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| Year 4 National Curriculum Objectives | | | | | |
| Autumn Term | | Spring Term | | Summer Term | |
| **Living Things and their 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.  **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 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. | | **Animals, Including Humans**  ▪ 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.  ▪ construct and interpret a variety of food chains, identifying producers, predators and prey. | | **States of Matter**  ▪  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.  **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.  ▪  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. | |
| Year 4 Key Skills | | | | | |
| **Living Things and their 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.  Use and make identification keys for plants and animals.  **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 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.  Electricity can be dangerous.  Electricity sources can be mains or battery.  Batteries 'push' electricity round a circuit and can make bulbs, buzzers and motors work.  Faults in circuits can be found by methodically testing connections.  Drawings, photographs and diagrams can be used to represent circuits (although standard symbols need not be introduced until UKS2). | | **Animals, Including Humans**  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.  Construct and interpret a variety of food chains, identifying producers, predators and prey.  Describe how teeth and gums have to be cared for in order to keep them healthy. | | **States of Matter**  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.  Solids, liquids and gases can be identified by their observable properties.  Solids have a fixed size and shape (the size and shape can be changed but it remains the same after the action).  Liquids can pour and take the shape of the container in which they are put.  Liquids form a pool not a pile.  Solids in the form of powders can pour as if they were liquids but make a pile not a pool.  Gases fill the container in which they are put.  Gases escape from an unsealed container.  Gases can be made smaller by squeezing/pressure.  Liquids and gases can flow.  **Sound (muffling/ blocking sounds)**  Recognise that vibrations from sounds travel through a medium to the ear.  Sounds are heard when they enter our ears (although the structure of the ear is not important key learning at this age phase).  Sounds can travel through solids, liquids and air/gas by making the materials vibrate.  Sound travel can be reduced by changing the material that the vibrations travel through.  Sound travel can be blocked.  **Sound (pitch)**  Find patterns between the pitch of a sound and features of the object that produced it.  Sounds can be high or low pitched.  The pitch of a sound can be altered.  Pitch can be altered either by changing the material, tension, thickness or length of vibrating objects or changing the length of a vibrating air column.  **Sound (vibrations)**  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 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 sounds can be made in a variety of ways (pluck, bang, shake, blow) using a variety of things (instruments, everyday materials, body).  Sounds travel away from their source in all directions.  Vibrations may not always be visible to the naked eye. | |
| Year 4 Working Scientifically | | | | | |
| **Living Things and their Habitats**  **Similarities & Differences, Questions, Observe, Research**  Using and making simple guides or keys [sorting, grouping, comparing, classifying] to explore and identify local plants and animals.  Making a guide [sorting, grouping, comparing, classifying] to local living things.  Raising and answering questions based on their observations of animals.  What they have found out about other animals that they have researched.  **Electricity**  **Observe, Test, Record, Report, Data, Research, Conclude & Predict**  Observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit. | | **Animals, Including Humans**  **Similarities & Differences, Record, Report**  Comparing the teeth of carnivores and herbivores.  Suggesting reasons for differences.  Finding out what damages teeth and how to look after them.  Drawing and discussing their ideas about the digestive system.  Comparing them with models or images. | | **States of Matter**  **Similarities & Differences, Test, Research, Observe, Record, Report, Data, Evidence, Conclude & Predict**  Grouping and classifying a variety of different materials.  Exploring the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice-cream for a party).  Researching the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid.  Observing and recording evaporation over a period of time, such as a puddle in the playground or washing on a line.  Investigating the effect of temperature on washing drying or snowmen melting.  Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and support using ICT.  This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare temperatures.  **Sound**  **Evidence, Test, Data, Record, Report, Conclude & Predict**  Finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses.  They might make ear muffs from a variety of different materials to investigate which provides the best insulation against sound.  They could make and play their own instruments by using what they have found out about pitch and volume.  Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and support using ICT across the curriculum.  This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare sounds. | |
| Year 4 Curriculum Enrichment Opportunities | | | | | |
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| Year 4 Vocabulary | | | | | |
| **Living Things and their Habitats**  classification  food chain  producers  predators  prey  invertebrates  vertebrate | **Electricity**  Circuit  Series  Loop  Conductors  Insulators  Cells | **Animals, Including Humans**  digestive system  teeth  food chain  producers  predators  prey  gums |  | **States of Matter**  solids  liquids  gasses | **Sound**  Vibration  Pitch  Volume  Medium |