|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 | Greater Depth |
| Foundation – DP | * Comments and asks questions about the natural world. * Can talk about some of the things they have observed such as plants, animals, natural objects.   . | * Developing an understanding of growth, decay and changes over time. * Shows care and concern for living things. | * Comments and asks questions about the natural world. * Can talk about some of the things they have observed such as plants, animals, natural objects. * Looks closely at similarities, differences, patterns and change. | * Developing an understanding of growth, decay and changes over time. * Shows care and concern for living things. * Looks closely at similarities, differences, patterns and change. | * Looks closely at similarities, differences, patterns and change.   **ELG**   * Children know about similarities and differences in relation to living things. * They make observations of animals and plants and talk about changes | * Looks closely at similarities, differences, patterns and change.   **ELG**   * Children know about similarities and differences in relation to living things. * They make observations of animals and plants and talk about changes | * They know the properties of some materials and can suggest some of the purposes they are used for. * They are familiar with basic scientific concepts such as floating, sinking, experimentation. |
| Foundation – BW  **Mud Kitchen accessed throughout the year** | * Can talk about some of the things they have observed such as plants, animals, natural objects. * Developing an understanding of growth, decay and changes over time. * Shows care and concern for living things. * Looks closely at similarities, differences, patterns and change.   **ELG**   * Children know about similarities and differences in relation to living things. * They make observations of animals and plants and talk about changes | * Looks closely at similarities, differences, patterns and change. | * Can talk about some of the things they have observed such as plants, animals, natural objects. * Looks closely at similarities, differences, patterns and change.   **ELG**   * Children know about similarities and differences in relation to living things. | * Looks closely at similarities, differences, patterns and change. | * Comments and asks questions about the natural world. * Can talk about some of the things they have observed such as plants, animals, natural objects. * Developing an understanding of growth, decay and changes over time. * Shows care and concern for living things. * Looks closely at similarities, differences, patterns and change.   **ELG**   * Children know about similarities and differences in relation to living things. * They make observations of animals and plants and talk about changes | * Comments and asks questions about the natural world. * Can talk about some of the things they have observed such as plants, animals, natural objects. * Developing an understanding of growth, decay and changes over time. * Looks closely at similarities, differences, patterns and change.   **ELG**   * Children know about similarities and differences in relation to living things. * They make observations of animals and plants and talk about changes | * They know the properties of some materials and can suggest some of the purposes they are used for. * They are familiar with basic scientific concepts such as floating, sinking, experimentation. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| 1/2 | **Uses of Everyday Materials (Yr2)**   * identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses   **Seasonal changes (yr1) Autumn.**   * observe changes across the 4 seasons * observe and describe weather associated with the seasons and how day length varies | **Uses of Everyday Materials (Yr2)**   * Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.   **Seasonal changes (yr1) Winter**   * observe changes across the 4 seasons * observe and describe weather associated with the seasons and how day length varies | **Ourselves (Yr1)**   * Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. | **Scientific Enquiry**   * asking simple questions and recognising that they can be answered in different ways * observing closely, using simple equipment * performing simple tests * using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions. | **Plants (Yr1)**   * Identify and describe the basic structure of a variety of common flowering plants, including trees. * Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. | **Humans and other animals (Yr1 and 2)**   * notice that animals, including humans, have offspring which grow into adults * describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) * 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 * find out about and describe the basic needs of animals, including humans, for survival (water, food and air) |
