

# Science Knowledge Organiser

## Year 3

### Autumn (ii)

#### Are animals consumers or producers?

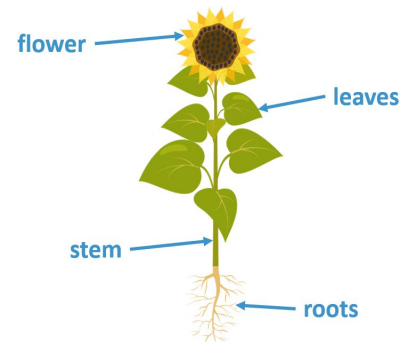
##### Portable Knowledge -

Plants are producers.

Animals are consumers.

Humans and some other animals have skeletons and muscles for support, movement and protection.

To know and describe the functions of different parts of flowering plants: roots, stem / trunk, leaves and flowers.



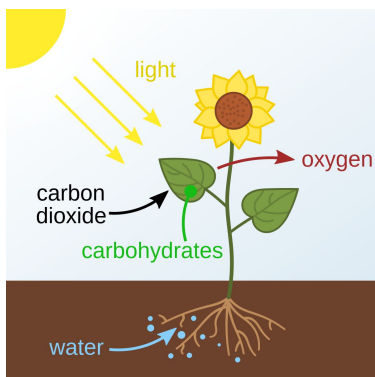
Flowers stand out because they usually have bright, colourful petals and often smell wonderful. This is to attract pollinators which help the plant produce seeds.

The stem supports the plant and keeps it standing upright. It must be strong to hold the weight of the flower and also carries water and nutrients from the roots to the leaves and flower.

The leaves harness the power of the sun to help the plant produce food.

The roots act as an anchor for the plant; they help to hold the plants to the ground. The roots also absorb water and nutrients from the soil.

To know that plants produce their own food using energy from the sun (producers).



The leaves are where plants make their food. Plants use light from the Sun, a gas called carbon dioxide from the air, and water from the soil to make their own food.

This process is called Photosynthesis.

Oxygen is produced during this process and is released into the air through the leaves.

Most leaves are thin and flat. This is so they get the best chance of catching the sunlight. The more sunlight, the more food the plant can produce.

To classify living / non- living things.

##### Living

Living things are things that are **alive** and have all **life processes**.



##### Non-Living

Non-living things are not alive. They can be things that were once living or part of a living thing, or they can be things that have never been alive.



##### Once Living

Once living things use to be alive and carried out all the **life processes** but now are not alive anymore.



##### Products of Living Things

Products of living things are things that come from a living thing or can be made from once living things.



To know that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food.

Eatwell Guide

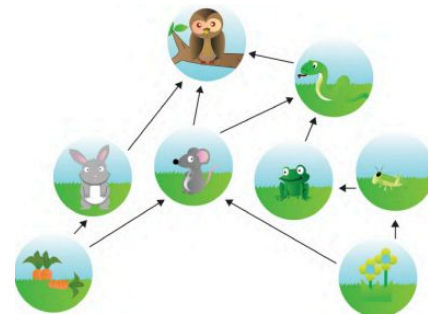


- Living things need food to grow and to be strong and healthy.
- Plants can make their own food, but animals cannot.
- To stay healthy, humans need to exercise, eat a healthy diet and be hygienic.
- Animals, including humans, need food, water and air to stay alive.

To know that animals get nutrition from what they eat (consumers).

Every living thing needs food. Food provides energy for both plants and animals. That energy is passed from one living thing to another when living things are eaten. We can show how the energy is transferred using a food chain. This is a diagram that shows where animals and plants get their energy from.

Animals are called consumers because they cannot make food themselves. They have to eat (consume) food to get energy. Herbivores are the first consumers in the food chain, and so they are known as primary consumers.



To know that humans and some other animals have skeletons and muscles for support, protection and movement.

Bones do all sorts of important jobs. They hold your body up and protect the organs inside you. Without bones, we would not be able to walk. We would be a shapeless blob — like a water balloon! Your bones can also store minerals until the rest of the body needs them. Bones can even make blood cells. They really do work hard.

- The skull — a thick casing to protect your brain.
- The rib cage — curved bones that protect your heart and lungs.
- The spine or backbone — holds you upright.

Your arms and legs have long bones inside them. The upper leg bone is called the femur. It is the longest and hardest bone in your body.



### Core vocabulary

**Producers** - is the name given to a living thing that produces its own food, rather than consuming another living thing.

**Consumers** - is a living thing that consumes (eats) another living thing for food, in order to get energy.

**Vertebrates** - is a living thing with a backbone.

**Invertebrates** - is a living thing that has no backbone.