifestyle and prevent the spread of germs. Explain why hand</p> | <p><b>PROJECT: Human Survival</b></p> <p>A healthy lifestyle includes exercise, good personal hygiene, good quality sleep and a balanced diet. Risks associated with an unhealthy lifestyle include</p> | <p><b>PROJECT: Cook Well, Eatwell</b></p> <p>Humans have to get nutrition from what they eat. It is important to have a balanced diet made up of the main food groups, including proteins, carbohydrates, fruit and</p> | <p><b>PROJECT: Digestive System</b></p> <p>Regular teeth brushing, limiting sugary foods and visiting the dentist are important for good oral hygiene. Describe what</p> | <p><b>PROJECT: Human Reproduction and Ageing</b></p> <p>Good personal hygiene (washing, wearing clean clothes and brushing teeth) can prevent disease or illness. Puberty is the period during which adolescents reach sexual</p> | <p><b>PROJECTS: Circulatory System and Food for Life</b></p> <p>Lifestyle choices can have a positive (exercise and eating healthily) or negative (drugs, smoking and alcohol) impact on the body. Explain the impact of positive and</p> |

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|  | <p>going to the toilet and before eating.</p> <p><b><u>Reception</u></b><br/> <b>PROJECTS: Splash!</b><br/> <b>Let's Explore and Ready, Steady, Grow</b><br/> Washing and drying their hands, especially after using the toilet and before eating, helps stop the spread of harmful germs. Wash and dry hands regularly and say why this is important.</p> <p>Be increasingly independent in meeting their own care needs, e.g. brushing teeth, using the toilet, washing and drying their hands thoroughly. (PSED)</p> <p>Manage their own needs. - Personal hygiene (PSED)</p> <p>Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. (PSED)</p> | <p>washing and cleanliness are important.</p> | <p>obesity, tooth decay and mental health problems. Describe the importance of a healthy lifestyle, including exercise, a balanced diet, good quality sleep and personal hygiene.</p> <p><b><u>NC Objectives</u></b><br/> <b>Animals including humans</b><br/> Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p> | <p>vegetables, dairy products and alternatives, and fats and spreads. Humans need to stay hydrated by drinking water. Explain the importance and characteristics of a healthy, balanced diet.</p> <p><b><u>NC Objectives</u></b><br/> <b>Animals including humans</b><br/> 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.</p> | <p>damages teeth and how to look after them.</p> | <p>maturity and become capable of reproduction. It causes physical and emotional changes. Explain why personal hygiene is important during puberty.</p> | <p>negative lifestyle choices on the body.</p> <p><b><u>NC Objectives</u></b><br/> <b>Animals including humans</b><br/> Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.</p> |
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| Key Vocabulary  | healthy, harmful germs, washing, drying                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Cleanliness, prevention, hygiene, spread of germs                                                                                                                                                                                                                                                                                                                                                             | protection exercise, hygiene, balanced diet, obesity, decay                                                                                                                                                                               | Nutrition, proteins, carbohydrates, fruit and vegetables, dairy, fats, hydration, healthy, balanced diet.                                                                                                                                                                                                                                                                                                                                                                  | Decay, cavities, dental hygiene                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Puberty, disease, illness, personal hygiene, adolescent, sexual maturity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | lifestyle, drug                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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|                 | Big Idea: Processes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Pattern seeking | <p><b>Nursery</b><br/><b>PROJECT: Winter Wonderland</b><br/>The weather is colder in winter and warmer in summer. Talk about the weather as being warm or cold.</p> <p><b>Reception</b><br/><b>PROJECTS: Sunshine and Sunflowers, Long Ago and Signs of Spring</b><br/>The weather can change throughout the day, week and month. The weather is different at different times in the year. Notice and begin to describe patterns of weather in summer and winter.</p> <p>Use all their senses in hands on exploration of natural materials. (UW)</p> <p>Talk about what they see, using a</p> | <p><b>PROJECT: Seasonal Changes</b><br/>There are four seasons: spring, summer, autumn and winter. Certain events and weather patterns happen in different seasons. Observe changes across the four seasons.</p> <p><b>NC Objectives</b><br/><b>Seasonal Changes</b><br/>Observe changes across the 4 seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p> | <p><b>PROJECT: Plant Survival</b><br/>The UK has typical weather in each of the seasons. For example, winter is cold and sometimes frosty, whereas summer is warm and sometimes sunny. Describe typical UK seasonal weather patterns.</p> | <p><b>PROJECT: Light and Shadows</b><br/>Shadows change shape and size when the light source moves. For example, when the light source is high above the object, the shadow is short and when the light source is low down, the object's shadow is long. Find patterns in the way shadows change during the day.</p> <p><b>NC Objectives</b><br/><b>Light</b><br/>Recognise that shadows are formed when the light from a light source is blocked by an opaque object.</p> | <p><b>PROJECT: Sound</b><br/>Volume is how loud or quiet a sound is. The harder an instrument is hit, plucked or blown, the stronger the vibrations and the louder the sound. Compare and find patterns in the volume of a sound, using a range of equipment, such as musical instruments</p> <p>Pitch is how high or low a sound is. Parts of an instrument that are shorter, tighter or thinner produce high-pitched sounds. Parts of an instrument that are longer, looser or fatter produce low-pitched sounds. Compare and find patterns in the pitch of a sound, using a range of equipment, such as musical instruments.</p> <p><b>NC Objectives</b><br/><b>Sound</b><br/>Find patterns between the pitch of a sound and</p> | <p><b>PROJECT: Earth and Space</b><br/>As Earth orbits the Sun, it also spins on its axis. It takes Earth a day (24 hours) to complete a full spin. During the day, the Sun appears to move through the sky. However, this is due to the Earth rotating and not the Sun moving. Earth rotates to the east or, if viewed from above the North Pole, it rotates anti-clockwise, which means the Sun rises in the east and sets in the west. As Earth rotates, different parts of it face the Sun, which brings what we call daytime. The part facing away is in shadow, which is night time. Use the idea of Earth's rotation to explain day and night, and the Sun's apparent movement across the sky.</p> <p><b>NC Objectives</b><br/><b>Earth and Space</b><br/>Use the idea of the Earth's rotation to explain day,</p> | <p><b>PROJECT: Light Theory</b><br/>A shadow appears when an object blocks the passage of light. Apart from some distortion or fuzziness at the edges, shadows are the same shape as the object. The distortion or fuzziness depends on the position or type of light source. Explain, using words, diagrams or a model, why shadows have the same shape as the objects that cast them and how shadows can be changed.</p> <p><b>NC Objectives</b><br/><b>Light</b><br/>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them</p> |
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|                | <p>wide vocabulary (UW)</p> <p>Understand the effect of changing seasons on the natural world around them (UW)</p> <p>Describe what they see, hear and feel whilst outside. (UW)</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)</p> |                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                          | <p>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>and night and the apparent movement of the sun across the sky.</p>                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                    |
| Key Vocabulary | <p>winter, summer, cold, warm, hot, weather, day, week</p>                                                                                                                                                                                                                                                                              | <p>season, spring, summer, autumn, winter, month, year, day, night, sun, moon, light, dark</p>                                                                                                                                                                                 | <p>Typical, frosty, seasonal, weather patterns</p>                                                                                                                                                                                                      | <p>light source, mirror, reflect, reflective, reflection shadow, blocked transparent, translucent, opaque</p>                                                                                                                                                                                            | <p>vibration, wave, volume, pitch, tone, insulation</p>                                                                                                                                                                                                                                                                | <p>Earth, sun, moon, solar system, axis of rotation, day, night, phases of the moon, star, constellation</p>                                                                                                                                                                                              | <p>refraction, reflection, spectrum, rainbow</p>                                                                                                                                                                                                                                                   |
| Changes        | <p><b>Nursery PROJECTS: Winter Wonderland and Starry Night</b></p> <p>In the winter, the evenings gets darker earlier. In the summer, the evening stay lighter for longer. Talk about things they can do on winter evenings and</p>                                                                                                     | <p><b>PROJECT: Seasonal Changes</b></p> <p>Day length (the number of daylight hours) is longer in the summer months and shorter in the winter months. Observe and describe how day length changes across the year.</p> <p><b>NC Objectives</b><br/><b>Seasonal Changes</b></p> | <p><b>PROJECT: Uses of Materials</b></p> <p>Some objects and materials can be changed by squashing, bending, twisting, stretching, heating, cooling, mixing and being left to decay. Describe how some objects and materials can be changed and how</p> | <p><b>PROJECT: Rocks, Relics and Rumbles</b></p> <p>Fossils form over millions of years and are the remains of a once-living organism, preserved as rock. Scientists can use fossils to find out what life on Earth was like in prehistoric times. Fossils form when a living thing dies in a watery</p> | <p><b>PROJECT: States of Matter</b></p> <p>Heating or cooling materials can bring about a change of state. This change of state can be reversible or irreversible. The temperature at which materials change state varies depending on the material. Water changes state from solid (ice) <math>\Rightarrow</math></p> | <p><b>PROJECT: Properties and Changes of Materials</b></p> <p>Reversible changes include heating, cooling, melting, dissolving and evaporating. Irreversible changes include burning, rusting, decaying and chemical reactions. Identify, demonstrate and compare reversible and irreversible changes</p> | <p><b>PROJECT: Evolution and Inheritance</b></p> <p>Describe some significant changes that have happened on Earth and the evidence, such as fossils, that support this.</p> <p><b>NC Objectives</b><br/><b>Evolution and Inheritance</b></p> <p>Recognise that living things have changed over</p> |

