|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2  | Spring 1 | Spring 2 – 6 wk | Summer 1 – 5 wk | Summer 2 – 7 wk |
| 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
 |
| 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.

**EXS*** They know the properties of some materials and can suggest some of the purposes they are used for.
 | * 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.

**EXS*** They are familiar with basic scientific concepts such as floating, sinking,
* experimentation.
 | * 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

**EXS*** They know the

properties of some materials and can suggest some of the purposes they are used for. **EXS*** 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 | **Ourselves** * describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene
 | **Everyday Materials (Yr1)*** identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
* distinguish between an object and the material from which it is made
* 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.
 | **Living Things and their habitats*** explore and compare the differences between things that are living, dead, and things that have never been alive
* identify and name a variety of plants and animals in their habitats, including microhabitats
* 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
* 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
 | **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 (yr 2) and Seasonal Changes (Yr1) Spring*** observe and describe how seeds and bulbs grow into mature plants
* observe changes across the 4 seasons
* observe and describe weather associated with the seasons and how day length varies
* observe and describe how seeds and bulbs grow into mature plants
 | **Plants (yr2) and Seasonal changes (yr 1) Summer*** find out and describe how plants need water, light and a suitable temperature to grow
* and stay healthy.
* observe and describe how seeds and bulbs grow into mature plants
* observe changes across the 4 seasons
* observe and describe weather associated with the seasons and how day length varies
 |
| 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…? | Odd one out – selection of 3 items and chn identify which is the odd one out and why.  | Explain why you would use a particular material for a specific job, relating the materials to their properties using appropriate scientific vocabulary.Explain why different materials are suitable for shoe laces, using appropriate scientific vocabulary. For example, they explain that string is suitable because it is strong and flexible. | suggest how to group animals to avoid them eating each other and is able to explain the similarities and differences between the animals in the different groups. 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.  | compares their tree with other trees, recognising that that deciduous trees change over the seasons and evergreens do not change.Could a plant grow without sunlight or water?Design a plant that would appeal to an insect.Design a seed packet with instructions for growth.Research own questions. | compares their tree with other trees, recognising that that deciduous trees change over the seasons and evergreens do not change.Could a plant grow without sunlight or water?Design a plant that would appeal to an insect.Design a seed packet with instructions for growth.Research own questions. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2  | Spring 1 | Spring 2 – 6 wk | Summer 1 – 5 wk | Summer 2 – 7 wk |
| 3/4 | **Rocks and soils*** 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
 | **Electricity** * identify common appliances that run on electricity
* construct a simple series electrical circuit, identifying and naming its basic parts,
* 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 some common conductors and insulators, and associate metals with being good conductors.
* recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
 | **Light** * 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 changes.
 | **Teeth and digestion*** identify the different types of teeth in humans and their simple functions
* describe the simple functions of the basic parts of the digestive system in humans
 | **Plants (Yr3)*** identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
* explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal
* 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
* investigate the way in which water is transported within plants
 | **States of Matter*** identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
 |
| Greater Depth(activities) | Explain how different rocks are formed.Which chocolate bars link to which rocks best and why?Recommend different plants for different soil conditions.Investigate the flooding of the River Nile in Ancient Egypt and relate this to your knowledge of soils. | PMI (positives, minuses, interesting sheet) about an aspect of science. | design safety glasses to watch the eclipse.Make a shadow the size of…Would you prefer to live in all dark or all light?What do you see when there is absolutely no light? | PMI (positives, minuses, interesting sheet) about an aspect of science. | Label the parts of a flower: sepal, petal, stamen, anther, filament, carpel, stigma, style, ovary. Clearly explain what elements a plant needs to survive. They can explain how some plants have need more/less light, water and nutrients to survive. They can explain what might happen to a plant, if it doesn’t have enough of a factor. Pupils can set up simple practical enquiries, including comparative and fair tests.uses scientific language: pollination, fertilisation and dispersal. They can describe how insects pollinate plants. They can explain how different types of seed can be dispersed by different methods and relate their story to their practical work. Prove or disprove that roots act like straws sucking up water for the plant. | PMI (positives, minuses, interesting sheet) about an aspect of science. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Autumn 1 | Autumn 2  | Spring 1 | Spring 2 and Summer 1 – 11 weeks | Summer 1 – 5 wk |
| 5/6 | **Earth and space** * describe the movement of the Earth, and other planets, relative to the Sun in the solar system
* describe the Sun, Earth and Moon as approx. spherical bodies
* describe the movement of the Earth, and other planets, relative to the Sun in the solar system
* 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 movement of the Moon relative to the Earth
 | **Forces*** 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.
 | **Living Things and Habitats*** describe the life process of reproduction in some plants and animals
* describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
 | **Materials*** 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
* give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
* 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
* demonstrate that dissolving, mixing and changes of state are reversible changes
* 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
 | **Animals including humans** every year for year 5 (see cycle B for year 6)* describe the changes as humans develop to old age.
 |
| Greater Depth(activities) | Which planet would you move to if earth became inhabitable? | Design an experiment to show the effect of air resistance, water resistance, friction.attempts to explain how the levers, pulleys and gears allow a smaller force to have a greater effect.  | Explain the concept of a life cycle and what happens when part of the life cycle is no longer there. | -identify materials in use and can explain why these types of material have been specifically chosen using appropriate scientific language. They can compare and justify why they have chosen particular materials based on their properties. E.g. PVC for windows instead of wood, as it is more durable. | PMI – People no longer get old. |