| **Science**  **Core Learning**  **Year B**  **Class 3** | | | | |
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|  | **Autumn Term** | **Spring term** | **Summer Term** | |
| **Unit of work** | Rocks  Light | Living things and their habitats - Habitat helpers  Plants - Greatly Green Growers | Animals including humans - The circle of life  Electricity | |
| **Prior Learning** | In Ks1 children have learned about different materials and classified them into groups using their properties. They know that rock is a physical material.  Children have looked plants and their need for light. They have also look at light using shadows in relation to the time of day. | In Ks1 children know about habitats and have looked at different habitats in relation to an animals’ needs. They’ve learned about bugs and microhabitats. Children have classified different types of plants and animals.  In ks1 children have learned basic parts of a plant and the needs of plants in order to live. They have grown plants from different seeds and have discovered how they grow. | In Ks1 children have looked at animals and their needs. They have grouped and classified these animals looking at different criteria. | |
| **Key Essential knowledge**  **(Nuggets)** | * What is a rock? Are all rocks the same? * What is a fossil and how are they made? * What is soil? * How can I see where I am going? * Why can I see my face in a mirror? * what is a shadow? * Why does my shadow follow me? | * What is climate change? How does it affect our animals? * How can we help to look after our planet? * What can we do to help endangered habitats? * How can I help my plant grow at its best? * Where does fruit come from? How is it formed? * How does a plant use water? | * What happens to my food? * How do all animals and humans link? * Why do all my teeth look different? * What is a food chain and are they important? * What is electricity and how does it work? * Does electricity flow through all materials? * Do all circuits look and work the same way? | |
| **Core Learning**  **Knowledge** | Rocks   1. Can I name 6 common rocks? 2. CanI understand that rocks are formed in different ways? 3. Can I identify different rock types and their uses? 4. Can I understand the process of fossil formation? 5. Can I investigate, discover and classify components of soil? 6. Assessment task   Light   1. Can I understand that recognise that we need light to see? 2. Can I understand why we can see things? 3. Can I understand and investigate reflection? 4. Can I understand and investigate how shadows are formed? 5. Can I investigate how shadows can change? 6. Assessment task | Living things   1. Can I recognise the dangers to habitats? 2. Can I recognise and understand how plants are adapted to their habitats? 3. Can I understand the term Climate change? 4. Can I understand how we can help the environment with reduce, reuse, recycle? 5. Can I recognise and understand endangered habitats? 6. Assessment task   Plants   1. Can I test what plants need to grow and thrive? 2. Can I observe growth and annotate changes in growth? 3. Can I annotate and classify fruit plants? 4. Can I investigate plant growth and how water moves within a plant? 5. Can I draw conclusions from investigations? 6. Assessment task | Animals including humans   1. Can I understand the digestive system and that nutrition relies on living things? 2. Can I understand and describe the process of digestion? 3. Can I name and describe the function of teeth? 4. Can I understand animal adaptations to nutrition and digestion? 5. Can I understand and describe the roles of the food chain? 6. Can I identify and understand the role of decomposers in the food chain?   Electricity   1. Can I explore electricity as an energy source? 2. Can I explore and use components to allow a bulb to work? 3. Can I investigate which materials allow electricity to flow through them? 4. Can I design, draw and create a functioning circuit? 5. Can I create a circuit to include a switch? 6. Assessment task | |
