



Science Curriculum Progression Map

"Learning is not the filling of a pail, but the lighting of a fire" W.B. Yeats.

The skills of working scientifically are continuously developed and practised through all topics.

Key Stage 1 Skills

- Asking simple questions (for example, 'What would happen if I didn't give a plant water?')
- Observing closely, using simple equipment such as a magnifying glass.
- Identifying and classifying.
- Using their observations and ideas to suggest answers to questions.
- Gathering and recording data to help in answering questions



Year 1 Knowledge

- Plants:** Identifying and naming plants and looking at their basic structure.
- Animals including humans:** Identifying and naming a range of animals and understanding how and why they are grouped (e.g. mammals, birds, amphibians etc.).
- Everyday materials:** Looking at their properties.
- Seasonal changes:** Observing changes across the four seasons and looking at different types of weather.

Year 2 Knowledge

- Living things and their habitats:** Including dependence within habitats and micro-habitats.
- Plants:** Observing how seeds and bulbs grow into plants and what plants need to stay healthy.
- Animals including humans:** Focusing on reproduction, nutrition and exercise.
- Everyday materials:** Comparing their uses and looking at how they can be changed by exerting force.

Year 3 Forces and magnets

- Understanding magnetic attraction and repulsion.
- Determining which materials are magnetic.
- Understanding that magnets have two poles.

Year 3 Light

- Understanding that dark is the absence of light.
- Investigating light reflection from surfaces.
- Looking at how shadows are formed and how they change.

Year 3 Animals including humans

- Understanding that animals need nutrition to survive.
- Identifying the function of skeletons and muscles.

Year 3 Plants

- Identifying the functions of parts of plants.
- Understanding what plants need to grow.
- Investigating transportation of water within plants.
- Exploring the life cycle of plants.

Year 3 and 4 Skills

- Learn what a 'fair test' is.
- Take measurements using a range of equipment.
- Gather and record data.
- Report their findings orally and in writing.



End of KS2

Children will leave us as confident and inquisitive young individuals, ready to care for and explore the natural world around them.

Year 6 Skills

- Understand what variables are and how to control them.
- Take measurements from a range of equipment, understanding the need for repeated measures to increase accuracy.
- Gather and record data using labels, classification keys, tables, scatter graphs, bar and line graphs.
- Use test results to make further predictions to set up further comparative and fair tests.
- Make conclusions on the test carried out, orally and in writing.

Year 6 Evolution and Inheritance

- Learn how fossils provide information about living things that inhabited the Earth in the past.
- Recognise that living things produce offspring that are not identical to their parents.
- Identify how plants and animals are adapted to suit their environment and that adaptation may lead to evolution.