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| <p>things they can do on summer evenings and begin to notice the difference in day length.</p> <p><b>Reception</b><br/> <b>PROJECTS: Winter Wonderland and Starry Night</b><br/> The number of daylight hours varies throughout the year, according to the season. The days are longer in summer and shorter in winter. Notice and talk about the differences in day length between the seasons.</p> <p>Use a wider range of vocabulary. (CL)</p> <p>Talk about what they see, using a wide vocabulary (UW)</p> <p>Understand the effect of changing seasons on the natural world around them (UW)</p> <p>Explore the natural world around them. (UW)</p> <p>Understand some important processes and changes in the</p> | <p>Observe and describe weather associated with the seasons and how day length varies.</p> | <p>these changes can be desirable or undesirable.</p> <p><b>NC Objectives</b><br/> <b>Everyday Materials</b><br/> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p> | <p>environment. The body gets covered by mud and sand and the soft tissues rot away. Over time, the ground hardens to form sedimentary rock and the skeletal or shell remains turn to rock. Describe simply how fossils are formed, using words, pictures or a model.</p> <p><b>NC Objectives</b><br/> <b>Rocks</b><br/> Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> | <p>liquid (water) at 0°C and from liquid (water) <math>\rightleftharpoons</math> gas (water vapour) at 100°C. The process of changing from a solid to liquid is called melting. The reverse process of changing from a liquid to a solid is called freezing. The process of changing from a liquid to a gas is called evaporation. The reverse process of changing from a gas to a liquid is called condensation. Observe and explain that some materials change state when they are heated or cooled and measure or research the temperature in degrees Celsius (°C) at which materials change state.</p> <p><b>NC Objectives</b><br/> <b>States of matter</b><br/> 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><b>NC Objectives</b><br/> <b>Properties and changes of materials</b><br/> 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>Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> | <p>time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> |
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|                | natural world around them, including the seasons and changing states of matter. (UW)                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Key Vocabulary | Day, night, seasons, longer, shorter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | season, spring, summer, autumn, winter, month, year, day, night, sun, moon, light, dark                                                                                                                                                                                                                                                                                                                                                                               | squash, bend, flexible, twist, stretch push, pull, roll, slide, bounce                                                                                                                                                                           | layer, sediment igneous, magma, lava, gas bubbles (tiny holes/spaces) metamorphic, change, squeeze, pressure                                                                                                                                                                                                                                                                                                                                                         | solid, liquid, gas, evaporation, condensation, particle, temperature, freezing, heating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | hardness, transparency, conductivity (electrical, thermal) solubility, solution dissolve, filter, evaporate, sieve, reversible, irreversible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | adaptation, evolution, fossils                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Earth          | <p><u>Nursery</u><br/> <b>PROJECT: Puddles and Rainbows</b><br/> Ways to describe daily weather include sunny, rainy, warm or cold. Weather is warmer in the summer and colder in the winter. Say what the daily weather is like.</p> <p><u>Reception</u><br/> <b>PROJECTS: Winter Wonderland, Puddles and Rainbows, Sunshine and Sunflowers, Moving On, Long Ago and Signs of Spring</b><br/> Ways to describe daily weather include sunny, rainy, windy, cloudy, warm or cold. Weather is warmer in the summer with</p> | <p><b>PROJECT: Seasonal Changes</b><br/> Different types of weather include sunshine, rain, hail, wind, snow, fog, lightning, storm and cloud. The weather can change daily and some weather types are more common in certain seasons, such as snow in winter. Observe and describe different types of weather.</p> <p><u>NC Objectives</u><br/> <b>Seasonal Changes</b><br/> Observe and describe weather associated with the seasons and how day length varies.</p> | <p><b>PROJECT: Uses of Materials</b><br/> The Earth is spherical and is covered in water and land. When it is daytime in one location, it is night time on the other side of the world. Describe features of Earth using words and pictures.</p> | <p><b>PROJECT: Rocks, Relics and Rumbles</b><br/> Soils are made from tiny pieces of eroded rock, air and organic matter. There are a variety of naturally occurring soils, including clay, sand and silt. Different areas have different soil types. Investigate soils from the local environment, making comparisons and identifying features.</p> <p><u>NC Objectives</u><br/> <b>Rocks</b><br/> Recognise that soils are made from rocks and organic matter.</p> | <p><b>PROJECT: Misty Mountain, Winding River</b><br/> The water cycle has four stages: evaporation, condensation, precipitation and collection. Water in lakes, rivers and streams is warmed by the Sun, causing the water to evaporate and rise into the air as water vapour. As the water vapour rises, it cools and condenses to form water droplets in clouds. The clouds become full of water until the water falls back to the ground as precipitation (rain, hail, snow and ice). The fallen water collects back in lakes, rivers and streams. Evaporation and condensation are caused by temperature changes. Describe the water cycle using words or diagrams and explain the part</p> | <p><b>PROJECT: Earth and Space</b><br/> The Solar System is made up of the Sun and everything that orbits around it. There are eight planets in our Solar System: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Earth orbits around the Sun and a year (365 days) is the length of time it takes for Earth to complete a full orbit. Describe or model the movement of the planets in our Solar System, including Earth, relative to the Sun.</p> <p>The Moon orbits Earth, completing a full orbit every month (28 days). Describe or model the movement of the Moon relative to Earth.</p> <p><u>NC Objectives</u><br/> <b>Earth and Space</b></p> | <p><b>PROJECT: Light Theory</b><br/> Light sources give out light. They can be natural or artificial. When light hits an object, it is absorbed, scattered, reflected or a combination of all three. Light from a source or reflected light enter the eye. Vertebrates, such as mammals, birds and reptiles, have a cornea and lens that refracts light that enters the eye and focuses it on the nerve tissue at the back of the eye, which is called the retina. Once light reaches the retina, it is transmitted to the brain via the optic nerve. Explain that, due to how light travels, we can see things because they give out or reflect light into the eye.</p> <p>Light travels in straight lines. Identify that light travels in straight lines.</p> |

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|                | <p>more sunshine and colder in the winter with more snow, hail and rain. Describe simply how weather changes as the seasons change.</p> <p>Use a wider range of vocabulary. (CL)</p> <p>Talk about what they see, using a wide vocabulary (UW)</p> <p>Understand the effect of changing seasons on the natural world around them (UW)</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)</p> |                                                                                                |                                                    |                                                                                                                   | <p>played by evaporation and condensation.</p> <p><b>NC Objectives</b></p> <p><b>States of matter</b></p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</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><b>NC Objectives</b></p> <p><b>Light</b></p> <p>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.</p> <p>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.</p> <p>Recognise that light appears to travel in straight lines.</p> |
| Key Vocabulary | <p>Weather, sunny, rainy, warmer, summer, colder, winter</p>                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>season, spring, summer, autumn, winter, month, year, day, night, sun, moon, light, dark</p> | <p>Spherical, water, land, daytime, night time</p> | <p>soils, organic matter, fossil, crystal sandstone, granite, marble, pumice, absorbent, crumble, sedimentary</p> | <p>solid, liquid, gas, evaporation, condensation, particle, temperature, freezing, heating</p>                                                                                                                                                       | <p>Earth, sun, moon, solar system, axis of rotation, day, night, phases of the moon, star, constellation</p>                                                         |                                                                                                                                                                                                                                                                                                                                                                                                               |

