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Description automatically generated

#MoorsidePAScience – Curriculum Progression Grid

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| **EYFS** | **Plants** | | **Animals including Humans** | | | **Everyday Materials** | | **Seasonal Changes** | |
| * Plant seeds and care for growing plants. * Understand the key features of the life cycle of a plant.  Begin to understand the need to respect and care for the natural environment and all living things. * Explore the natural world around them. | | * Observe different animals in their habitats. * Observe changes over time, e.g. hatching, hibernation, migration. * Explore the key features of the life cycle of an animal and humans. * Understand how to take care of animals and humans. | | | * Explore and name collections of materials with similar and/or different properties. * Describe materials e.g. hard, soft, squashy, silky, smooth, rough. * Talk about the differences between materials and changes they notice through observation. * Explore floating and sinking. | | * Explore and describe the natural world around them. * Describe what they see, hear and feel whilst outside. * Understand the effect of changing seasons on the natural world around them. | |
|  | **Plants** | **Animals, including humans** | | | **Everyday materials (classifying and grouping)** | |  | | **Seasonal changes** |
| **Year 1** | * Name the petals, stem, leaf, bulb, flower, seed, stem and root of a plant * Identify and name a range of common plants and trees * Recognise deciduous and evergreen trees * Name the trunk, branches and root of a tree * Describe the parts of a plant (roots, stem, leaves, flowers) | * **P**oint out some of the differences between different animals sort photographs of living things and non-living things * Identify and name a variety of common animals (birds, fish, amphibians, reptiles, mammals, invertebrates) * Describe how an animal is suited to its environment * Identify and name a variety of common animals that are carnivores, herbivores and omnivores * Name the parts of the human body that they can see * Draw & label basic parts of the human body * Identify the main parts of the human body and link them to their senses * Name the parts of an animal’s body * Name a range of domestic animals * Classify animals by what they eat (carnivore, herbivore, omnivore) * Compare the bodies of different animals | | | * Distinguish between an object and the material from which it is made * Describe materials using their senses * Describe materials using their senses, using specific scientific words * Explain what material objects are made from * Explain why a material might be useful for a specific job * Name some different everyday materials * Sort materials into groups by a given criteria * Explain how solid shapes can be changed by squashing, bending, twisting and stretching | |  | | * Observe changes across the four seasons * Name the four seasons in order * Observe and describe weather associated with the seasons * Observe and describe how day length varies |
|  |  |  | | **Living things and their habitats** | **Classifying and grouping materials** | | **Changing materials** | |  |
| **Year 2** | * Describe what plants need to survive * Observe and describe how seeds and bulbs grow into mature plants * Find out & describe how plants need water, light and a suitable temperature to grow and stay healthy | * Describe what animals need to survive * Explain that animals grow and reproduce * Explain why animals have offspring which grow into adults * Describe the life cycle of some living things * Explain the basic needs of animals, including humans for survival * Describe why exercise, balanced diet and hygiene are important for humans | | * Match certain living things to the habitats they are found in * Explain the differences between living and non-living things * Describe some of the life processes common to plants and animals, including humans * Decide whether something is living, dead or non-living * Describe how a habitat provides for the basic needs of things living there * Describe a range of different habitats * Describe how plants and animals are suited to their habitat. | * Describe the simple physical properties of a variety of everyday materials * Compare and group together a variety of materials based on their simple physical properties | | * Explore how the shapes of solid objects can be changed (squashing, bending, twisting, stretching) * Find out about people who developed useful new materials * Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, cardboard for particular uses * Explain how things move on different surfaces | |  |
|  |  |  | | **Rocks** | **Forces and magnets** | | **Light** | |  |
| **Year 3** | * Identify and describe the functions of different parts of flowering plants? (roots, stem/trunk, leaves and flowers) * Explore the requirement of plants for life and growth (air, light, water, nutrients from soil, and room to grow) * Explain how they vary from plant to plant * Investigate the way in which water is transported within plants * Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal | * Explain the importance of a nutritionally balanced diet * Describe how nutrients, water and oxygen are transported within animals and humans * Identify that animals, including humans, cannot make their own food: they get nutrition from what they eat * Describe and explain the skeletal system of a human * Describe and explain the muscular system of a human | | * Compare and group together different rocks on the basis of their appearance and simple physical properties * Describe and explain how different rocks can be useful to us * Describe and explain the differences between sedimentary and igneous rocks, considering the way they are formed * Describe in simple terms how fossils are formed when things that have lived are trapped within rock * Recognise that soils are made from rocks and organic matter | * Compare how things move on different surfaces * Observe that magnetic forces can be transmitted without direct contact * Observe how some magnets attract or repel each other * Classify which materials are attracted to magnets and which are not * Notice that some forces need contact between two objects, but magnetic forces can act at a distance * Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet * Identify some magnetic materials * Describe magnets have having two poles (N & S) * Predict whether two magnets will attract or repel each other depending on which poles are facing | | * Recognise that they need light in order to see things * Recognise that dark is the absence of light * Notice that light is reflected from surfaces * Recognise that light from the sun can be dangerous and that there are ways to protect their eyes * Recognise that shadows are formed when the light from a light source is blocked by a solid object * Find patterns in the way that the size of shadows change | |  |
