

fScience End Points

Nursery:

- Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties.
- Talk about what they see, using a wide vocabulary.
- 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 and talk about different forces they can feel.
- Talk about the differences between materials and changes they notice

Reception

children as above (these statements are best fit at the end of the Reception year):

- Explore the natural world around them. Describe the school area, garden, trees, yard.
- Recognise some environments that are different from the one in which they live. Look at the local farm.
- Understand the effect of changing seasons on the natural world around them. Know the four season names.

Year 1

Plants

Plants grow from seeds/bulbs and have different parts.
Plants need light and water to grow and survive.
Trees are made from four basic parts. (root system, trunk, branches and foliage)
Trees can be deciduous and evergreen.
We can eat a variety of plants.

Animals including Humans

There are many different animals with different characteristics.
Fish, amphibians, reptiles, birds and mammals. (Local animals-pig, sheep, horse, cow, goat, fox, deer)
Some animals are carnivores, some herbivores and some are omnivores.
The body parts associated with senses can be labelled on a body map

Seasonal Changes

There are 4 seasons.

There are lots of different types of weather: Rain, Sun, Cloud, Wind, Snow, etc
Days are longer and hotter in the summer.
Days are shorter and colder in the winter.

Materials

There are many different materials that have different properties.
Materials that have similar properties are grouped into metals, rocks, fabrics, wood, plastic and ceramics (including glass).
The properties of a material determine whether they are suitable for a purpose.

Year 2

Plants

Plants need light, water and warmth to grow and survive.
Describe how seeds and bulbs grow into mature plants.

Animals including Humans

Animals and humans have babies that grow into adults.
Animals and humans air, water, shelter and food to survive.
Healthy diet and exercise is important.

Living Things and Their Habitats

Some things are living, dead and some have never lived.
Habitats differ based on a living thing needs.
Some things are living, some were once living but now dead and some things never lived.
Animals find their food in their habitats in different ways.

Materials

Materials have different properties and suitability.
Some materials can be changed by squashing, bending, twisting and stretching.
Some objects move differently on different material surfaces.

Year 3

Plants

Plants are producers, they make their own food.
Their leaves absorb sunlight and carbon dioxide.
Plants have roots, which provide support and draw water from the soil.
Flowering plants have specific adaptations which help it to carry out pollination, fertilisation and seed production.
Seed dispersal improves a plants chances of successful reproduction.
Seeds/bulbs require the right conditions to germinate and grow.

Animals Including Humans

Different food groups provide different things for our bodies.
Animals and humans cannot make their own food; they get nutrition from what they eat.
Humans and some other animals have skeletons and muscles for support, protection and movement.

Forces and Magnets

Surfaces affect the way things move on them.
Magnetic forces can act at a distance.

Magnets attract and repel each other and some attract and repel different materials.
Some forces need contact between 2 objects.
Magnets have two poles.
Identify some magnetic materials.

Light

Light is needed to see things.
Light is reflected from surfaces.
Light from the sun can be dangerous.
Shadows are formed when the light from the sun is blocked by a solid object.
Shadows change size and shape.

Rocks & Soils

There are different types of rock - igneous, metamorphic and sedimentary.
There are different types of soil - sandy, silt, clay and loamy.
What fossils are.
How fossils are formed.
Fossils are found in sedimentary rock.
Fossils provide evidence.

Year 4

Animals Including Humans

The functions of the digestive system.
There are 5 main types of teeth that have different functions.
Food chains consist of producers, predators and prey.

All Living Things

Living things can be divided into groups based upon their characteristics.
Classification keys can be used to group and organise living things.
Some environmental changes pose a danger to living things.

States of Matter

Identify solids, liquids and gases.
Materials change state.
Evaporation and condensation play a part in the water cycle.

Sound

Identify how sounds are made. (vibration)
Vibrations from sounds travel through a medium to the ear.
The pitch of a sound and features of the object that produced it.
The volume of a sound and the strength of the vibrations that produced it.
Sounds get fainter as the distance from the sound source increases.

Electricity

Common appliances around the home run on electricity.
What a series circuit is and the components that make it.
Troubleshoot circuits when a bulb is not lit.
Make and use a simple switch.
A conductor allows electricity to pass.
An insulator does not pass electricity.

Electrical safety.

Year 5

Animals Including Humans

Our bodies change as we grow older.

Puberty is something we all go through, a process which prepares our bodies for being adults, and reproduction.

Hormones control these changes; which can be physical and/or emotional.

Some organisms reproduce sexually where offspring inherit information from both parents.

Some organisms reproduce asexually by making a copy of a single parent.

Forces

Gravity is a force where unsupported objects fall to the floor.

Air resistance is a force.

Water resistance is a force.

Friction is a force.

Levers, pulleys and gears allow a smaller force to have a greater effect.

Earth & Space

How planets, move in relation to the sun.

How the moon and Earth move.

The Earth and Moon are spherical bodies.

Day and night occur because of the Earth's rotation.

Properties and Changes of Materials

The temperature effects the rate of evaporation in the water cycle.

Some materials dissolve and some can be recovered from a solution.

Some mixtures can be separated.

All matter (including gas) has mass.

Sometimes mixed substances react to make a new substance. These changes are usually irreversible. Heating can sometimes cause materials to change permanently. When this happens, a new substance is made. These changes are not reversible.

Indicators that something new has been made are: the properties of the material are different (colour, state, texture, hardness, smell, temperature)

If it is not possible to get the material back easily. it is likely that it is not there anymore and something new has been made (irreversible change)

Year 6

Animals Including Humans

The main parts of the circulatory system and functions.

A balanced diet is needed for a healthy body and mind.

How nutrients and water are transported within animals and humans.

Evolution

Life cycles have evolved to help organisms survive to adulthood.

Over time the characteristics that are most suited to the environment become increasingly common. Fossils can be used in different ways to find out about the past.

Similarities can be found in offspring of humans and animals.

Living Things & Their Habitats

Classify living things into broad groups according to observable characteristics and based on similarities and differences.

Give reasons for classifying plants and animals based on specific characteristics.

Electricity

Several things affect the brightness of a bulb, volume of a buzzer and speed of a motor.

Symbols for components in a circuit.

Light

Light appears to travel in straight lines.

Objects are seen because they give out or reflect light into the eye.

Light travels from light sources to our eyes or from light sources to objects and then to our eyes.

Light travels in straight lines to explain why shadows have the same shape as the objects that cast them.