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| Phenomena | <p><u><b>Nursery</b></u><br/>Notice and begin to describe natural phenomena, such as weather, rainbows and clouds.</p> <p><u><b>Reception</b></u><br/><b>PROJECTS: Puddles and Rainbows, Shadows and Reflections and Signs of Spring</b><br/>Natural phenomena include weather, shadows, rainbows, clouds, flooding and waves. Name and describe natural phenomena, such as the size of shadows, the colours of a rainbow, the speed of clouds moving across the sky and the strength of a wave.</p> <p><b>Talk about what they see, using a wide vocabulary. (UW)</b></p> <p><b>Use a wider range of vocabulary. (CL)</b></p> <p><b>Explore the natural world around them. (UW)</b></p> <p><b>Describe what they see, hear and feel whilst outside. (UW)</b></p> | <p>A shadow is formed when light from a light source, such as the Sun, is blocked by an opaque object, but not by transparent objects. Explain in simple terms how shadows are formed.</p> | <p>When an instrument is played by plucking, striking or blowing, the air around or inside it vibrates. These vibrations travel as a sound wave to the ear. Explain in simple terms how sounds are made.</p> | <p><b>PROJECT: Light and Shadows</b><br/>A shadow is formed when light from a light source, such as the Sun, is blocked by an opaque object. Transparent objects allow light to pass through them and do not create shadows. Explain, using words or diagrams, how shadows are formed when a light source is blocked by an opaque object.</p> <p>Dark is the absence of light and we need light to be able to see. Describe the differences between dark and light and how we need light to be able to see.</p> <p><u><b>NC Objectives</b></u><br/><b>Light</b><br/>Recognise that they need light in order to see things and that dark is the absence of light.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object.</p> | <p><b>PROJECT: Sound</b><br/>When an instrument is played, the air around or inside it vibrates. These vibrations travel as a sound wave. Sound waves travel through a medium, such as air or water, to the ear. Explain how sounds are made and heard using diagrams, models, written methods or verbally.</p> <p><u><b>NC Objectives</b></u><br/><b>Sound</b><br/>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><b>PROJECT: Earth and Space</b><br/>The Sun, Earth, Moon and the planets in our solar system are roughly spherical. All planets are spherical because their mass is so large that they have their own force of gravity. This force of gravity pulls all of a planet's material towards its centre, which compresses it into the most compact shape – a sphere. Describe the Sun, Earth and Moon as approximately spherical bodies and use this knowledge to understand the phases of the Moon and eclipses.</p> <p><u><b>NC Objectives</b></u><br/><b>Earth and Space</b><br/>Describe the sun, Earth and moon as approximately spherical bodies</p> | <p><b>PROJECT: Light Theory</b><br/>'White' light is a term used to describe visible, ordinary daylight. White light can be split into a spectrum of colours (rainbow) by droplets of water or prisms. Describe, using scientific language, phenomena associated with light (rainbows, colours on soap bubbles and refraction in a glass of water).</p> |
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|                | Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Key Vocabulary | weather, shadows, rainbows, clouds, flooding, waves, colours, sky,                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Shadow, light source, Sun, opaque, transparent                                                                                                                                                                                                                                                                         | Vibrations, travel, air, sound wave, ear.                                                                                                                                                                                         | light source, mirror, reflect, reflective, reflection shadow, blocked transparent, translucent, opaque                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | vibration, wave, volume, pitch, tone, insulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Earth, sun, moon, solar system, axis of rotation, day, night, phases of the moon, star, constellation                                                                                                                                                                                                                                                                                                                                                                                                                                                            | refraction, reflection, spectrum, rainbow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Forces         | <p><u>Nursery</u><br/> <b>PROJECT: Splash!</b><br/>           Some objects float and others sink. Talk about and play with objects that float and sink and describe different forces that they can feel.</p> <p><u>Reception</u><br/> <b>PROJECTS: Splash! Exploring Autumn, Starry Night and Ready, Steady, Grow</b><br/>           Some objects float and others sink. When an object sinks it falls through water to the bottom of the vessel. An object that floats stays at the water's surface. Describe, predict and</p> | <p><b>PROJECT: Seasonal Changes</b><br/>           Simple equipment can be used for measuring weather, such as measuring temperature with a thermometer; identifying wind direction and force with a windsack or measuring rainfall with a rain gauge. Investigate weather using toys, models or simple equipment.</p> | <p><b>PROJECT: Coastline</b><br/>           Some objects float and others sink. Objects that float are typically light or hollow. Objects that sink are typically heavy or dense. Sort and group objects that float and sink.</p> | <p><b>PROJECT: Forces and Magnets</b><br/>           An object will not move unless a pushing or pulling force is applied. Some forces require direct contact, whereas other forces can act at a distance, such as magnetic force. Explain that an object will not move unless a push or pull force is applied, describing forces in action and whether the force requires direct contact or whether the force can act at a distance (magnetic force).<br/> <u>NC Objectives</u><br/> <b>Forces and magnets</b><br/>           Notice that some forces need contact between 2 objects, but magnetic</p> | <p><b>PROJECT: Electrical Circuits and Conductors</b><br/>           A series circuit is a simple loop with only one path for the electricity to flow. A series circuit must be a complete loop to work and have a source of power from a battery or cell. Predict and describe whether a circuit will work based on whether or not the circuit is a complete loop and has a battery or cell.<br/> <u>NC Objectives</u><br/> <b>Electricity</b><br/>           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><b>PROJECT: Forces and Mechanisms</b><br/>           Gravity is a force of attraction. Anything with a mass can exert a gravitational pull on another object. The Earth's large mass exerts a gravitational pull on all objects on Earth, making dropped objects fall to the ground. Explain that objects fall to Earth due to the force of gravity.<br/> <u>NC Objectives</u><br/> <b>Forces</b><br/>           Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> | <p><b>PROJECT: Electrical Circuits and Components</b><br/>           Voltage is measured in volts (V) and is a measure of the difference in electrical energy between two parts of a circuit. The bigger the voltage, the more electrons are pushed through the circuit. The more voltage flowing through a lamp, buzzer or motor, the brighter the lamp, the louder the buzzer and the faster the motor. Explain how the brightness of a lamp or volume of a buzzer is affected by the number and voltage of cells used in a circuit.<br/> <u>NC Objectives</u><br/> <b>Electricity</b></p> |

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|                | <p>sort things that float and sink and talk about the forces that they can feel.</p> <p>Explore and talk about different forces they can feel. (UW)</p> <p>Explore how things work (UW)</p> <p>Understand the effect of changing seasons on the natural world around them. (UW)</p> <p>Explore the natural world around them (UW)</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)</p> |                                                                  |                                           | forces can act at a distance.                            |                                                                                                             |                                                                                  | Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. |
| Key Vocabulary | Float, sink. Forces, water, vessel, surface. Describe, predict, sort                                                                                                                                                                                                                                                                                                                                                                                                                     | Measuring, weather, thermometer; wind direction, force, rainfall | Float, sink, light, hollow, heavy, dense. | force, contact, surface, magnetic, attract, repel, poles | appliance, battery, power, main power, circuit, series, cell, battery, wire, bulb, switch, break in circuit | air resistance, water resistance, friction, gravity lever, gear, pulley, Newtons | circuit - series, parallel voltage, volts, amps                                                                        |

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| Modelling | <p><b>Nursery PROJECT: Marvellous Machines</b></p> <p>Toys and models that are powered by a battery can be switched on and off. Play with and explore battery-powered toys and models.</p> <p><b>Reception PROJECTS: Starry Night, Puddles and Rainbows and Marvellous Machines</b></p> <p>Some light sources need electricity or batteries to work, such as a torch, and some do not, such as candles. Explore and describe electrical and non-electrical light sources.</p> <p>Use all their senses in hands- on exploration of natural materials. (UW)</p> <p>Talk about what they see, using a wide vocabulary. (UW)</p> <p>Explore how things work. (UW)</p> <p>Learn new vocabulary. (CL)</p> | <p>Electrical circuits can light lamps or sound a buzzer. A switch turns an electrical circuit off and on. Describe, following exploration, what simple electrical circuits can do.</p> | <p><b>PROJECT: Push and Pull</b></p> <p>Models can have moving parts that use levers, sliders, wheels and axles. Make models with moving parts.</p> | <p>Make working models with simple mechanisms or electrical circuits.</p> | <p><b>PROJECT: Electrical Circuits and Conductors</b></p> <p>Electrical components include cells, wires, lamps, motors, switches and buzzers. Switches open and close a circuit and provide control. Construct operational simple series circuits using a range of components and switches for control.</p> <p><b>NC Objectives Electricity</b></p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <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.</p> | <p><b>PROJECT: Forces and Mechanisms</b></p> <p>Mechanisms, such as levers, pulleys and gears, give us a mechanical advantage. A mechanical advantage is a measurement of how much a simple machine multiplies the force that we put in. The bigger the mechanical advantage, the less force we need to apply. Describe and demonstrate how simple levers, gears and pulleys assist the movement of objects.</p> <p><b>NC Objectives Forces</b></p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.</p> | <p><b>PROJECT: Electrical Circuits and Components</b></p> <p>There are recognised symbols for different components of circuits. Create circuits using a range of components and record diagrammatically using the recognised symbols for electrical components.</p> <p><b>NC Objectives Electricity</b></p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p> |
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|                                   | <p>Use new vocabulary through the day. (CL)</p> <p>Articulate their ideas and thoughts in well-formed sentences. (CL)</p> <p>Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. (CL)</p> |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                         |
| Key Vocabulary                    | Battery, light sources, electricity, torch, candles, electrical, non-electrical                                                                                                                                                                                                                  | Electrical circuits, lamps, buzzer, switch, explore                                                                                                                                                                                                                                        | Models, moving parts, levers, sliders, wheels, axles                                                                                                                                                                                                                              | Models, mechanisms, electrical circuits.                                                                                                                                                                                                                                                                        | Electrical components, cells, wires, lamps, motors, switches and buzzers.                                                                                                                                                                                                                                         | Mechanisms, levers, pulleys, gears, measurement, force, movement                                                                                                                                                                                                                                   | Symbols, components, circuits, buzzer, lamp, battery, switch                                                                                                                                                                                                                                                                            |
| Big Idea: Materials               |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                         |
| Identification and Classification | <p><b>Nursery</b></p> <p><b>PROJECTS: Sparkle and Shine and Shadows and Reflections</b></p> <p>Objects are made from different materials. Everyday materials include plastic, wood and glass. Explore and sort everyday items, with support, into</p>                                            | <p><b>PROJECTS: Everyday Materials and Shade &amp; Shelter</b></p> <p>A material is what an object is made from. Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric. Identify and name what an object is made from, including wood, plastic,</p> | <p><b>PROJECT: Remarkable Recipes</b></p> <p>Some foods, such as ice and chocolate, melt when heated, but then harden (solidify or freeze) when cooled. Observe what happens when a range of everyday materials, including foods, are heated and cooled, sorting and grouping</p> | <p><b>PROJECT: Light and Shadows</b></p> <p>Light can be reflected from different surfaces. Some surfaces are poor reflectors, such as some fabrics, while other surfaces are good reflectors, such as mirrors. Group and sort materials as being reflective or non-reflective.</p> <p><b>NC Objectives</b></p> | <p><b>PROJECT: States of Matter</b></p> <p>Materials can be grouped according to whether they are solids, liquids or gases. Solids stay in one place and can be held. Some solids can be squashed, bent, twisted and stretched. Examples of solids include wood, metal, plastic and clay. Liquids move around</p> | <p><b>PROJECT: Properties and Changes of Materials</b></p> <p>Materials can be grouped according to their basic physical properties. Properties include hardness, solubility, transparency, conductivity (electrical and thermal) and magnetism. Compare and group everyday materials by their</p> | <p>Heat energy is transferred in three different ways: conduction, convection and radiation. A material that allows heat energy to travel through it is a thermal conductor. Poor thermal conductors are known as thermal insulators. Insulation is important for the survival of many animals. Blubber is a layer of fat that acts</p> |

