

Big Ideas



Biology:

The cellular basis of life - Heredity and life cycles - Variation, adaptation and evolution -
Organisms and their environments - Health and disease

The names of some common garden plants

People may grow flowering plants which are beautiful to look at or beans and seeds to grow plants for food.

When plants are grown for food, this may be called a herb garden or vegetable patch.

A wild plant will grow by itself;

It does not need to be cared for.

If it grows somewhere unwanted, it may be a weed.

Interweaving: Reception taught most of the EYFS Understanding the World strand with the exception of planting seeds. We will address this by introducing talking about seeds and growth earlier than planned as part of our observations on season change in Term 1 and ongoing.

Deciduous and evergreen trees ;

Deciduous trees lose their leaves in the autumn every year. Their leaves are generally broad, flat and have veins running through them.

Evergreen trees have green leaves all year round. Their leaves are generally thick, waxy and narrow like needles.

Animals that only eat meat (other animals) are called carnivores (examples include lions and eagles).

Animals that only eat plants are called herbivores (examples include cows and giraffes)

Animals that eat plants and meat are called omnivores (examples include humans and squirrels)

There are many different animals with different characteristics.

Animals have senses to help individuals survive; when animals sense things they are able to respond.

Animals need food to survive but different animals have different diets.

Animals need a variety of food to help them grow, repair their bodies, be active and stay healthy.

Interweaving: The children were introduced to sorting and classifying in YR, but did not get the opportunities they normally would to practise this skill, so we will be using the language of same, different, similar etc. as part of different curricula subjects as well as giving children more opportunities to sort and classify based on different criteria.

Vocabulary

eyebrows - protect our eyes

hair - grows on our head

Skull - bone that protects our brain

eyes - these help us see

ears - these help us hear

mouth - we use our mouth to eat and talk.

Inside our mouths are tongues and teeth

tongue - help us taste

shoulders - help our arms to lift up

hands - help us grab things

knees - help us bend our legs

nose - helps us smell

neck - connects the head to the rest of the body

elbows - these help our arms to bend

feet - these help us stay balanced and upright.

absorbent - material that soaks up liquid easily

bendy - an object that bends easily into a curved shape

brick - rectangular blocks of baked clay used for building walls, which are usually red or brown

dull - a colour or light that is not bright

elastic - a rubber material that stretches when you pull it and returns to its original size and shape when you let it go

fabrics - cloth or other material produced by weaving together cotton, wool or other threads.

Foil - sheets of metal as thin as paper

glass - a hard transparent material

man-made - things are created by people

metal - a hard substance such as iron, steel, gold, or lead

natural - things that exist in nature and are not made by people

opaque - if an object or substance is opaque, you cannot see through it

plastic - a material which is light in weight and does not break easily

rock - the hard substance which the Earth is made of

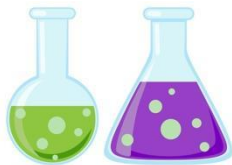
rough - uneven and not smooth

shiny - things are bright and reflect light

smooth - no roughness, lumps, or holes

backbone - the column of small linked bones down the middle of your back

carnivores - an animal that eats meat



Chemistry:

Substances and Properties - Particles and Structure - Chemical reactions - Earth's atmosphere - Dynamic earth

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

Which materials are some objects made from?



What words can I use to describe materials?



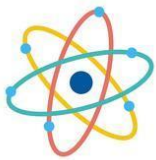
Which materials are natural and which are manmade?

