Moor First
School: Progression of Skills in Science

EYFS

Three and Four-Year-Olds

- Talk about what they see, using a wide vocabulary.
- Explore how things work.
- Use all their senses in hands-on exploration of natural materials.
- Plant seeds and care for growing plants.
- Understand the key features of the life cycle of a plant and an animal.
- Begin to understand the need to respect and care for the natural environment and all living things.
- Explore collections of materials with similar and/or different properties.
- Talk about the differences between materials and changes they notice.
- Explore and talk about different forces they can feel.

Children in Reception

- Explore the natural world around them.
- Describe what they see, hear and feel whilst outside.
- Recognise some environments that are different to the one in which they live.
- Understand the effect of changing seasons on the natural world around them.

Early Learning Goals

- 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.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

Working Scientifically

KS1

I can ask simple questions and recognise that they can be answered in different ways.
I can carry out simple tests
I can identify and classify things.
I can use my observations and ideas to suggest answers to questions.
I can gather and record data to help to answer questions.
I can observe closely, using simple equipment.

LKS2

I can ask relevant scientific questions and use different types of scientific enquiries to answer them.
I can set up simple practical enquiries.
I can set up a fair and comparative tests.
I can make systematic and careful observations.
I can take accurate measurements using standard units.
I can use a range of equipment, including thermometers and data loggers.
I can gather, record, classify and present data in different ways to answer questions.
I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. . .
I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
I can identify differences, similarities and changes related to simple scientific ideas and processes.
I can use straightforward scientific evidence to answer questions or to support my findings.

Biology

Animals including humans

Year One

I can identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals.
I can identify and name a variety of animals that are carnivores, herbivores and omnivores.

I can describe and compare the observable features of animals from a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
I can identify, name, draw and label the basic parts of the human body.
I can link the correct part of the human body to each sense.

Year Two

I can find out about and describe the basic needs of animals and humans for survival (water, food and air).
I can describe why exercise, a balanced diet and good hygiene are important for humans.
I can notice that animals, including humans, have offspring which grow into adults

Year Three

I can identify 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.
I can identify that humans and some other animals have skeletons and muscles for support, protection and movement.

Year Four

I can describe the simple functions of the basic parts of the human digestive system.
I can identify and describe the different types of teeth in humans and their simple functions.
I can interpret food chains to identify producers, predators and prey.
I can construct food chains to identify producers, predators and prey.

Living things and their habitats

Year Two

I can identify, explore and compare the differences between things that are alive, dead and have never lived.
I can identify a variety of plants and animals in their habitats, including microhabitats.
I can identify that most living things live in habitats that they are suited to.
I can describe how different habitats provide for the basic needs of different kinds of plants and animals, and how they depend on each other.
I can describe how animals get their food from other animals/ plants and identify and name different sources of food.
I can use simple food chains to describe these relationships.

Year Four

I recognise that living things can be grouped in a variety of ways.
I can explore and use classification keys to group, identify and name a variety of living things in the local and wider environment.
I recognise that environments can change and that this can have an impact on and sometimes pose dangers to living things.

Plants

Year One

I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
I can identify and describe the basic structure of a variety of common flowering plants, including trees.

Year Two

I can describe the basic needs of plants for survival and the impact of changing these (water, light and suitable temperature).
I can describe the main changes as seeds and bulbs grow into mature plants.

Year Three

I can identify and describe the function of different parts of flowering plants and trees (roots, stem/trunk, leaves and flowers).
I can 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.
I can investigate the way in which water is transported within plants.
I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Physics

Seasonal Changes

Year One

I can observe and describe changes across the four seasons.
I can observe and describe the weather associated with the seasons and how day length varies.

Light

Year Three

I can describe what dark is (the absence of light).
I can explain that light is needed in order to see.
I can explain that light is reflected from a surface.
I can recognise that shadows are formed when the light from a light source is blocked by an opaque object.
I can find patterns in the way that the size of shadows change.
I can recognise that light from the sun can be dangerous and describe how to protect our eyes.

Forces and Magnets

Year Three

I can explore, describe and compare how objects move on different surfaces.
I can notice and describe that some forces need contact between two objects, but magnetic forces can act at a distance.
I can observe and describe how magnets attract or repel each other and attract some materials and not others.
I can describe how magnets have two poles.
I can predict whether magnets will attract or repel, depending on which poles are facing.
I can 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.

Sound

Year Four

I can identify how sound is made, associating some of them with something vibrating.
I can recognise that vibrations from sounds travel through a medium to the ear.
I can find patterns between the pitch of a sound and the features of the object that produced it.
I can find patterns between the volume of a sound and the strength of the vibrations that produced it.
I can recognise that sound gets fainter as the distance from the sound source increases.

Electricity

Year Four

I can identify common appliances that run on electricity.
I can construct a simple series electrical circuit.
I can identify and name the components in a series circuit, including cells, wires, bulbs, switches and buzzers.
I can predict and test whether a lamp will light within a circuit, based on whether or not the lamp is part of the complete loop with a battery.
I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.

I can recognise some common conductors and insulators, giving examples of each, and associate metals with being good conductors.

Chemistry

Materials

Year One

I can distinguish between an object and the material it is made from.
I can describe the simple physical properties of a variety of everyday materials.
I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.
I can compare and group together a variety of everyday materials on the basis of their simple physical properties.

Year Two

I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
I can explain how shapes can be changed by squashing, bending, twisting and stretching.

Rocks

Year Three

I can compare and group different kinds of rocks based on their appearance and simple physical properties,
I can describe in simple terms how fossils are formed when things that have lived are trapped within rocks.
I can recognise that soils are made from rocks and organic matter.

States of Matter

Year Four

I can compare and group materials based on their state of matter (solid, liquid, gas).
I can observe and describe how some materials change state when they are heated or cooled.
I can measure or research the temperature at which materials change state in degrees Celsius (°C).
I can explain the water cycle and the part played by evaporation and condensation in this process.
I can associate the rate of evaporation with temperature.