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|  | <p>groups of the same material.</p> <p><b><u>Reception</u></b><br/> <b>PROJECTS: Sparkle and Shine, Big Wide World, Built It Up and Long Ago</b><br/> Objects are made from different materials. Everyday materials include, wood, plastic, glass, fabric, metal and stone. Materials have different properties. Name and sort everyday items into groups of the same material.</p> <p>Explore collections of materials with similar and/or different properties. (UW)</p> <p>Talk about the differences between materials and the changes they notice (UW)</p> <p>Use new vocabulary in different contexts. (CL)</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and</p> | <p>glass, metal, water and rock.</p> <p><b><u>NC Objectives</u></b><br/> <b>Everyday Materials</b><br/> Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</p> <p>Distinguish between an object and the material from which it is made.</p> | <p>them based on their observations.</p> | <p><b>Light</b><br/> Notice that light is reflected from surfaces.</p> | <p>(flow) easily and are difficult to hold. Liquids take the shape of the container in which they are held. Examples of liquids include water, juice and milk. Gases spread out to fill the available space and cannot be held. Examples of gases include oxygen, helium and carbon dioxide. Air is a mixture of gases. Group and sort materials into solids, liquids or gases.</p> <p><b><u>NC Objectives</u></b><br/> <b>States of matter</b></p> <p>Compare and group materials together, according to whether they are solids, liquids or gases.</p> | <p>properties, including hardness, solubility, transparency, conductivity (electrical and thermal) and magnetism. covered</p> <p>Some materials (solutes) will dissolve in liquid (solvents) to form a solution. The solute can be recovered by evaporating off the solvent by heating. Explain, following observation that some substances (solutes) will dissolve in liquid (solvents) to form a solution and the solute can be recovered by evaporating off the solvent.</p> <p><b><u>NC Objectives</u></b><br/> <b>Properties and changes of materials</b><br/> 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>as an insulator under the skin of some animals, such as walrus and whales. It is an adaptation that is essential for their survival. Animals with fur, such as polar bears and Arctic foxes, trap a layer of air close to their skin to insulate them from the cold. Investigate and identify good thermal insulators, describing their common features.</p> |
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|                     | changing states of matter. (UW)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Key Vocabulary      | Objects, materials. every day, plastic, wood, glass, explore, sort, fabric, metal, stone, properties                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | hard, soft, rough, smooth, shiny, dull, bendy, stiff, wood, plastic, glass, paper, metal, rock                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Melt, heated, harden, solidify, freeze, cooled, observe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | light source, mirror, reflect, reflective, reflection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | materials, solids, liquids, gases, squashed, bent, twisted, stretched, wood, metal, plastic, clay, shape, container, water, juice, milk, oxygen, helium, carbon dioxide, air                                                                                                                                                                                                                                                                                                                          | hardness, transparency, conductivity (electrical, thermal) solubility, solution dissolve, filter, evaporate, sieve, reversible, irreversible                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | heat energy, transfer conduction, convection, radiation, thermal conductor, thermal insulators.                                                                                                                                                                                                                                                                                                                               |
| Properties and uses | <p><u>Nursery</u><br/> <b>PROJECT: Puddles and Rainbows</b><br/>           Different materials can be used for different things because they are hard, soft, bendy or waterproof.<br/>           Waterproof items, such as Wellington boots, raincoats and umbrellas, protect us from the rain. Explore and talk about materials which are waterproof.</p> <p><u>Reception</u><br/> <b>PROJECTS: Once Upon A Time and Marvellous Machines</b><br/>           Some materials are magnetic, which means that they are attracted to (pull towards) a magnet. Some metals are magnetic. Other materials are non-</p> | <p><b>PROJECTS: Everyday Materials and Shade &amp; Shelter</b><br/>           Materials have different properties, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof; magnetic or non-magnetic.<br/>           Investigate and describe the simple physical properties of some everyday materials, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof and magnetic or non-magnetic</p> <p><b>NC Objectives</b><br/> <b>Everyday Materials</b><br/>           Describe the simple physical properties of a variety of everyday materials.</p> | <p><b>PROJECT: Uses of Materials</b><br/>           A material's physical properties make it suitable for particular purposes, such as glass for windows and brick for building walls. Many materials are used for more than one purpose, such as metal for cutlery and cars. Compare the suitability of a range of everyday materials for particular uses, including wood, metal, plastic, glass, brick, rock, paper and cardboard.</p> <p><b>NC Objectives</b><br/> <b>Everyday Materials</b><br/>           Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> | <p><b>PROJECTS: Rocks, Relics and Rumbles and Forces and Magnets</b><br/>           There are three different rock types: sedimentary, igneous and metamorphic. Sedimentary rocks form from mud, sand and particles that have been squashed together over a long time to form rock. Examples include sandstone and limestone. Igneous rocks are made from cooled magma or lava. They usually contain visible crystals. Examples include pumice and granite. Metamorphic rocks are formed when existing rocks are heated by the magma under the Earth's crust or squashed by the movement of the Earth's tectonic plates. They are usually very hard. Examples include slate and marble. Compare and group rocks based on their</p> | <p><b>PROJECT: Electrical Circuits and Conductors</b><br/>           Electrical conductors allow electricity to flow through them, whereas insulators do not. Common electrical conductors are metals. Common insulators include wood, glass, plastic and rubber. Describe materials as electrical conductors or insulators.</p> <p><b>NC Objectives</b><br/> <b>Electricity</b><br/>           Recognise some common conductors and insulators, and associate metals with being good conductors.</p> | <p><b>PROJECT: Properties and Changes of Materials</b><br/>           A material's properties dictate what it can be used for. For example, cooking pans are made from metal, which is a good thermal conductor, allowing heat to quickly transfer from the hob to the contents of the pan. Describe, using evidence from comparative or fair tests, why a material has been chosen for a specific use, including metals, wood and glass.</p> <p>Some mixtures can be separated by filtering, sieving and evaporating. Sieving can be used to separate large solids from liquids and some solids from other solids. Filtering can be used to separate small solids from liquids. Evaporating can be used to separate dissolved solids from liquids.</p> | <p><b>PROJECT: Light Theory</b><br/>           Mirrors and lenses are used in a range of everyday objects (telescopes, periscopes, cards and on roads). The human eye has a lens that bends and focuses light on the back of the eye (retina) so that we can see. Describe, using diagrams, how light behaves when reflected off a mirror (plane, convex or concave) and when passing through a lens (concave or convex).</p> |

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|         | <p>magnetic, such as wood, dough and glass. Identify that materials have different properties and explore and sort magnetic and non-magnetic materials through play and exploration.</p> <p>Explore collections of materials with similar and/or different properties (UW)</p> <p>Talk about the differences between materials and the changes they notice (UW)</p> <p>Use new vocabulary in different contexts. (CL)</p> <p>Use new vocabulary through the day (CL)</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)</p> |                                         |                                                | <p>appearance, properties or uses.</p> <p>Some materials have magnetic properties. Magnetic materials are attracted to magnets. All magnetic materials are metals but not all metals are magnetic. Iron is a magnetic metal. Compare and group materials based on their magnetic properties.</p> <p><b>NC Objectives</b><br/><b>Rocks</b></p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p><b>Forces and magnets</b></p> <p>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.</p> |                              | <p>Separate mixtures by filtering, sieving and evaporating.</p> <p><b>NC Objectives</b><br/><b>Properties and changes of materials</b></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>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> |                                          |
| Voc Key | Materials, hard, soft, bendy, waterproof,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | hard, soft, rough, smooth, shiny, dull, | brick, fabric, elastic, foil, property, solid, | soils, organic matter, fossil, crystal,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | circuit conductor, insulator | hardness, transparency, conductivity (electrical,                                                                                                                                                                                                                                                                                                                                                                                                        | Mirrors, lenses, telescopes, periscopes, |

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|  | Wellington boots, raincoats, umbrellas, rain | bendy, stiff, wood, plastic, glass, paper, metal, rock | waterproof, absorbent, opaque, transparent, squash, bend, flexible, twist, stretch push, pull, roll, slide, bounce | sandstone, granite, marble, pumice absorbent, crumble sedimentary, layer, sediment igneous, magma, lava, gas bubbles (tiny holes/spaces) metamorphic, change, squeeze, pressure |  | thermal) solubility, solution dissolve, filter, evaporate, sieve, reversible, irreversible | cards, lens, bends, retina, reflected convex, concave |
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## Big Idea: Nature

