Curriculum overview –Science 

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| Year group | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| 1 | ANIMALS inc humans.  -To identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.  -To identify and name a variety of common animals that are carnivores, herbivores and omnivores.  -To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals inc pets) | SEASONS- AUTUMN  -To observe changes across the four seasons.  -To observe and describe weather associated with winter and how the days are shorter. | PLANTS-  -To identify and name a variety of common wild and garden plants, including deciduous and evergreen.  -To identify and describe the basic structure of common flowering plants, including trees.  SEASONS- WINTER  -Observe temperature changes.  -Investigate ice formation. | SEASONS- SPRING  -To observe changes across the four seasons.  -To observe and describe weather associated with winter and how the days are shorter. | EVERYDAY MATERIALS  -To distinguish between an object and the material it is made from.  -To identify and name a variety of everyday materials inc wood, plastic, glass, metal water and rock.  -To describe the simple physical properties of everyday materials.  -To compare and group together a variety of everyday materials on the basis of their physical properties. | ANIMALS inc humans  -To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.  SEASONS- SUMMER  -To investigate clothing suitable for different seasons.  -To understand changes such as temperature and plants. |
| 2 | ANIMALS inc humans  -To notice that animals, inc humans, have offspring which grows into adults.  -To find out about and describe the basic needs of animals, inc humans, for survival  -To describe the importance for humans to exercise, eat the right amount of different types of food and food hygiene. | SEASONS- migration and hibernation  -To understand how different animals prepare for the winter months in the UK (eg squirrels, tortoises) and in other climates (eg bears hibernating in arctic climates)  -To understand how birds migrate to warmer climates and track the paths they take (inc birds)  -To understand how native birds and mammals etc will find food during the winter months. | SEASONS- nesting and emerging from hibernation  -To understand how biological clocks work and what signals a hibernating animal to waken.  - To track animals when they emerge from hibernation in the UK and abroad. | PLANTS  -To observe how bulbs grow and mature into plants.  -To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. | LIVING THINGS AND THEIR HABITATS  -To explore and investigate the differences between things that are living, dead and have never been alive.  -To identify that most things live in a habitat 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.-To identify and name a variety of plants and animals in their habitats, inc microhabitats.  -To describe how animals obtain their food using the idea of a simple food chain, and identify and name different sources of food. | USES OF EVERYDAY MATERIALS  -To identify and compare the suitability of a variety of everyday materials, inc wood, plastic, brick, paper and cardboard.  -To find out how the shape of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. |
| 3 | ANIMALS inc humans: skeletons  -To identify that humans and some other animals have skeletons and muscles for support, protection and movement. | ANIMALS inc humans: healthy humans  -To identify that animals, inc humans, need the right type and amount of nutrition and they cannot make their own food.  -To identify that humans get nutrition from what they eat. | ROCKS  -To compare and group together different kinds of rocks on the basis of their appearance.  -To recognise that soils are made from rocks and organic matter  - describe in simple terms how fossils are formed when things that are living are trapped within rocks | MAGNETS AND FORCES  -To compare how things move on different surfaces.  -To notice that some forces need contact between 2 objects, but magnetic forces can act over a distance.  - To observe how magnets attract and repel each other and attract some materials but not others.  -To compare and group together a variety of everyday materials on the basis of if they are magnetic.  -To describe that magnets have 2 poles.  -To predict whether 2 magnets will attract or repel. | LIGHT  To recognise that they need light in order to see things and that dark comes from the absence of light.  -To notice that light is reflected from surfaces.  -To recognise that light from the sun can be dangerous and there are ways to protect your eyes.  -To recognise that shadows are formed when the light from a light source is blocked by an opaque object.  -To find patterns in the way that the size of shadows change. | PLANTS  -To identify, locate and describe the functions of flowering plants: roots, stem/trunk, leaves and flowers.  -To explore the requirements of plants for life and growth (air, water, nutrients from the soil and room to grow) and how they vary from plant to plant.  -To investigate the way in which water is transported in plants.  -To explore the part that flowers play in the life cycle of flowering plants including pollination, seed formation and seed dispersal. |