| Greater Depth  (activities)  How do you know…?  What facts or ideas show…?  What can you say about…?  What is meant by…?  What would happen if…?  What if….?  What would be the result if…?  What questions would you ask a  Scientist about…? | Compares their tree with other trees, recognising that that deciduous trees change over the seasons and evergreens do not change. | Compares their tree with other trees, recognising that that deciduous trees change over the seasons and evergreens do not change. | Use a wide variety of scientific language when they are naming and describing the functions of the different parts of the body. | Odd one out – selection of 3 items and chn identify which is the odd one out and why. | Design a plant that would appeal to an insect.  Research own questions.  Sort plants and use appropriate scientific vocabulary to explain their groupings and the similarities and differences between the different plants.  Could you suggest a garden design for someone who likes privacy and bright autumn colours? | If there were no more bees, What would happen?  Able to explain the similarities and differences between the animals in the different groups.  Complete the lifecycle of a frog/chick/butterfly, writing at least 2 sentences describing what happens at each stage and what the frog looks like at each stage. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| 3/4 | **Animals inc Humans yr4) Food chains**   * construct and interpret a variety of food chains, identifying producers, predators and prey. | **Living Things and Habitats**   * 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 | **Forces and magnets**   * compare how things move on different surfaces * 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, and identify some magnetic materials   * describe magnets as having two poles * observe how magnets attract or repel each other and attract some materials and not   others   * predict whether two magnets will attract or repel each other, depending on which   poles are facing. | **Solids and Liquids**   * 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) | **Animals inc humans (yr3)**   * 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 * identify that humans and some other animals have skeletons and muscles for support, protection and movement. | **Sound**   * identify how sounds are made, associating some of them with something vibrating * recognise that vibrations from sounds travel through a medium to the ear * recognise that sounds get fainter as the distance from the sound source increases. * 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 |
| Greater Depth  (activities) | Why do you think…?  How would you classify..?  What evidence can you find…? | Suppose you could remove\_\_\_ from the food chain. What would you remove? | Explain how magnetic toys work./ don’t work as a sales pitch to a toy company.  Magnets in real life –why has a magnet been used?  Create a game with magnets.  PMI (positives, minuses, interesting sheet) – a world without magnets. | PMI (positives, minuses, interesting sheet) – What if the ocean froze completely?  How has global warming affected the earth? | label the main parts of the skeleton and describe what a human would look like if they didn’t have a skeleton Pupils can explain the similarities and differences between animals with and without skeletons  digestion model made (ARE)- can suggest improvements to their model. | design and make a pitched instrument.  What if animals couldn’t hear (e.g. owl)?  Research hearing dogs and aids.  provide their own examples to explain how sounds are caused by vibrations. For example, an alarm clock or dog whistle. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| 5/6 | **Inheritance and evolution**   * recognise that living things produce offspring of the same kind, but normally offspring   vary and are not identical to their parents   * identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. * recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago | **Animals including Humans**   * identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood * describe the ways in which nutrients and water are transported within animals, including humans. * recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. | **Living Things and the Habitats**   * 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 * give reasons for classifying plants and animals based on specific characteristics | **Electricity**   * use recognised symbols when representing a simple circuit in a diagram. * 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. * associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. | **Light**   * 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   * use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. * 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 that objects are seen because they give out or reflect light into the eye | **Animals including humans**   * describe the changes as humans develop to old age. |
| Greater Depth  (activities) | Using different equipment e.g. tweezers, chopsticks and spoons pick up worms, rice etc pretending they are a beak. With the conclusion they should explain how evolution has the beaks to be adapted in order to ensure survival of species. They link their findings to the work by Charles Darwin and other examples of natural selection. | How would you justify the importance of a healthy diet for your heart?  Simply describe the heart, recognising it consists of 2 pumps, one of which pumps blood to the lungs to collect oxygen and one to the body to distribute the oxygen to cells and collect waste materials. The pupil recognises there are different types of blood vessels and can explain their role. | Would it be better if..?  Do you agree with the actions/outcome…?  What is your opinion on…?  Suppose you could….what would you do? | Which are more important – insulators or conductors?  Research – Where doers electricity come from? How is it made? Which method do you think is best and why?  Why are batteries safer than mains?  What is an electro magnet? When would it be useful? | what would happen if the sun went?  What would happen if you didn’t have a lens in your eye?  Do we all see the same colours?  Carry out experiments and explain what is happening to the light. They use appropriate scientific terms and apply their knowledge of refraction, spectrums and dispersion to explain how and where rainbows are formed | PMI – People no longer get old. |