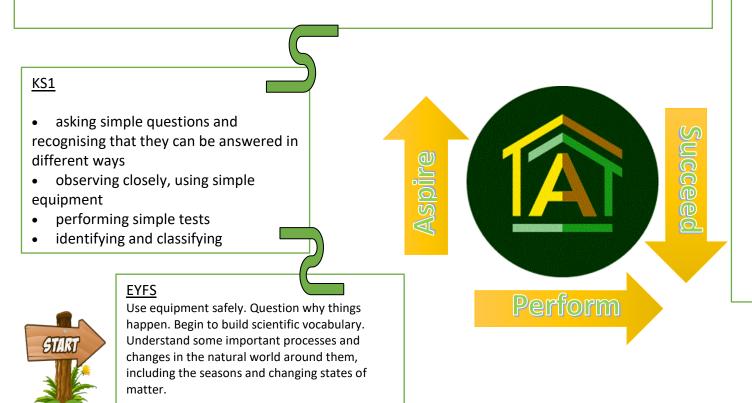
Science at Alexandra Primary School: Working Scientifically

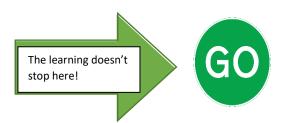
<u>LKS2:</u>

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

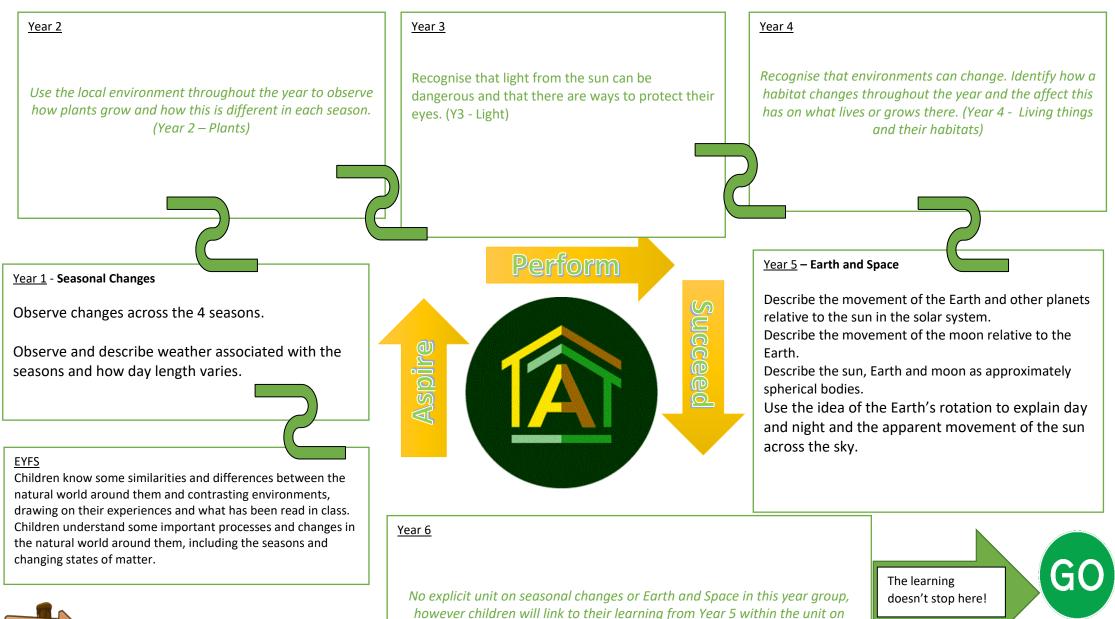


<u>UKS2:</u>

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments

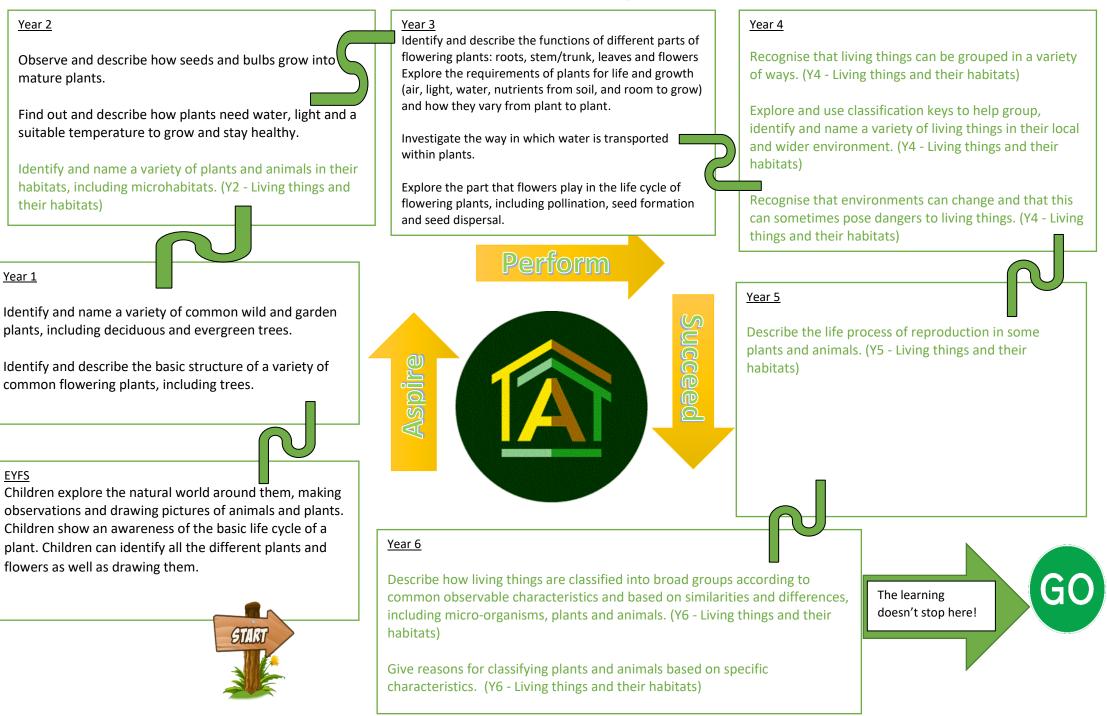


Science at Alexandra Primary School: Seasonal changes – Earth & Space



light. Use the idea that light travels in straight lines. Investigate the relationship between light sources, objects and shadows (Year 6 – Light)

Science at Alexandra Primary School: Plants



Science at Alexandra Primary School: Materials

Year 2 – Uses of everyday materials

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.

Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Year 1- Everyday Materials

Distinguish between an object and the material from which it is made.

Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Describe the simple physical properties of a variety of everyday materials.

Compare and group together a variety of everyday materials on the basis of their simple physical properties.

<u>EYFS</u>

Children understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Explore the natural world around them and make observations.



<u>Year 3</u> – Rocks

Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.