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| Identification and Classification | <p><b>Nursery PROJECTS:</b><br/>Exploring Autumn, Sunshine and Sunflowers, Ready Steady Grow, Signs of Spring, Starry Night, Winter Wonderland and Big Wide World</p> <p>Plants and trees are living things. Care for growing seeds and plants and describe observable features of different types of plants and trees.</p> <p>Animals are living things. There are lots of different types of animals. Pets are animals. Name a variety of domestic and wild animals.</p> <p><b>Reception PROJECTS:</b><br/>Exploring Autumn, Puddles and Rainbows, Sunshine</p> | <p><b>PROJECTS: Seasonal Changes, Plant Parts, Human Senses and Animals Parts</b></p> <p>Plants are living things. Common plants include the daisy, daffodil and grass. Trees are large, woody plants and are either evergreen or deciduous. Trees that lose their leaves in the autumn are called deciduous trees. Examples include oak, beech and rowan. Trees that shed old leaves and grow new leaves all year round are called evergreen trees. Examples include holly and pine. Identify, compare, group and sort a variety of common wild and garden plants, including deciduous and evergreen trees, based on observable features.</p> <p>Animals are living things. Animals can be sorted and grouped into six main groups: fish, amphibians,</p> | <p><b>PROJECTS: Animal Survival, Habitats and Plant Survival</b></p> <p>Animals have offspring that grow into adults. Different animals have different stages of growth or life cycles. Describe the basic life cycles of some familiar animals (egg, caterpillar, pupa, butterfly; egg, chick, chicken; spawn, tadpole, frog).</p> <p>A habitat is a place where a living thing lives. A microhabitat is a very small habitat. Identify and name a variety of plants and animals in a range of habitats and microhabitats.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Notice that animals, including humans, have</p> | <p><b>PROJECT: Skeletal and Muscular Systems</b></p> <p>Some animals have skeletons for support, movement and protection. Endoskeletons are those found inside some animals, such as humans, cats and horses. Exoskeletons are those found on the outside of some animals, such as beetles and flies. Some animals have no skeleton, such as slugs and jellyfish. Identify and group animals that have no skeleton, an internal skeleton (endoskeleton) and an external skeleton (exoskeleton).</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> | <p><b>PROJECT: Grouping and Classifying</b></p> <p>Scientists classify living things according to shared characteristics. Animals can be divided into six main groups: mammals, reptiles, amphibians, birds, fish and invertebrates. These groups can be further subdivided. Classification keys are scientific tools that aid the identification of living things. Compare, sort and group living things from a range of environments, in a variety of ways, based on observable features and behaviour.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b><br/>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</p> | <p><b>PROJECT: Sow, Grow and Farm</b></p> <p>Flowering plants reproduce sexually. The flower is essential for sexual reproduction. Other plants reproduce asexually. Bulbs, corms and rhizomes are some parts used in asexual reproduction in plants. Group and sort plants by how they reproduce.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b><br/>Describe the life process of reproduction in some plants.</p> | <p><b>PROJECT: Frozen Kingdoms</b></p> <p>Classification keys help us identify living things based on their physical characteristics. Use and construct classification systems to identify animals and plants from a range of habitats.</p> <p>Scientists classify living organisms into broad groups according to their characteristics. Vertebrates are an example of a classification group. There are a number of ranks, or levels, within the biological classification system. The first rank is called a kingdom, the second a phylum, then class, order, family, genus and species. Classify living things, including microorganisms, animals and plants, into groups according to common observable characteristics.</p> |
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|  | <p><b>and Sunflowers and Ready Steady Grow</b></p> <p>Plants and trees are living things. They can be identified according to their features, such as leaves, seeds and flowers. Begin to name and group plants and trees according to their observable features.</p> <p>Animals are living things. There are different types of animal. Parent and baby mammals include cow and calf, sheep and lamb, and cat and kitten. Parent and baby birds include duck and duckling, chicken and chick, and goose and gosling. Match animals to their young.</p> <p><b>Plant seeds and care for growing plants.</b><br/>(UW)</p> <p><b>Explore the natural world around them.</b><br/>(UW)</p> <p><b>Explore the natural world around them, making observations and drawing pictures of animals and plants (UW)</b></p> | <p>reptiles, birds, invertebrates and mammals. Identify, compare, group and sort a variety of common animals, including fish, amphibians, reptiles, birds, invertebrates and mammals, based on observable features.</p> <p><b><u>NC Objectives</u></b></p> <p><b>Plants</b></p> <p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p><b>Animals including humans</b></p> <p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> | <p>offspring which grow into adults.</p> <p><b>Living things and their habitats</b></p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats.</p> |  | <p>a variety of living things in their local and wider environment.</p> |  | <p>and based on similarities and differences.</p> <p><b><u>NC Objectives</u></b></p> <p><b>Living things and their habitats</b></p> <p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p> |
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| Key Vocabulary      | <p>Plants, trees, seeds, stem, leaves, roots, flower, soil</p> <p>Pet, wild, cat, dog, animal, cow, parent, baby mammals, cow and calf, sheep and lamb, and cat and kitten, duck and duckling, chicken and chick</p>                                                                                                                                                                                                                                                                                                                                          | <p>deciduous, evergreen, tree, pine, birch, oak, leaf, flower (blossom), petals, fruit, bulb, seed, roots, stem, trunk, branches</p> <p>amphibians, fish, reptiles, mammals, birds (+ 1 example of each) herbivore, omnivore, carnivore</p>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>reproduce, adult, baby, offspring, kitten, calf, puppy, egg, caterpillar, pupa, butterfly; egg, chick, chicken; spawn, tadpole, frog</p> <p>living, dead, habitat, microhabitat, woodland, meadow, hedgerow, pond</p>                                                                                                                                                                                                        | <p>skeleton, skull, bones, muscles, movement, support, endoskeleton, exoskeleton</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>amphibians, fish, reptiles, mammals, birds, insects, vertebrates, invertebrates, classification</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>life process, reproduction, offspring, Flowering plants, asexual reproduction, plants</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>characteristic, classification, organism, micro-organism, invertebrate, vertebrate, reproduction, habitat, plant, taxonomist, bacteria, virus</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Parts and Functions | <p><b>Nursery</b><br/><b>PROJECTS: Sunshine and Sunflowers, Signs of Spring and Starry Night</b></p> <p>Parts of a plant include flower, petal, leaf and stem. Begin to talk about and draw plants with attention to their parts.</p> <p>Animals have some similar and some different body parts. Begin to talk about and name the body parts of common animals, including pets.</p> <p><b>Reception</b><br/><b>PROJECTS: Exploring Autumn, Sunshine and Sunflowers, Ready, Steady, Grow, Signs of Spring, Starry Night, Winter Wonderland, Dangerous</b></p> | <p><b>PROJECTS: Plant Parts, Human Senses and Animals Parts</b></p> <p>The basic plant parts include root, stem, leaf, flower, petal, fruit, seed and bulb. Trees have a woody stem called a trunk. Label and describe the basic structure of a variety of common plants.</p> <p>Different animal groups have some common body parts, such as eyes and a mouth, and some different body parts, such as fins or wings. Label and describe the basic structures of a variety of common animals, including fish, amphibians, reptiles, birds and mammals.</p> <p><b>NC Objectives</b><br/><b>Plants</b><br/>Identify and describe the basic structure of a variety of common</p> | <p><b>PROJECT: Plant Survival</b></p> <p>Plants need water, light and a suitable temperature to grow and stay healthy. Without any one of these things, they will die. Describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> <p><b>NC Objectives</b><br/><b>Plants</b><br/>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p> | <p><b>PROJECT: Plant Nutrition and Reproduction</b></p> <p>Water is transported in plants from the roots, through the stem and to the leaves, through tiny tubes called xylem. Investigate how water is transported within plants.</p> <p>The plant's roots anchor the plant in the ground and transport water and minerals from the ground to the plant. The stem (or trunk) support the plant above the ground. The leaves collect energy from the Sun and make food for the plant. Flowers make seeds to produce new plants. Name and describe the functions of the different parts of flowering plants (roots, stem, leaves and flowers).</p> <p><b>NC Objectives</b><br/><b>Plants</b></p> | <p><b>PROJECT: Digestive System</b></p> <p>There are four different types of teeth: incisors, canines, premolars and molars. Incisors are used for cutting. Canines are used for tearing. Premolars and molars are used for grinding and chewing. Carnivores, herbivores and omnivores have characteristic types of teeth. Herbivores have many large molars for grinding plant material. Carnivores have large canines for killing their prey and tearing meat. Identify the four different types of teeth in humans and other animals, and describe their functions.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Identify the different types of teeth in humans and their simple functions.</p> | <p><b>PROJECT: Sow, Grow and Farm</b></p> <p>Parts of a flower include the stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal. Pollination is when the male part of a plant (pollen) is carried, by wind, insects or other animals, to the female part of the plant (carpel). The pollen travels to the ovary, where it fertilises the ovules (eggs). Seeds are then produced, which disperse far away from the parent plant and grow new plants. Label and draw the parts of a flower involved in sexual reproduction in plants (stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal).</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b></p> | <p><b>PROJECT: Evolution and Inheritance</b></p> <p>Animals that sexually reproduce generate new offspring of the same kind by combining the genetic material of two individuals. Each offspring inherits two of every gene, one from the female parent and one from the male parent. Identify that living things produce offspring of the same kind, although the offspring are not identical to either parent.</p> <p>Animals and plants can be bred to produce offspring with specific and desired characteristics. This is called selective breeding. Examples include cows that produce large quantities of milk or crops that are disease-resistant. Describe how animals and plants can be bred to produce offspring with</p> |