| **Core Learning**  **Skills** | * Ask relevant questions and use different types of scientific enquiries to answer them * Make systematic and careful observations * Record findings using simple scientific language, drawings and labelled diagrams * Set up simple practical enquiries and comparative and fair tests. * Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions * Use straightforward scientific evidence to answer questions or to support their findings. * Identify differences, similarities or changes related to simple scientific ideas and processes. | * Make systematic and careful observations and, where appropriate, take accurate measurements. * Gather, record, classify and present data in a variety of ways to help answer questions. * Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. * Identify differences, similarities or changes related to simple scientific ideas and processes. * Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. * Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. * Set up simple practical enquiries and comparative and fair tests. * 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. | * Asking relevant questions and using different types of scientific enquiries to answer them * Setting up simple practical enquiries, comparative and fair tests * Identifying differences, similarities or changes related to simple scientific ideas and processes. * Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions * Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and table | |
| **Vocabulary** | Rock, sandstone, limestone, chalk, granite, slate, marble, classification, observation, Petrologist, man-made rocks, brick, tile, concrete, Igneous, sedimentary, metamorphic, permeable, impermeable, acid, erosion, marble, chalk, limestone, slate, granite, sandstone, identification key, bedrock, permeable, impermeable, properties, Fossil, ichthyosaur, plesiosaur, ammonite, sediment, minerals, mould, cast, soil, micro-organisms, organic matter, particles, sand, silt, fair test, compare, sort, predict  Light, beam, darkness, illuminate, straight lines, investigate, Light source, reflector, reflect, predict, investigate, fair test, reflective materials, Reflect, mirror, reflection, image, angle, line of reflection, concave, convex, symmetrical, Transparent, translucent, opaque, shadow, screen, light source, block, Light source, shadow, measure, distance, plot, graph, data, fair test, results | Environment, habitat, ecosystem, pollution, climate change, human activity, survey, evidence, data, Habitat, ecosystem, adapted, adaptation, depend, survival, natural, manmade, changes, climate change, global warming, greenhouse gases, carbon dioxide, temperature, Waste, landfill, incinerator, reduce, reuse, recycle, plastic, habitat, environment, break down, material, Deforestation, sustainable, unsustainable, population, species, endangered, threatened, erosion,  Plants, growth, light, warmth, air, soil, water, investigate, seedlings, research, Plants, investigate, seedlings, research, height, root, stem, leaves, flowers, petals, research, root, stem, shoots, leaves, flowers, petals, buds, fruits, seeds, classify, Data logger, light level, temperature, wilting, yellowing, requirement, measure, record, | Digestion, digestive system, organ, saliva, peristalsis, oesophagus, stomach, acid, intestines, faeces, Saliva, peristalsis, oesophagus, stomach, enzymes, gastric acid, bowels, villi, colon, rectum, anus, faeces, Jaw, incisors, molars, premolars, canines, tear, grind, chew, gums, enamel, acid, bacteria, tooth decay, Herbivore, carnivore, omnivore, diet, features, adaptations, life style, survival, predator, prey, Herbivore, carnivore, omnivore, food chain, food web, producer, consumer, predator, prey, energy, Scavengers, decomposers, breakdown, recycle, plus all vocab previously taught in this block  Electricity, cell, battery, plug, mains, cable, appliance, device, connection, power, danger, safety, circuit, battery, plug, device, wire, lead, crocodile clip, bulb, bulb holder, buzzer, connection, power, cell, energy, flow, current, conductor, insulator, disconnect, disconnect, design, test, adapt, modify, | |
| **Personal Development** | Present information in front of the class  Creating and investigating using their own curiosity. | Understand and use surveys to collect data and form results and conclusions.  Understand climate change, what effects it and how can we help.  presenting scientific arguments and baking these up with evidence.  Making a clear change with reduce, reuse, recycle. | Understanding where energy is from and how it is generated, renewed and maintainable.  Understand circuits and how electricity around us is used and connected. | |
| **End of Unit Application Task** | Rock, fossil, soil quiz?  Create a film or presentation to present information about rocks, soils and fossils to the class.  Solving the case - crime scene investigation and conclusions made from evidence using light. | Habitats quiz  Create an exciting and persuasive display to encourage friends and family to help look after our Earth.  Plants quiz  create an advice pack for the Greatly Green Growers using data, graphs and notes. | Team games on learning content  Circle of life quiz.  Electricity quiz  Create an electrical model with an aesthetic component. | |