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|  | **Topic** | **National Curriculum Outcomes***(Endpoints children will achieve)* | **Substantive Knowledge** *(specific facts, e.g. herbivores feed on plants linked to: Living things and habitats; Animals including humans, Plants, materials, Rocks, Forces and magnets, evolution and inheritance, electricity, light, Earth and space.* | **Disciplinary Knowledge***(Know how to … be able to… know that…because….)**Working scientifically* | **Concepts***(discovery, change, investigation, cause and consequence)* | **Vocabulary**  | **Culture***(What is wonderful and awesome in Science? How do children feel successful and show/ promote this?What enrichment?)*  |
|  |  |  | Children will know how to/be able to: | Children will know how to/be able to: | Children will appreciate: | Children will recall and verbalise: |  |
|  | Working Scientifically | * Sc1/1.1 asking simple questions and recognising that they can be answered in different ways
* Sc1/1.2 observing closely, using simple equipment
* Sc1/1.3 performing simple tests
* Sc1/1.4 identifying and classifying
* Sc1/1.5 using their observations and ideas to suggest answers to questions
* Sc1/1.6 gathering and recording data to help in answering questions
 |  | * Know that we can use magnifying glasses to observe objects closely
* Know that objects can be identified or sorted into groups based on their observable properties
* Know that we can write down numbers and words or draw pictures to record what we find
* Know that we can test our questions to see if they are true
 | * Know that we can ask questions about the world and that when we observe the world to answer these questions, this is science
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| Year 1 | **Everyday Materials**  | •Sc1/3.1a distinguish between an object and the material from which it is made•Sc1/3.1b identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock•Sc1/3.1c describe the simple physical properties of a variety of everyday materials•Sc1/3.1d compare and group together a variety of everyday materials on the basis of their simple physical properties | Know that an object is made from/of a materialKnow that materials can be hard, soft, strong, weak, absorbent, heavy, light, solid and runny, smooth and rough; these descriptions denote the properties of a materialTo know and use the terms absorption, material and property | Know from observation how to distinguish between materials made of wood, plastic, glass, metal, water, rock |  | **absorption, matter, property,** wood, plastic, glass, metal, water, rock |  |
| **Wonderful Weather** | Sc1/4.1a observe changes across the 4 seasonsSc1/4.1b observe and describe weather associated with the seasons and how day length varies. | Know that days are longer in the summer and shorter in winterKnow that weather changes through the year, getting hotter in the summer and colder in the winter | To know and use the terms melting, orbit, reflection Know that the winter is likely to bring ice on the ground when water freezes due to the cold |  | **energy, freezing, melting, orbit, reflection,** Sun, clouds, wind, snow, ice, spring, summer, autumn, winter |  |
| **Animals Including Humans**  | Sc1/2.2a identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammalsSc1/2.2b identify and name a variety of common animals that are carnivores, herbivores and omnivoresSc1/2.2c describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)Sc1/2.2d identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. | Know the name of common animals including fish, amphibians, reptiles, birds and mammalsKnow the names of a variety of common animals that are carnivores, herbivores and omnivores.Know the names of basic parts of the human bodyKnow that eyes are associated with sight, ears with sound, nose with smell, tongue with taste and skin with touch. | Know the difference between a variety of common animals – including amphibians, reptiles, birds and mammals.Be able to sort the animals into groups according to their features  |  | **energy, growth, habitat**, fish, amphibian, reptile, bird, mammal, offspring, carnivore, herbivore, omnivore, vertebrate, skeleton, organ, senses, sight, smell, taste, touch |  |
| **Plants** | Sc1/2.1a identify and name a variety of common wild and garden plants, including deciduous and evergreen treesSc1/2.1b identify and describe the basic structure of a variety of common flowering plants, including trees | Know a rose bush, a sunflower and a dandelion by sightKnow that evergreen trees maintain their leaves throughout the year and that deciduous trees shed their leaves in autumnKnow that a flowering plant consist of roots, stem, leaves and flowers, and that a tree’s stem is called a trunk | Know how to prepare potatoes and seeds for growing and how to keep your plants healthy |  | **component, energy, habitat, growth,** deciduous, evergreen, flower, plant, tree, structure, roots, stem, leaf, trunk, flower |  |