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|  | <p><b>Dinosaurs and Big Wide World</b></p> <p>Parts of plants and trees include trunk, branch, twig, roots, stem, flowers and leaves. Name and describe basic features of plants and trees.</p> <p>Different animal groups have some common body parts, such as birds have wings and fish have fins. Identify common features for different groups of animals, including wild and domestic animals.</p> <p><b>Plant seeds and care for growing plants. (UW)</b></p> <p><b>Understand the key features of the life cycle of a plant and an animal. (UW)</b></p> <p><b>Begin to understand the need to respect and care for the natural environment and all living things. (UW)</b></p> <p><b>Explore the natural world around them. (UW)</b></p> | <p>flowering plants, including trees.</p> <p><b>Animals including humans</b></p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</p> |  | <p>Investigate the way in which water is transported within plants</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flower</p> |  | <p>Describe the life process of reproduction in some plants.</p> | <p>specific and desired characteristics (selective breeding).</p> <p><b><u>NC Objectives</u></b></p> <p><b>Evolution and Inheritance</b></p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> |
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|                | Explore the natural world around them, making observations and drawing pictures of animals and plants (UW)                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Key Vocabulary | <p>Parts of a plant, flower, petal, leaf, stem, trees, trunk, branch, twig, roots</p> <p>Animals, body parts, paw, tail, nose, ear, whiskers, claws, teeth, birds, wings, fish, fins, pets, domestic, wild</p>                                                                                                                                                                | <p>deciduous, evergreen, tree, leaf, flower, blossom, petals, fruit, bulb, seed, roots, stem, trunk, branches</p> <p>animal, body parts, eyes, mouth, fins, wings, fish, amphibians, reptiles, birds and mammals.</p>                                                                                                                                                                    | <p>growth, germinate, light, sunlight, window, temperature, water, soil, plant pot, space, healthy,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>air, water, transportation, nutrients, soil, roots, stem, leaves, xylem. reproduction, seed formation, seed dispersal, pollination, stem, leaves, flowers</p>                                                                                                                                                                                                                                                                                                                                                                                                                        | <p>mouth, tongue, teeth, oesophagus, stomach, small intestine, large intestine, nutrients, absorb, canine, incisor, molar, premolars Carnivores, herbivores, omnivores</p>                                                                                                                                                                                                                                                                                                                                                                                               | <p>flower, stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal, Pollination, pollen, ovary, fertilise, seed dispersion</p>                                                                                                                      | <p>Reproduce, offspring, genetic material, gene, parent, identical, selective breeding</p>                                                                                                                                                                                                                                                                                                                                                                           |
| Nutrition      | <p><b>Nursery</b><br/>Animals, including pets, eat different kinds of foods. Describe what a familiar animal or pet eats.</p> <p><b>Reception PROJECT: Dangerous Dinosaurs</b><br/>Animals eat different kinds of food, including other animals, plants or both animals and plants. Match animals to the foods that they eat.</p> <p>Use a wider range of vocabulary (CL)</p> | <p><b>PROJECT: Animals Parts</b><br/>Carnivores eat other animals (meat), herbivores eat plants and omnivores eat other animals and plants. Group and sort a variety of common animals based on the foods they eat.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> | <p><b>PROJECTS: Habitats and Animal Survival</b><br/>Food chains show how living things depend on one another for food. All food chains start with a plant, followed by animals that either eat the plant or other animals. Interpret and construct simple food chains to describe how living things depend on each other as a source of food.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b><br/>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify</p> | <p><b>PROJECT: Skeletal and Muscular Systems</b><br/>Animals cannot make their own food and need to get nutrition from the food they eat. Carnivores get their nutrition from eating other animals. Herbivores get their nutrition from plants. Omnivores get their nutrition from eating a combination of both plants and other animals. Compare and contrast the diets of different animals.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make</p> | <p><b>PROJECT: Digestive System</b><br/>Food chains show what animals eat within a habitat and how energy is passed on over time. All food chains start with a producer, which is typically a green plant. The producer is eaten by a primary consumer (prey), which is eaten by a secondary consumer (prey), which is eaten by a tertiary consumer. All food chains end with a top or apex predator. Changes within a food chain, such as an abundance or lack of one food type, have an impact on the entire food chain. Construct and interpret a variety of food</p> | <p><b>PROJECT: Sow, Grow and Farm</b><br/>Population changes in a habitat can have significant consequences for food chains and webs. Describe, using their knowledge of food chains and webs, what could happen if a habitat had a living thing removed or introduced.</p> | <p><b>PROJECT: Circulatory System</b><br/>The role of the circulatory system is to transport oxygen, water and nutrients around the body. They are transported in blood and delivered to where they are needed. Explain that the circulatory system in animals transports oxygen, water and nutrients around the body.</p> <p><b>NC Objectives</b><br/><b>Animals including humans</b><br/>Describe the ways in which nutrients and water are transported within</p> |

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|                | <p>Understand "why" questions, like "Why do you think the caterpillar got so fat?" (CL)</p> <p>Explore the natural world around them. (UW)</p> <p>Ask questions to find out more and to check they understand what has been said to them. (CL)</p> <p>Know some similarities and differences between the natural world around them and contrasting environments. (UW)</p> |                                                                                                                                                                                           | and name different sources of food.                                                                                                                                  | their own food; they get nutrition from what they eat.                                                                                                                            | chains and webs to show interdependence and how energy is passed on over time.<br><b>NC Objectives</b><br><b>Animals including humans</b><br>Construct and interpret a variety of food chains, identifying producers, predators and prey. |                                                                                                                                                                                                 | animals, including humans.                                                                                                                                                      |
| Key Vocabulary | Animals, pets, foods, meat, vegetables, plants                                                                                                                                                                                                                                                                                                                            | Carnivores, animals, meat, herbivores, plants, omnivores                                                                                                                                  | food chain, prey, predator, camouflage, dependence                                                                                                                   | Food, nutrition, carnivore, herbivores, omnivores plants, animals, diet                                                                                                           | Food chains, energy, producer, primary consumer, prey, secondary consumer, tertiary consumer. interdependence                                                                                                                             | Population significant consequences for food chains and webs. Describe, using their knowledge of food chains and webs, what could happen if a habitat had a living thing removed or introduced. | circulatory system, transport, oxygen, water, nutrients, transported, blood, animals                                                                                            |
| Survival       | <p><u>Nursery</u></p> <p><b>PROJECTS: Sunshine and Sunflowers, Ready, Steady Grow</b></p> <p>Plants and animals are living things. They need food and</p>                                                                                                                                                                                                                 | <p><b>PROJECTS: Plant Parts, and Animals Parts</b></p> <p>Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. Describe how to</p> | <p><b>PROJECTS: Human Survival and Animal Survival</b></p> <p>Animals need water, food, air and shelter to survive. Their habitat must provide all these things.</p> | <p><b>PROJECT: Plant Nutrition and Reproduction, Greenhouse</b></p> <p>Plants need air, light, water, minerals from the soil and room to grow, in order to survive. Different</p> | <p><b>PROJECT: Misty Mountain, Winding River</b></p> <p>An adaptation helps an animal or plant survive in its habitat. If living things are unable to adapt to changes within their</p>                                                   | <p><b>PROJECTS: Sow, Grow and Farm, Human Reproduction and Ageing</b></p> <p>Reproduction is the process of producing offspring and is essential for the continued survival of a</p>            | <p><b>PROJECTS: Frozen Kingdoms and Evolution and Inheritance</b></p> <p>An adaptation is a physical or behavioural trait that allows a living thing to survive and fill an</p> |

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| <p>water to survive. Begin to talk about ways to care for a plant or animal.</p> <p><b><u>Reception</u></b><br/><b>PROJECTS:</b><br/><b>Exploring Autumn, Sunshine and Sunflowers, Ready Steady Grow, Winter Wonderland, Puddles and Rainbows and Splash!</b></p> <p>Plants and animals are living things. Plants need water, sunlight and air to survive. Animals need food, water, air and shelter to survive. Describe some ways that plants or animals should be cared for in order for them to survive.</p> <p><b>Begin to understand the need to respect and care for the natural environment and all living things. (UW)</b></p> <p><b>Explore the natural world around them. (UW)</b></p> <p><b>Explore the natural world around them, making observations. (UW)</b></p> | <p>care for plants and animals, including pets.</p> | <p>Explain how animals, including humans, need water, food, air and shelter to survive.</p> <p><b><u>NC Objectives</u></b><br/><b>Animals including humans</b></p> <p><b>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</b></p> | <p>plants have different needs depending on their habitat. Examples include cacti, which need less water than is typical, and ferns, which can grow in lower light levels. Describe the requirements of plants for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant.</p> <p><b><u>NC Objectives</u></b><br/><b>Plants</b></p> <p><b>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.</b></p> | <p>habitat, they are at risk of becoming extinct. Explain how adaptations help living things to survive in their habitat.</p> | <p>species. There are two types of reproduction: sexual and asexual. Sexual reproduction involves two parents (one female and one male) and produces offspring that are different from the parents. Asexual reproduction involves one parent and produces offspring that is identical to the parent. Describe the life process of reproduction in some plants and animals.</p> <p><b><u>NC Objectives</u></b><br/><b>Living things and their habitats</b></p> <p><b>Describe the life process of reproduction in some plants and animals.</b></p> | <p>ecological niche. Adaptations evolve by natural selection. Favourable traits help an organism survive and pass on their genes to subsequent generations. Identify how animals and plants are adapted to suit their environment, such as giraffes having long necks for feeding, and that adaptations may lead to evolution.</p> <p><b><u>NC Objectives</u></b><br/><b>Evolution and Inheritance</b></p> <p><b>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</b></p> |
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| Key Vocabulary | Plants, animals, Food, water, shelter, survive. water, sunlight, air | Living things, animals, water, food, warmth and shelter. | Animals, water, food, air shelter, habitat, humans, survive. | Plants, air, light, water, minerals, soil, habitat. ferns, growth, nutrients | An adaptation helps an animal or plant survive in its habitat. If living things are unable to adapt to changes within their habitat, they are at risk of becoming extinct. Explain how adaptations help living things to survive in their habitat. | Reproduction, offspring, continued survival, species. Sexual, asexual | Adaptation, evolve, natural selection, organism, genes, environment, evolution |
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## Big Idea: Place and space