- cold-blooded** - a body temperature that changes according to the surrounding temperature
- environment** - all the circumstances, people, things, and events around them that influence their life
- farm** - an area of land used to produce crops or to breed animals and livestock
- gills** - the organs on the sides of fish and other water creatures through which they breathe
- herbivore** - an animal that only eats plants
- invertebrate** - a creature that does not have a spine, for example an insect, a worm, or an octopus
- omnivore** - person or animal eats all kinds of food, including both meat and plants
- pet** - a tame animal kept in a household
- temperature** - a measure of how hot or cold something is
- vertebrate** - a creature which has a backbone
- warm-blooded** - a fairly high body temperature which does not change much and is not affected by the surrounding temperature
- wild** - animals or plants that live or grow in natural surroundings and are not looked after by people
- branches** - parts that grow out from the tree trunk and have leaves, flowers, or fruit growing on them
- bulb** - a root shaped like an onion that grows into a flower or plant
- deciduous** - a tree that loses its leaves in the autumn every year
- evergreen** - a tree or bush which has green leaves all the year round
- flowering** - trees or plants which produce flowers
- herb** - a plant whose leaves are used in cooking to add flavour to food, or as a medicine
- leaf / leaves** - the parts of a tree or plant that are flat, thin, and usually green
- petal** - thin coloured or white parts which form part of the flower
- roots** - the parts of a plant that grow under the ground
- seed** - the small, hard part from which a new plant grows
- stem** - the thin, upright part of a plant on which the flowers and leaves grow
- vegetation** - plants, trees and flowers

Natural Materials



Man-made Materials



Physics:

Matter - Forces and motion - **Sound, light and Waves** - Electricity and Magnetism - Earth in space

We have five senses.

- 1) We smell using our nose.
- 2) We taste using our tongue.
- 3) We touch using parts of our body, like our hands.
- 4) We see using our eyes.
- 5) We hear using our ears.

weed - a wild plant that grows in garden and prevents the plants that you want from growing properly
wild - animals or plants that live or grow in natural surroundings and are not looked after by people

Recall Quiz



What are the properties of the material used to make a raincoat? What material could you use?

What materials should you not use to make a raincoat and why?

What are the similarities and differences between wood and stone?

Why is it important that we can change the shape of some solid objects?

What is a habitat? Can you name some different habitats?

What plants and animals might you find in the rainforest? Why?

What animals would you not find in the rainforest? Why?

What food might these animals eat? What might eat them?

Define 'deciduous' and 'evergreen'.

Big Ideas in Science - What I need to know by the end of Y1 (Y2 revision)

The different parts of the **body**.

eyebrows - these protect our eyes

eyes - these help us see

ears - these help us hear

nose - helps us smell

mouth - we use our mouth to eat and talk. Inside our mouths are **tongues** which help us taste and teeth

neck - connects the **head** to the rest of the **body**

shoulders - these help our **arms** to lift up

elbows - these help our **arms** to bend

hands - these help us grab things and write

feet - these help us stay balanced and upright.

knees - these help us bend our **legs**

hair - this grows on our **head** and helps to protect our **skull**. The skull is the bone that protects our **brain**

Can you give me an example of each?

What is the basic structure of a plant?

What conditions are needed for plants to grow?

What are the different sources of light?

How do we see?

What is the difference in sound between a fire bell and cat purr?

How do we hear?

Teaching resources:

Animals including humans:

<https://www.stem.org.uk/resources/community/collection/12726/year-1-animals-including-humans>
<https://pstt.org.uk/resources/curriculum-materials/assessment> (click 'Focussed Assessment Plans)
<https://explorify.wellcome.ac.uk/en/activities/zoom-in-zoom-out/prints>

Looking at animals inc. vertebrates:

<https://explorify.wellcome.ac.uk/en/activities/odd-one-out/sleepy-heads>
<https://pstt.org.uk/resources/curriculum-materials/assessment> (click 'Focussed Assessment Plans)
<https://www.stem.org.uk/resources/community/collection/13195/year-1-seasonal-changes>

Everyday materials:

<https://pstt.org.uk/resources/curriculum-materials/assessment> (click 'Focussed Assessment Plans)
<https://explorify.wellcome.ac.uk/en/activities/zoom-in-zoom-out/cosy-comfort>
<https://www.stem.org.uk/resources/community/collection/12725/year-1-everyday-materials>

Plant detectives:

<https://pstt.org.uk/resources/curriculum-materials/assessment> (click 'Focussed Assessment Plans)
<https://www.stem.org.uk/resources/community/collection/12534/year-1-plants>
<https://explorify.wellcome.ac.uk/en/activities/whats-going-on/nothing-lives-here-or-does-it>