Science Coverage

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|  | AUT 1 | AUT 2 | SPR 1 | SRP 2 | SUM 1 | SUM 2 |
| EYFS | **Understanding the World** | | | | | |
| Remembers and talks about significant events in their own experience - **Baby/Toddler/present day photo**  **Growth and Change**  Understand the effect of changing seasons on the natural world around them - **autumn.** | Recognise some similarities and differences between life in this country and life in other countries. **- Polar regions/Arctic - how do animals keep warm? Blubber experiment**  Understand some important processes and changes in the natural world around them - **Shadows - Smoot the Rebellious shadow/Melting and freezing - how can we melt the ice to free the characters? (Link to focus stories)**  Understand the effect of changing seasons on the natural world around them - **winter** | Materials - **Explore different materials and their properties in Investigation Area**  Floating and sinking - **What Floats in a Moat focus text and activity**  Understand the effect of changing seasons on the natural world around them - **winter** | Make observations of animals and plants and explain why some things occur, and talks about changes  **- Grow fruits and vegetables in our outdoor area. What do they need to grow?**  Understand the effect of changing seasons on the natural world around them - **spring** | Explore the natural world around them, making observations and drawing pictures of animals and plants **-Minibeast hunt, Minibeast habitats, observational drawings and small world exploration**  Know some similarities and differences between the natural world around them and contrasting environments, - **Bug hotel; what do we need to include for each minibeast?** | **African animals and habitats - small world and non-fiction texts**  Understand the effect of changing seasons on the natural world around them - **summer** |
| YEAR 1 | **Animals including humans:**  **Human body & senses** | **Seasonal change:**  **Autumn & Winter** | **Everyday materials** | **Seasonal change:**  **Spring & Summer** | **Plants** | **Animals including humans:**  **Animals** |
| Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. | Autumn & Winter - observe changes across the four seasons  Observe and describe weather associated with the seasons and how day length varies. | Distinguish between an object and the material from which it is made  identify and name a variety of everyday materials, including wood, plastic, glass,  metal, water, and rock  describe the simple physical properties of a variety of everyday materials  Compare and group together a variety of everyday materials on the basis of their  simple physical properties. | Spring & Summer - observe changes across the four seasons  Observe and describe weather associated with the seasons and how day length varies. | Identify and name a variety of common wild and garden plants, including deciduous  and evergreen trees  Identify and describe the basic structure of a variety of common flowering plants,  including trees. | Identify and name a variety of common animals including fish, amphibians, reptiles,  birds and mammals  identify and name a variety of common animals that are carnivores, herbivores and omnivores  Describe and compare the structure of a variety of common animals (fish,  amphibians, reptiles, birds and mammals, including pets) |
| YEAR 2 | **Animals including humans** | | **Uses of everyday materials** | | **Plants** | **Living Things and their Habitats** |
| Notice that animals, including humans, have offspring which grow into adults  Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)  Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene | | Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses  Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | | Observe and describe how seeds and bulbs grow into mature plants  Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy | Explore and compare the differences between things that are living, dead, and things that have never been alive  identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other  Identify and name a variety of plants and animals in their habitats, including microhabitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food |
| YEAR 3 | **Rocks** | | **Animals including humans** | **Forces and Magnets** | **Plants** | **Light** |
| Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties  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. | | 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  Touch on why plants’ nutrients are different from animals and how plants receive nutrients  Describe the simple functions of the basic parts of the digestive system in humans  Identify the different types of teeth in humans and their simple functions | Compare how things move on different surfaces  Notice that some forces need contact between two objects, but magnetic forces can act at a distance  Observe how magnets attract or repel each other and attract some materials and not others  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  Describe magnets as having two poles  Predict whether two magnets will attract or repel each other, depending on which poles are facing. | Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers  Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary  rom 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. | Recognise that they need light in order to see things and 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 an opaque object  Find patterns in the way that the size of shadows change. |
| YEAR 4 | **Animals, including humans** | **Electricity** | **States of matter** | | **Sound - Science Week** | **Living things & their habitats** |
| Humans and some other animals have skeletons and muscles for support, protection and movement.  Construct and interpret a variety of food chains, identifying producers, predators and prey. | Identify common appliances that run on electricity.  Construct a simple series electrical circuit, identifying and naming its basic parts.  Identify whether or not a lamp will light in a simple series circuit.  Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.  Recognise some common conductors and insulators, and associate metals with being good conductors. | Compare and group materials together, according to whether they are solids, liquids or gases.  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)  Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature | | Identify how sounds are made, associating some of them with something vibrating.  Recognise that vibrations from sounds travel through a medium to the ear.  Find patterns between the pitch of a sound and features of the object that produced it.  Find patterns between the volume of a sound and the strength of the vibrations that produced it.  Recognise that sounds get fainter as the distance from the sound source increases. | Recognise that living things can be grouped in a variety of ways.  Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.  Recognise that environments can change and that this can sometimes pose dangers to living things |
| YEAR 5 | **Forces** | **Properties and changes of materials** | **Living Things and their habitats** | | **Earth and Space** | **Animals including humans** |
| 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. | 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  Know that some materials will dissolve in liquid to form a solution, and describe how  to recover a substance from a solution  Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating  Give reasons, based on evidence from comparative and fair tests, for the particular  uses of everyday materials, including metals, wood and plastic  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 kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. | Describe the differences in the life cycles of a mammal, an amphibian, an insect and  a bird  Describe the life process of reproduction in some plants and animals. | | Describe the movement of the Earth, and other planets, relative to the Sun in the  solar system  Describe 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. | Describe the changes as humans develop to old age.  Pupils should draw a timeline to indicate stages in the growth and development of  humans. They should learn about the changes experienced in puberty.  Pupils could work scientifically by researching the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a  baby as it grows. |
| YEAR 6 | **Living Things and their habitats** | **Evolution and Inheritance** | **Light** | **Animals including humans** | **Animals including Humans** | **Electricity** |
| 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 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  Revisit and deepen: Biography of Darwin | 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 objects 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 | Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function  Describe the ways in which nutrients and water are transported within animals, including humans.  (linked to PSHE Healthy Me) | Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood  (including heart dissection) | Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit  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  Use recognised symbols when representing a simple circuit in a diagram |