| **Year 4** |  | **Animals including humans** | | **Living things and their habitats** | **States of matter** | | **Sound** | | **Electricity** |
|  |  | * Identify and name the basic parts of the digestive system in humans * Describe the simple functions of the basic parts of the digestive system in humans * Identify the simple function of different types of teeth in humans * Compare the teeth of herbivores and carnivores * explain what a simple food chain shows * Construct and interpret a variety of food chains, identifying producers, predators and prey | | * Recognise that living things can be grouped in a variety of ways * Explore and use a classification key to group, identify and name a variety of living things (plants, vertebrates, invertebrates) * Compare the classification of common plants and animals to living things found in other places * Recognise that environments can change and this can sometimes pose a danger to living things | * Compare and group materials together, according to whether they are solids, liquids or gases * Explain what happens to materials when they are heated or cooled * Measure or research the temperature at which different materials change state in degrees Celsius * Use measurements to explain changes to the state of water * Identify the part that evaporation and condensation has in the water cycle * Associate the rate of evaporation with temperature | | * Describe a range of sounds and explain how they are made * Associate some sounds with something vibrating * Compare sources of sound and explain how the sounds differ * Explain how to change a sound (louder/softer) * Recognise how vibrations from sound travel through a medium to an ear * Find patterns between the pitch of a sound and features of the object that produce it * Find patterns between the volume of the sound and the strength of the vibrations that produced it * Recognise that sounds get fainter as the distance from the sound source increases * Explain how you could change the pitch of a sound * Investigate how different materials can affect the pitch and volume of sounds | | * Identify common appliances that run on electricity * Construct a simple series electric circuit * Identify and name the basic part in a series circuit, including cells, wires, bulbs, switches and buzzers * 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 * Recognise that a switch opens and closes a circuit * Associate a switch opening with whether or not lamp lights in a simple series circuit * Recognise some common conductors and insulators * Associate metals with being good conductors |
| **Year 5** |  | **Animals including humans** | | **Living things and their habitats** | **Properties and changes to materials** | | **Earth and space** | | **Forces** |
|  |  | * Describe the changes as humans develop to old age | | * Describe the differences in the life cycles of mammals, amphibians, insects and birds * Describe the life cycles of common plants * Explore the work of well know naturalists and animal behaviourists | * Compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets * Explain how some materials dissolve in liquid to form a solution * Describe how to recover a substance from a solution * Use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving, evaporating * Give reasons, based on evidence for comparative and fair tests for the particular uses of everyday materials, including metals wood and plastic * Describe changes using scientific words (evaporation, condensation) * Demonstrate that dissolving, mixing and changes of state are reversible changes * Explain that some changes result in the formation of new materials, and that this kid of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda * Use the terms ‘reversible’ and ‘irreversible’ | | * Identify and explain the movement of the Earth and other plants relative to the sun in the solar system * Explain how seasons and the associated weather is created * Describe and explain the movement of the Moon relative to the Earth * Describe the sun, earth and moon as approximately spherical bodies * Use the idea of the earth’s rotation to explain day and night and the apparent movement of the sun across the sky | | * Explain that unsupported objects fall towards the earth because of the force of gravity acting between the earth and the falling object * Identify the effects of air resistance, water resistance and friction that act between moving surfaces * Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect |
| **Year 6** | **Evolution and inheritance** | **Animals including humans** | | **Living things and their habitats** |  | | **Light** | | **Electricity** |
|  | * Recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago * Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents * Give reasons why offspring are not identical to each other or to their parents * Explain the process of evolution and describe the evidence for this * Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution | * Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood * Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function * Describe the ways in which nutrients and water and transported within animals, including humans | | * Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences including microorganisms, plants and animals * Give reasons for classifying plants and animals based on specific characteristics |  | | * Recognise that light appears to travel in straight lines * 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 * Explain that we see things because light travels from light sources to our eyes or from light sources to object s and then to our eyes * Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them | | * Identify and name the basic parts of a simple electric series circuit (cells, wires, bulbs, switches, buzzers) * Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers, the on/off position of switches * Use recognised symbols when representing a simple circuit in a diagram |