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| Habitats | <p><b>Nursery PROJECTS: Exploring Autumn, Sunshine and Sunflowers and Starry Night</b></p> <p>A habitat is a place where living things live. Living things, including plants and animals, live in the local environment. Begin to observe and talk about living things in the local environment.</p> <p><b>Reception PROJECTS: Exploring Autumn, Sunshine and Sunflowers, Ready Steady Grow and Let's Explore</b></p> <p>A habitat is a place where living things live. Local habitats include woodlands, gardens and ponds. Other habitats include</p> | <p><b>PROJECTS: Seasonal Changes, Plant Parts, and Animals Parts</b></p> <p>The local environment is a habitat for living things and can change during the seasons. Observe the local environment throughout the year and ask and answer questions about living things and seasonal change.</p> | <p><b>PROJECTS: Habitats and Plant Survival</b></p> <p>Local habitats include parks, woodland and gardens. Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains. All living things live in a habitat to which they are suited and it must provide everything they need to survive. Describe a range of local habitats and habitats beyond their locality (beaches, rainforests, deserts, oceans and mountains) and what all habitats provide for the things that live there.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b></p> <p>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</p> | <p>Environments are constantly changing due to natural influences, such as seasons, extreme weather, population changes and availability of food. Living things must adapt to these changes in order to survive. Describe how environments can change due to natural influences and how living things need to be able to adapt to these changes</p> | <p><b>PROJECT: Misty Mountain, Winding River</b></p> <p>Humans can affect habitats in negative ways, such as littering, pollution and land development, or positive ways, such as garden ponds, bird boxes and wildflower areas. Describe how environments can change due to human and natural influences and the impact this can have on living things.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b></p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p> | <p><b>PROJECT: Sow, Grow and Farm</b></p> <p>Farming in the UK can be divided into three main types: arable (growing crops), pastoral (raising livestock), mixed (arable and pastoral). Intensive farming in the past has resulted in the loss of habitats. Research and describe different farming practices in the UK and how these can have positive and negative effects on natural habitats.</p> | <p><b>PROJECT: Frozen Kingdoms</b></p> <p>Living things are classified into groups, according to common observable characteristics and based on similarities and differences. Research unfamiliar animals and plants from a range of habitats, deciding upon and explaining where they belong in the classification system.</p> <p><b>NC Objectives</b><br/><b>Living things and their habitats</b></p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p> |
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|  | <p>hot places, such as deserts, and cold places, such as the Arctic. Observe and describe living things and their habitats within the local environment</p> <p>Recognise some environments that are different to the one in which they live. (UW)</p> <p>Understand “why” questions, like “Why do you think the caterpillar got so fat?” (CL)</p> <p>Explore the natural world around them (UW)</p> <p>Recognise some environments that are different to the one in which they live. (UW)</p> <p>Understand the effect of changing seasons on the natural world around them. (UW)</p> <p>Know some similarities and differences between the natural world around them and contrasting environments,</p> |  | <p>kinds of animals and plants, and how they depend on each other.</p> |  |  |  |  |
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|                      | <p>drawing on their experiences and what has been read in class. (UW)</p> <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)</p> |                                                                                                                                                                                                                        |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                          |
| Key Vocabulary       | <p>Habitat, living things, plants, animals, insect, bird, cat, fox, squirrel, dairy, tree, bush, local environment, woodlands, gardens, ponds</p>                                                                            | <p>The local environment is a habitat for living things and can change during the seasons. Observe the local environment throughout the year and ask and answer questions about living things and seasonal change.</p> | <p>Habitats, parks, woodland, gardens, beaches, rainforests, deserts, oceans, mountains, suitable, survive</p>                                                                                                  | <p>Environments are constantly changing due to natural influences, such as seasons, extreme weather, population changes and availability of food. Living things must adapt to these changes in order to survive. Describe how environments can change due to natural influences and how living things need to be able to adapt to these changes.</p> | <p>Habitats, littering, pollution, land development, garden ponds, bird boxes, wildflower areas, impact, human, natural</p>                                                                                        | <p>Farming in the UK can be divided into three main types: arable (growing crops), pastoral (raising livestock), mixed (arable and pastoral). Intensive farming in the past has resulted in the loss of habitats. Research and describe different farming practices in the UK and how these can have positive and negative effects on natural habitats.</p> | <p>Classification, groups, characteristics, similarities, differences, animals, plants</p>                                                                                                               |
| Big Idea: Comparison |                                                                                                                                                                                                                              |                                                                                                                                                                                                                        |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                          |
| Physical Things      | <p><b>Nursery</b><br/><b>PROJECT: Starry Night</b><br/>Make simple comparisons between objects and materials, such as bigger and</p>                                                                                         | <p><b>PROJECTS: Chop, Slice and Mash, Everyday Materials and Shade &amp; Shelter</b><br/>Materials can be grouped according to their properties. Compare and group materials in a</p>                                  | <p><b>PROJECT: Habitats</b><br/>Living things are those that are alive. Dead things are those that were once living but are no longer. Some things have never been alive. Compare and group things that are</p> | <p><b>PROJECT: Forces and Magnets</b><br/>Magnets have two poles (north and south). Opposite poles (north and south) attract each other, while like poles (north and north, or south and south)</p>                                                                                                                                                  | <p><b>PROJECT: Electrical Circuits and Conductors</b><br/>Electricity is a type of energy. It is used to power many everyday items, such as kettles, computers and televisions. Electricity can also come from</p> | <p><b>PROJECTS: Sow, Grow and Farm, Human Reproduction and Ageing</b><br/>A life cycle is the series of changes in the life of a living thing and includes these basic stages: birth, growth, reproduction and</p>                                                                                                                                          | <p><b>PROJECT: Evolution and Inheritance</b><br/>Environmental factors can affect the distribution of living things within a habitat. These factors include light (intensity and duration), weather,</p> |

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|                | <p>smaller, and softer and harder.</p> <p><b><u>Reception</u></b><br/> <b>PROJECTS: Once Upon a Time, Starry Night, Shadows and Reflections, Splash, Build It Up and Let's Explore</b></p> <p>Objects can be compared and grouped according to their shape, colour, material or use. Compare and group objects and materials according to simple given criteria.</p> <p>Talk about the differences between materials and changes they notice. (UW)</p> <p>Use new vocabulary in different contexts. (CL)</p> <p>Use new vocabulary through the day (CL)</p> <p>Safely use and explore a variety of materials (EA &amp;D)</p> | <p>variety of ways, such as based on their physical properties; being natural or man-made and being recyclable or non-recyclable.</p> <p><b><u>NC Objectives</u></b><br/> <b>Everyday Materials</b><br/> Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p> | <p>living, dead or have never been alive.</p> <p><b><u>NC Objectives</u></b><br/> <b>Living things and their habitats</b><br/> Explore and compare the differences between things that are living, dead, and things that have never been alive</p> | <p>repel each other.</p> <p>Investigate and compare a range of magnets (bar, horseshoe and floating) and explain that magnets have two poles (north and south) and that opposite poles attract each other, while like poles repel each other.</p> <p><b><u>NC Objectives</u></b><br/> <b>Forces and magnets</b><br/> Describe magnets as having 2 poles.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing.</p> | <p>batteries. Batteries eventually run out of power and need to be recycled or recharged. Batteries power devices that can be carried around, such as mobile phones and torches. Compare common household equipment and appliances that are and are not powered by electricity.</p> <p><b><u>NC Objectives</u></b><br/> <b>Electricity</b><br/> Identify common appliances that run on electricity.</p> | <p>death. Mammals' life cycles include the stages: embryo, juvenile, adolescent and adult. Amphibians' life cycles include the stages: egg, larva (tadpole), adolescent and adult. Some insects' (butterflies, beetles and bees) life cycles include the stages: egg, larva, pupa and adult. Birds' life cycles include the stages: egg, baby, adolescent and adult. Compare the life cycles of animals, including a mammal, an amphibian, an insect and a bird.</p> <p><b><u>NC Objectives</u></b><br/> <b>Living things and their habitats</b><br/> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.</p> | <p>altitude, soil type and humans, such as when we mow or trample grass. Compare the living things in two contrasting areas of a habitat (top vs bottom of a hill, full sun vs shade, exposed location vs sheltered location or well-trodden path vs unused area).</p> |
| Key Vocabulary | <p>Compare, group, objects, materials, bigger, smaller, softer, harder, shape, colour</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Materials, group, compare, properties, natural or man-made, recyclable, non-recyclable.</p>                                                                                                                                                                                                                            | <p>Compare, group, similarities, differences</p>                                                                                                                                                                                                   | <p>Magnets, north poles, south pole, attract, repel, bar, horseshoe, floating</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Electricity, energy, power, kettles, computers, televisions, batteries. Recharged, mobile phones, torches, appliances</p>                                                                                                                                                                                                                                                                            | <p>life cycle, birth, growth, reproduction, death, Mammals, embryo, juvenile, adolescent, adult. Amphibians, egg, larva tadpole, insects' butterflies, beetles and bees, pupa, bird</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>Environmental factors can affect the distribution of living things within a habitat. These factors include light (intensity and duration), weather, altitude, soil type and humans, such as when we</p>                                                             |

