

Y3

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth (air, light, water, nutrients from soil & room to grow) and how they vary from plant to plant
 - **The plant makes its food from water and carbon dioxide, using sunlight as energy, in the green parts of plants (mainly leaves)**
 - Plants make their own food in their leaves to provide them with energy, grow, repair, and reproduce
 - Leaves absorb sunlight and carbon dioxide through leaves
 - Plants have roots to provide support and to draw moisture from the soil, through stems to take water to the rest of the plant
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
 - Flowering plants have evolved specific parts to carry out pollination, fertilisation and seed growth.
 - Seed dispersal improves chances of enough seeds germinating and growing to mature
 - Seeds and bulbs need the right conditions to germinate. They contain a food store for the first stages of growth (i.e. until the plant is able to produce its own food)
- 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
 - Different animals are adapted to eat different foods
 - Food is broken down by the teeth and further in the stomach and intestines where nutrients go into the blood. The blood takes nutrients around the body
 - Nutrients produced by plants move to primary consumers then to secondary consumers through food chains
- identify that humans and some other animals have skeletons and muscles for support, protection and movement.
 - Many animals have skeletons to support their bodies and protect vital organs
 - Muscles are connected to bones and move them when they contract
 - Movable joints connect bones
- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
 - **Materials can be divided into solids, liquids and gases**
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognize that soils are made from rocks and organic matter.
- recognize that they need light in order to see things and that dark is the absence of light
 - **Light comes from a source**
 - **There must be light for us to see. Without light it is dark**
- notice that light is reflected from surfaces
 - **We need light to see things even shiny things**
 - **Beams of light bounce off some materials (reflection).**
 - **Shiny materials reflect light beams better than non-shiny materials**
- recognize that light from the sun can be dangerous and that there are ways to protect their eyes
- recognize that shadows are formed when the light from a light source is blocked by a solid object
 - **Transparent materials let light through them and opaque materials don't let light through**
- find patterns in the way that the size of shadows change.
- compare how things move on different surfaces

- notice that some forces need contact between two objects, but magnetic forces can act at a distance
 - Magnets exert **non-contact** forces, which work through some materials
- observe how magnets attract or repel each other and attract some materials and not others
 - Magnets exert attractive and repulsive forces on each other
 - Magnets exert attractive forces on some materials
- 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
 - Magnetic forces are affected by:
 - Magnet strength
 - Object mass
 - Distance from object
 - Object material
- describe magnets as having two poles
- predict whether two magnets will attract or repel each other, depending on which poles are facing.