Describe in simple terms how fossils are formed when things that have lived are trapped within rock.

Recognise that soils are made from rocks and organic matter.

Perform



<u>Year 6</u>

Materials are not covered explicitly within a Science unit in this year group. Children will build on Y3 Rocks unit and prior knowledge of fossils when learning about evolution and how living things have changed over time.

Year 4 - States of Matter

Compare and group materials together, according to whether they are solids, liquids or gases.

Observe 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).

Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Year 5 – Properties and changes of materials

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.

Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.

Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes

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.

> The learning doesn't stop here!

Science at Alexandra Primary School: Living things and their habitats

characteristics.



Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. Describe how animals obtain their food from plants and

other animals, using the idea of a simple food chain, and identify and name different sources of food.

<u>Year 1</u>

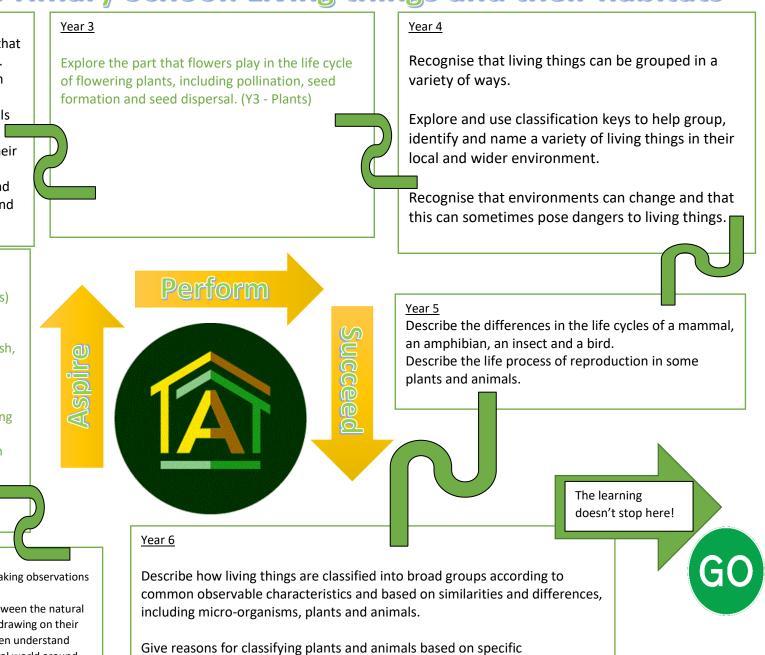
Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans)

Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals including humans)

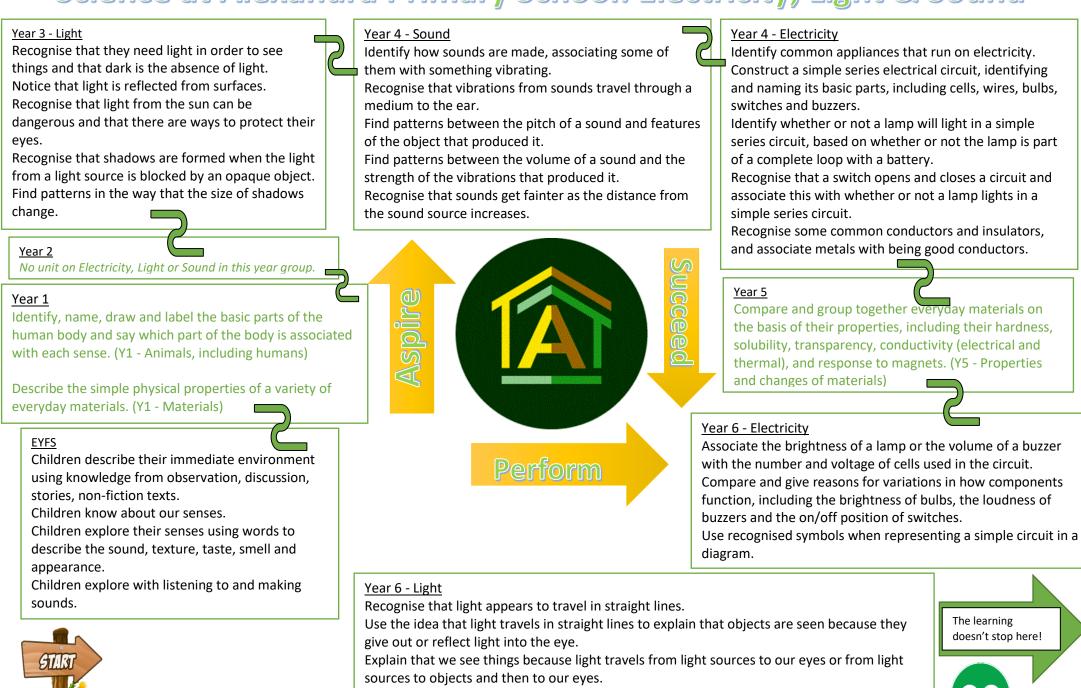
Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans) Observe changes across the four seasons. (Y1 - Seasonal change)

EYFS

Children explore the natural world around them, making observations and drawing pictures of animals and plants. Children 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. Children understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.



Science at Alexandra Primary School: Electricity, Light & Sound



Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

Science at Alexandra Primary School: Animals, including Humans (incl. Year 6 Evolution)

Year 2 Year 3 Year 4 Identify that animals, including humans, need the Notice that animals, including humans, have offspring Describe the simple functions of the basic parts of right types and amount of nutrition, and that they which grow into adults. the digestive system in humans. cannot make their own food; they get nutrition from what they eat. Find out about and describe the basic needs of animals. Identify the different types of teeth in humans and including humans, for survival (water, food and air). their simple functions. Identify that humans and some other animals have skeletons and muscles for support, protection and Describe the importance for humans of exercise, eating Construct and interpret a variety of food chains, the right amounts of different types of food, and hygiene. movement. identifying producers, predators and prey. Perform Year 1 Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Year 5 DeedDom Identify and name a variety of common animals that are Splife carnivores, herbivores and omnivores. Describe the changes as humans develop to Describe and compare the structure of a variety of old age. common animals (fish, amphibians, reptiles, birds and mammals including pets). Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. GUIS Year 6 Identify and name the main parts of the human circulatory system, and describe the functions of the heart. blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Children can name and describe some animals. Describe the ways in which nutrients and water are transported within animals, including humans. They can make comparisons between animals Year 6 – Evolution and Inheritance and their habitats. Recognise that living things have changed over time and that fossils provide Children explore the natural world around The learning information about living things that inhabited the Earth millions of years ago. doesn't stop here! them, making observations and drawing Recognise that living things produce offspring of the same kind, but normally pictures of animals. offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Science at Alexandra Primary School: Forces & Magnets (Y5 Forces)

