Scargill C of E Primary School

Curriculum End Points – Knowledge Expectations – Reception to Y6

Reception End Points	KS1 - Y1 and Y2 End Points	LKS2 - Y3 and Y4 End Points	UKS2 – Y5 and Y6 End Points
ELG: The Natural World Children at the expected level of development will: • Know how to explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Know and understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	**Working Scientifically** • Know how to ask simple questions and recognise that they can be answered in different ways. • Know how to observe closely, using simple equipment. • Know how to perform simple tests. • Know how to identify and classify. • Know how to use their observations and ideas to suggest answers to questions. • Know how to gather and record data to help in answering questions. **Plants** • Know how to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. • Know how to identify and describe the basic structure of a variety of common flowering plants, including trees. • Know how to observe and describe how seeds and bulbs grow into mature plants. • Know how to find out and describe that plants need water, light and a suitable temperature to grow and stay healthy. **Animals, including humans** • Know how to identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • Know how to identify and name a variety of common animals and their	**Working Scientifically** • Know how to ask relevant questions and use different types of scientific enquiries to answer them. • Know how to set up simple practical enquiries, comparative and fair tests. • Know how to make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. • Know how to gather, record, classify and present data in a variety of ways to help in answering questions. • Know how to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. • Know how to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. • Know how to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. • Know how to identify differences, similarities or changes related to simple scientific ideas and processes. • Know how to use straightforward scientific evidence to answer questions or to support their findings.	**Working Scientifically** • Know how to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • Know how to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. • Know how to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. • Know how to use test results to make predictions to set up further comparative and fair tests. • Know how to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. • Know how to identify scientific evidence that has been used to support or refute ideas or arguments. **Living things and their habitats** • Know how to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. • Know how to describe the life process of reproduction in some plants and animals.

	diet types (carnivores, herbivores and omnivores). • Know how to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • Know how to 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 that animals, including humans, have offspring which grow into adults. • Know how to find out about and describe the basic needs of animals, including humans, for survival (water, food and air). • Know about and be able describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **Everyday materials/Uses of everyday materials** • Know how to distinguish between an object and the material from which it is made. • Know how to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. • Know how to use scientific language to describe the simple physical properties of a variety of everyday materials. • Know how to compare and group together a variety of everyday materials on the basis of their simple physical properties.	**Plants** • Know how to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. • Know 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. • Know how to investigate the way in which water is transported within plants. • Know the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. **Animals, including humans** • Know 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. • Know that humans and some other animals have skeletons and muscles for support, protection and movement. • Know and describe the simple functions of the basic parts of the digestive system in humans. • Know and identify the different types of teeth in humans and their simple functions. • Know how to construct and interpret a variety of food chains, identifying producers, predators and prey. **Rocks** • Know how to compare and group together different kinds of rocks on	• Know how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. • Know and give reasons for classifying plants and animals based on specific characteristics. **Animals, including humans** • Know how to describe the changes as humans develop to old age. • Know and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • Know the impact of diet, exercise, drugs and lifestyle on the way their bodies function. • Know and describe the ways in which nutrients and water are transported within animals, including humans. **Properties and changes of materials** • Know how to 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. • Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. • Know how to use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.

	• Know how to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. • Know how to find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. **Seasonal changes** • Know how to make observations about changes across the four seasons. • Know how to observe and describe weather associated with the seasons and explain how day length varies. **Living things and their habitats** • Know how to explore and compare the differences between things that are living, dead, and things that have never been alive. • Know how to identify that most living things live in habitats to which they are suited and be able to describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. • Know how to correctly identify and name a variety of plants and animals in their habitats, including microhabitats. • Know how to accurately describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and	the basis of their appearance and simple physical properties. • Know how to describe in simple terms how fossils are formed when things that have lived are trapped within rock. • Know that soils are made from rocks and organic matter. **Light** • Know that light is needed in order to see things and that dark is the absence of light. • Know that light is reflected from surfaces. • Know that light from the sun can be dangerous and that there are ways to protect their eyes. • Know that shadows are formed when the light from a light source is blocked by an opaque object. • Know how to find patterns in the way that the size of shadows change. **Forces and magnets** • Know how things move on different surfaces and be able to make comparisons. • Know that some forces need contact between two objects, but magnetic forces can act at a distance. • Know that magnets attract or repel each other and attract some materials and not others. • Know how to 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.	• Know how to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. • Know how to demonstrate that dissolving, mixing and changes of state are reversible changes. • Know how to 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. **Earth and space** • Know how to describe the movement of the Earth, and other planets, relative to the Sun in the solar system. • Know how to describe the movement of the Moon relative to the Earth. • Know how to describe the Sun, Earth and Moon as approximately spherical bodies. • Know how to use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. **Forces** • Know how to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • Know how to identify the effects of air resistance, water resistance and friction that act between moving surfaces.

	identify and name different sources of food.	• Know that magnets are described as having two poles. • Know how to make a prediction of whether two magnets will attract or repel each other, depending on which poles are facing. **Living things and their habitats** • Know that living things can be grouped in a variety of ways. • Know how to use classification keys to help group, identify and name a variety of living things in their local and wider environment. • Know that environments can change and that this can sometimes pose dangers to living things. **States of matter** • Know how to compare and group materials together, according to whether they are solids, liquids or gases. • Know 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). • Know the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Sound** • Know how sounds are made, associating some of them with something vibrating. • Know that vibrations from sounds travel through a medium to the ear.	• Know that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. **Evolution and inheritance** • Know that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. • Know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. • Know how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. **Light** • Know that light appears to travel in straight lines. • Know how to 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. • Know that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. • Know that light travels in straight lines and use this to explain why shadows have the same shape as the objects that cast them. **Electricity** • Know to associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.

		• Know how to find patterns between the pitch of a sound and features of the object that produced it. • Know how to find patterns between the volume of a sound and the strength of the vibrations that produced it. • Know that sounds get fainter as the distance from the sound source increases. **Electricity** • Know some common appliances that run on electricity. • Know how to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. • Know 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. • Know that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Know some common conductors and insulators, and associate metals with being good conductors.	• Know how to 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. • Know how to use recognised symbols when representing a simple circuit in a diagram.