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| Phenomena | <p><b>Nursery</b><br/> <b>PROJECT: Shadows and Reflections</b><br/>         Shadows are made on sunny days. They can be big or small and can change shape and size. Play with objects or their own body outside to create shadows.</p> <p><b>Reception</b><br/> <b>PROJECTS: Starry Night, Shadows and Reflections, Dangerous Dinosaurs, Let's Explore and Puppets and Pop Ups</b><br/>         A shadow is the same shape as the object that makes it. Shadows change during the day. Make a shadow bigger or smaller using toys, play equipment and a light source.</p> <p>Explore how things work. (UW)</p> | Shadows are normally the same shape as the object that cast them. Shadows change during the day as the Sun appears to change position in the sky. Shadows occur where light is blocked by an opaque object. Compare shadows made by different objects and materials. | Volume is how loud or quiet a sound is. Pitch is how high or low a sound is. Compare the volume and pitch of sounds made by instruments, their voices or other objects. | <p><b>PROJECT: Forces and Magnets</b><br/>         Friction is a force between two surfaces as they move over each other. Friction slows down a moving object. Smooth surfaces usually generate less friction than rough surfaces. Compare how objects move over surfaces made from different materials.</p> <p><b>NC Objectives</b><br/> <b>Forces and magnets</b><br/>         Compare how things move on different surfaces.</p> | <p><b>PROJECT: Sound</b><br/>         Sounds are louder closer to the sound source and fainter as the distance from the sound source increases. Compare how the volume of a sound changes at different distances from the source.</p> <p><b>NC Objectives</b><br/> <b>Sound</b><br/>         Recognise that sounds get fainter as the distance from the sound source increases.</p> | <p><b>PROJECT: Forces and Mechanisms</b><br/>         Friction, air resistance and water resistance are forces that oppose motion and slow down moving objects. These forces can be useful, such as bike brakes and parachutes, but sometimes we need to minimise their effects, such as streamlining boats and planes to move through water or air more easily, and using lubricants and ball bearings between two surfaces to reduce friction. Compare and describe, using a range of toys, models and natural objects, the effects of water resistance, air resistance and friction.</p> <p><b>NC Objectives</b><br/> <b>Forces</b><br/>         Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.</p> | <p><b>PROJECT: Electrical Circuits and Components</b><br/>         A circuit needs a power source, such as a battery or cell, with wires connected to both the positive and negative terminals. Other components include lamps, buzzers or motors, which an electric current passes through and affects a response, such as lighting a lamp or turning a motor. When a switch is open, it creates a gap and the current cannot travel around the circuit. When a switch is closed, it completes the circuit and allows a current to flow all the way around it. Compare and give reasons for variations in how components in electrical circuits function (brightness of lamps; volume of buzzers and function of on or off switches).</p> <p><b>NC Objectives</b><br/> <b>Electricity</b></p> |

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|                  | Explore the natural world around them. (UW)<br><br>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (UW)                                                    |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                    | 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.                                                                                                                                                                                      |
| Key Vocabulary   | Shadows, sunny, big, small, shape, size, object, light source.                                                                                                                                                                                    | Shadows. Shadows change during the day as the Sun appears to change position in the sky. Shadows occur where light is blocked by an opaque object. Compare shadows made by different objects and materials.                                                                                             | Volume is how loud or quiet a sound is. Pitch is how high or low a sound is. Compare the volume and pitch of sounds made by instruments, their voices or other objects.                                                                                                                                                                | Friction, force, surfaces, object, Smooth, rough                                                                                                                                                                                                                                                                                                      | Sounds, louder, source, fainter, distance, volume                                                                                                                                                                                                                                                                                                                 | Friction, air resistance, water resistance, forces, motion, streamlining, boats, planes, water, air, lubricants                                                                                                                                                                                                    | Circuit, power source, battery, cell, wires, positive, negative terminals, components, lamps, buzzers or motors, electric current, switch                                                                                                                                                                                                                |
| Big Idea: Change |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                          |
| Living Things    | <u>Nursery</u><br><b>PROJECT: Signs of Spring.</b><br>Living things change and grow. Say how a living thing has changed over time.<br><br><u>Reception</u><br><b>PROJECTS: Exploring Autumn, Once Upon a Time, Sunshine and Sunflowers, Let's</b> | <b>PROJECTS: Seasonal Changes, Plant Parts, and Animals Parts</b><br>All living things (plants and animals) change over time as they grow and mature. Describe, following observation, how plants and animals change over time.<br><u>NC Objectives</u><br><b>Plants</b><br>To observe how plants grow. | <b>PROJECT: Plant Survival</b><br>Plants grow from seeds and bulbs. Seeds and bulbs need water and warmth to start growing (germinate). As the plant grows bigger, it develops leaves and flowers. Observe and describe how seeds and bulbs change over time as they grow into mature plants.<br><u>NC Objectives</u><br><b>Plants</b> | <b>PROJECT: Plant Nutrition and Reproduction</b><br>Flowers are important in the life cycle of flowering plants. The stages of a plant's life cycle include germination, flower production, pollination, fertilisation, seed formation and seed dispersal. Insects and the wind can transfer pollen from one plant to another (pollination). Animals, | Habitats change over time, either due to natural or human influences. Natural influences include extreme or unseasonable weather. Human influences include habitat destruction or pollution. These changes can pose a risk to animals and plants that live in the habitat. Explain how unfamiliar habitats, such as a mountain or ocean, can change over time and | <b>PROJECT: Human Reproduction and Ageing</b><br>Humans go through characteristic stages as they develop towards old age. These stages include baby, infant, toddler, child, adolescent, young adult, adult and senior citizen. Puberty is the transition between childhood and adulthood. Describe the changes as | <b>PROJECT: Evolution and Inheritance</b><br>Scientists compare fossilised remains from the past to living species that exist today to hypothesise how living things have evolved over time. Humans and apes share a common ancestry and evidence for this comes from fossil discoveries and genetic comparison. Explain that living things have changed |

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|                | <p><b>Explore and Signs of Spring</b></p> <p>Living things change over time. This includes growth and decay. Explore the natural world around them and give simple descriptions, following observation, of changes.</p> <p>Understand the key features of the life cycle of a plant and an animal. (UW)</p> <p>Explore the natural world around them. (UW)</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants (UW)</p> |                                                                                                             | <p>Observe and describe how seeds and bulbs grow into mature plants.</p>                              | <p>wind, water and explosions can disperse seeds away from the parent plant (seed dispersal). Draw and label the life cycle of a flowering plant.</p> <p><u>NC Objectives</u><br/><b>Plants</b></p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> | <p>what influences these changes.</p>                                                                                                                                                                                                                                                                                                                                    | <p>humans develop from birth to old age.</p> <p><u>NC Objectives</u><br/><b>Animals including humans</b></p> <p>Describe the changes as humans develop to old age.</p> | <p>over time, using specific examples and evidence.</p> <p><u>NC Objectives</u><br/><b>Evolution and Inheritance</b></p> <p>Recognise that living things have changed over time.</p> |
| Key Vocabulary | <p>Living things, changes, growth, decay, natural world, plants, trees</p>                                                                                                                                                                                                                                                                                                                                                                                                       | <p>living things, plants, animals, change, grow, mature, describe, observe, stem, roots, leaves, flower</p> | <p>Plants, seeds, bulbs, water, warmth, grow, germinate, develops leaves, flowers, mature plants.</p> | <p>Flowers, life cycle, germination, flower production, pollination, fertilisation, seed formation and seed dispersal, insects, wind, pollen, animals, wind, water</p>                                                                                                                                                                         | <p>Habitats change over time, either due to natural or human influences. Natural influences include extreme or unseasonable weather. Human influences include habitat destruction or pollution. These changes can pose a risk to animals and plants that live in the habitat. Explain how unfamiliar habitats, such as a mountain or ocean, can change over time and</p> | <p>Humans, develop, old age, baby, infant, toddler, child, adolescent, young adult, adult, senior citizen, puberty, transition, childhood, adulthood</p>               | <p>Scientists, fossilised remains, past, exist, hypothesise, evolved, humans, apes, common ancestry, genetic comparison</p>                                                          |

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