Year 6 Light

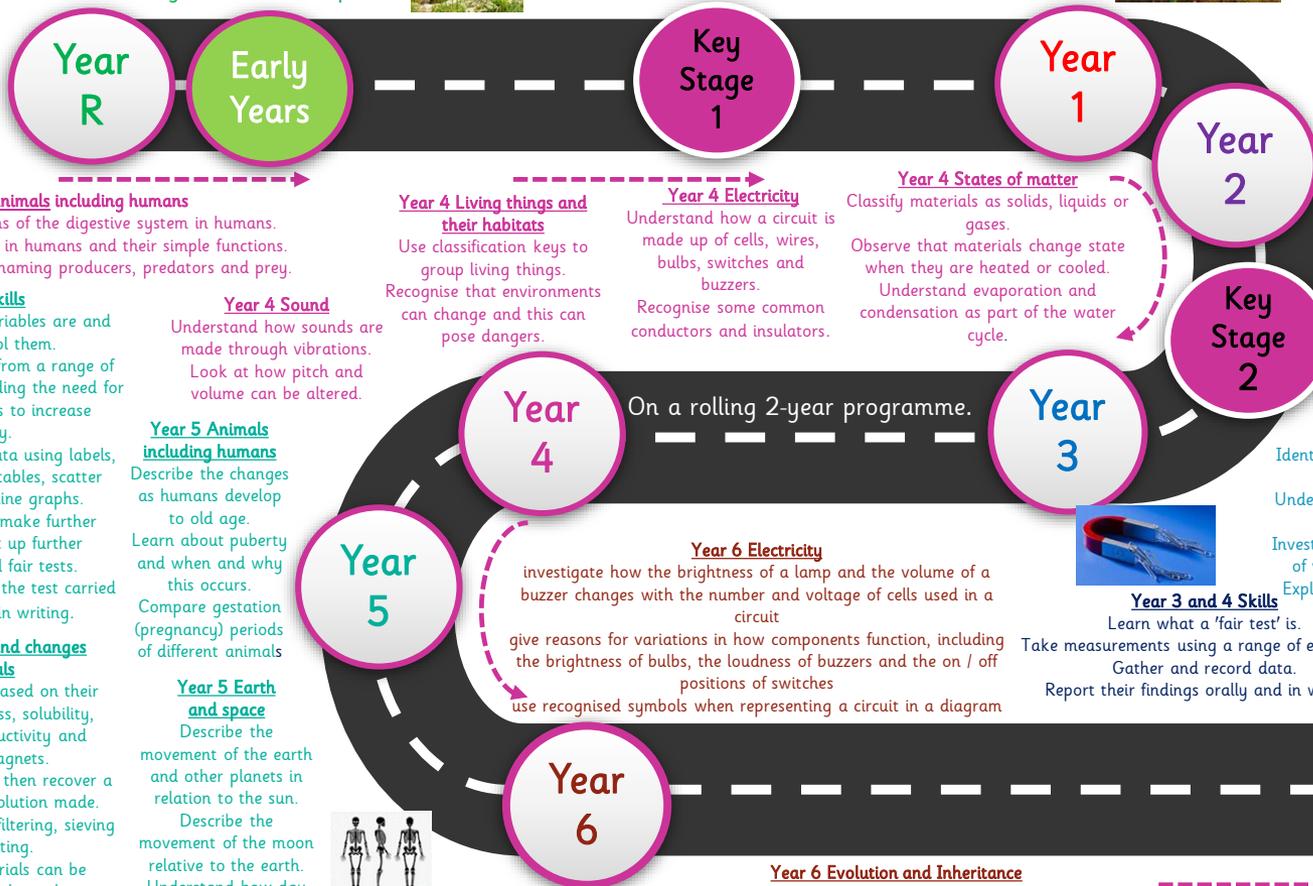
- Understand that light appears to travel in straight lines and is necessary for us to see objects.
- Understand how shadows are formed.

Year 6 Animals including humans

- Identify and name parts and functions of the human circulatory system.
- Recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions.
- Describe how nutrients and water are transported within animals.



On a rolling 2-year programme.



Year R

Early Years

Key Stage 1

Year 1

Year 2

Key Stage 2

Year 3

Year 4

Year 5

Year 6

Year 4 Animals including humans

- Describe the functions of the digestive system in humans.
- Identify types of teeth in humans and their simple functions.
- Interpret food chains: naming producers, predators and prey.

Year 5 Skills

- Understand what variables are and how to control them.
- Take measurements from a range of equipment, understanding the need for repeated measures to increase accuracy.

- Gather and record data using labels, classification keys, tables, scatter graphs, bar and line graphs.
- Use test results to make further predictions to set up further comparative and fair tests.
- Make conclusions on the test carried out, orally and in writing.

Year 5 Properties and changes of materials

- Compare materials based on their properties of hardness, solubility, transparency, conductivity and response to magnets.
- Dissolve materials and then recover a substance from the solution made.
- Separate materials by filtering, sieving and evaporating.
- Look at ways materials can be changed and whether these changes are reversible or not.

Year 5 Forces

- Investigate the forces of gravity, air resistance, water resistance and friction.
- Understand that levers, pulleys and gears allow a smaller force to have a greater effect.

Year 4 Sound

- Understand how sounds are made through vibrations.
- Look at how pitch and volume can be altered.

Year 5 Animals including humans

- Describe the changes as humans develop to old age.
- Learn about puberty and when and why this occurs.
- Compare gestation (pregnancy) periods of different animals

Year 5 Earth and space

- Describe the movement of the earth and other planets in relation to the sun.
- Describe the movement of the moon relative to the earth.
- Understand how day and night are caused by the earth's rotation.

Year 6 Living things and their habitats

- Describe how living things are classified into groups including micro-organisms, plants and animals.
- Give reasons for classifying plants and animals.

Year 4 Living things and their habitats

- Use classification keys to group living things.
- Recognise that environments can change and this can pose dangers.

Year 4 Electricity

- Understand how a circuit is made up of cells, wires, bulbs, switches and buzzers.
- Recognise some common conductors and insulators.

Year 4 States of matter

- Classify materials as solids, liquids or gases.
- Observe that materials change state when they are heated or cooled.
- Understand evaporation and condensation as part of the water cycle.

Year 6 Electricity

- investigate how the brightness of a lamp and the volume of a buzzer changes with the number and voltage of cells used in a circuit
- give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on / off positions of switches
- use recognised symbols when representing a circuit in a diagram