| 4 | ELECTRICITY  -To identify common appliances that run on electricity.  -To construct a simple series electrical circuit, identifying and naming it’s basic parts, including cells, wires, bulbs, switches and buzzers.  -To 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.  -To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in simple series circuit.  -To recognise some common conductors and insulators and associate metals with being good conductors. | ELECTRICITY  Crumble project | ANIMALS inc humans  -To describe the simple function of the basic parts of the digestive system.  -To identify the different types of teeth in humans and their simple function.  -To construct and interpret a variety of food chains, identifying producers, predators and prey. | SOUND  -To identify how sounds are made associating some of them with something vibrating.  -To recognise that vibrations from sound travel through a medium into the ear.  -To find patterns between the pitch of a sound and features of the object that produced it.  -To find patterns between the volume of a sound and the strength of the vibrations that produced it.  -To recognise that sound gets fainter as the distance from the sound increases. | STATES OF MATTER  -To compare and group materials together depending on whether they are solid, liquids or gases.  -To observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens.  -To identify the part played by condensation and evaporation in the water cycle and associate the rate of evaporation with temperature. | LIVING THINGS AND THEIR HABITATS  -To recognise that living things can be grouped in a variety of ways.  -To explore classification keys to help group, identify and name a variety of living things in the local environment.  -To recognise environments change and can pose dangers to living things. |
| 5 | PROPERTIES AND CHANGES OF MATERIALS  -To understand how heat moves from a place of high concentration to low.  -To understand how insulators keep things both hot and cold and apply this to practical everyday scenarios. | PROPERTIES AND CHANGES OF MATERIALS  -To know that some materials dissolve in liquid to form a solution, and describe how to recover a substance from a solution  -To use knowledge of solids, liquids and gases to separate them by filtering, sieving and evaporation.  -To demonstrate that dissolving, mixing and changes of state are reversible changes.  -To explain that some changes result in the formation of a new material eg burning or reactions with bicarb of soda. | EARTH AND SPACE  -To describe the movements of the Earth and other planets in relation to the Sun.  -To describe the movements of the Moon in relation to the Earth. | LIVING THINGS AND THEIR HABITATS  -To describe the differences in life cycles of a plants (dandelions).  -To describe the life process of reproduction in some plants. | FORCES  -To describe that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.  -To identify the effects of air resistance, water resistance and friction that act between moving surfaces.  -To recognise that some mechanisms, including levers, pulleys and gears allow a smaller force to have a greater impact. | ANIMALS inc humans  -To describe the differences in the life cycles of a mammal, an amphibian, and insect and a bird.  -To describe the life process of reproduction in animals.  -To describe the changes as humans develop into old age. |
| 6 | EVOLUTION AND INHERITANCE  -To recognise that some living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.  -To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.  -To understand how animals are adapted to their environment in different ways. | LIGHT  -To recognise that light travels in a straight line.  -To use the idea that light travels in a straight line to explain that objects are seen because they give out or reflect light into our eyes.  -To explain that we see things because light travels from a light source to our eyes.  -To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. | ANIMALS inc humans  -To identify and name the main parts of the human circulatory system.  -To recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions.  -To describe the way in which water and nutrients are transported within animals inc humans. | LIVING THINGS AND THEIR HABITATS  -To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences (incl microorganisms, plants and animals).  -To give reasons for classifying plants and animals based on specific characteristics. | ELECTRICITY  -To associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.  -To compare and give reasons for variations in how components work, incl brightness of a bulb, the loudness of a buzzer and the on/off position of switches. | ELECTRICITY  -To use recognised symbols when representing a simple circuit diagram.  -To use an interpret circuit diagrams to construct a variety of more complex circuits predicting whether they will ‘work’  - STEM project Fairgrounds |