Aim

- To explore ideas about living and non-living things and to examine observable features and categorise living and non-living specimens.

Success Criteria

- I can explain what living and non-living means.
- I know the main features of living and non-living specimens.
- I can discuss how to categorise specimens.

Living Organisms & Non-Living Materials

Living and non-living things are all around us. Can you tell the difference between living and non-living?

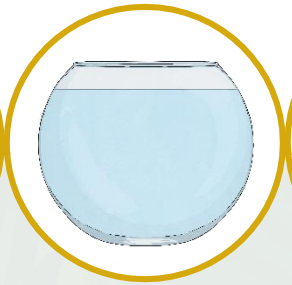
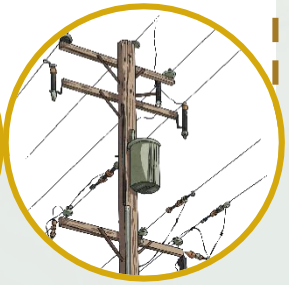
Living Things

Include things like bacteria, plants and animals.



Non-Living Things

Could be soil, water, physical space and energy.

Living Things

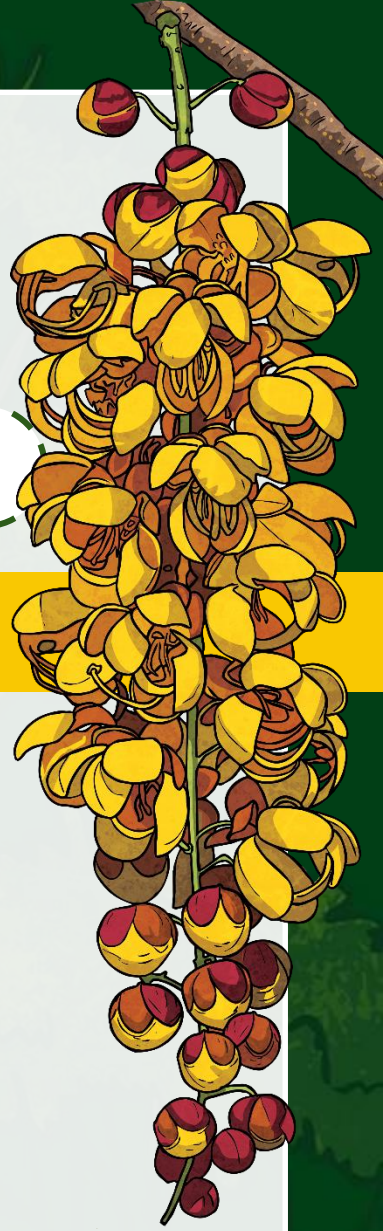
People are living.

Animals are living.

Plants are living.

In order for something to be living it must:

- Move
- Have senses
- Breath or respire
- Grow
- Excrete waste
- Reproduce
- Eat

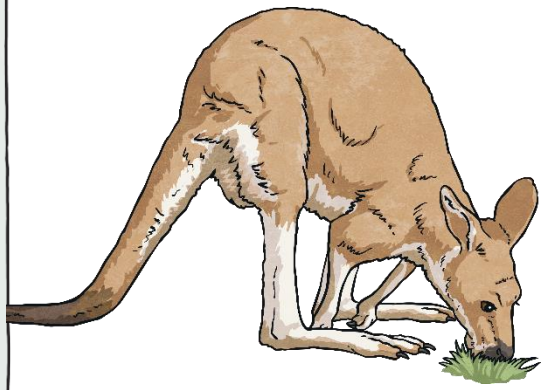


Seven Characteristics of Living Things

Characteristics of **All** living things.

Movement

Living things move within their environment to find essentials such as water, air and food or to protect themselves from danger.



Growth

Living things become larger, and repair their damaged cells.

Nutrition

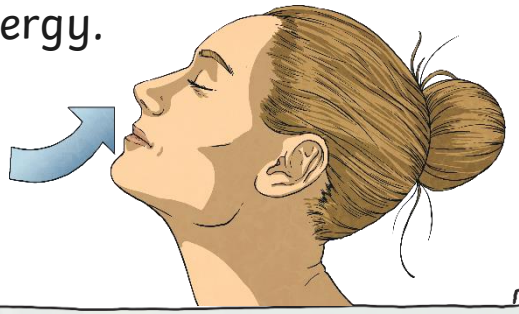
Living things need to grow and produce energy to live. This requires nutrients. Plants make their food through photosynthesis. Animals get their food by eating other plants or animals.

Reproduction

Living things produce offspring similar to themselves for their species to survive.

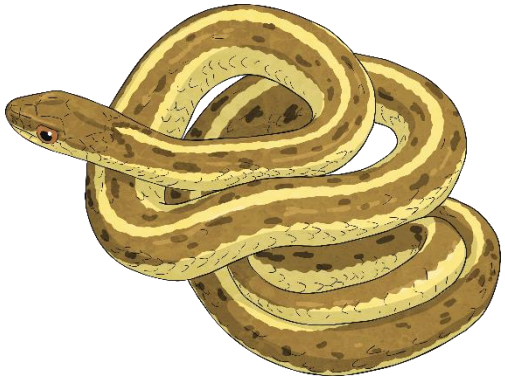
Respiration

Respiration is a process where energy is released from a specimens food. Oxygen is usually required to do this although a small number of living things can produce their own food and turn it into energy.



Sensitivity

Living things respond and change to their environment. E.g. snakes lay in the sun to warm their blood.



Eliminations

All living things create waste materials produced from energy. Plants give off waste as oxygen. Animals give off waste as carbon dioxide.

Misunderstandings

It is sometimes difficult to characterise living and non-living things. Especially when something is a living thing but has died.

In Science, living is described as something that is, has or has once been alive. E.g. a tree, a log or paper.
Non living is used to describe anything that is not now and has never been alive. E.g. a mountain, rock or sand.

Sometimes objects seem living because they have 1 or more characteristics of living things. E.g. a boat. It is made from wood and moves in water but it is not living.

Non-Living

If an object does not have all 7 characteristics then it is non-living.

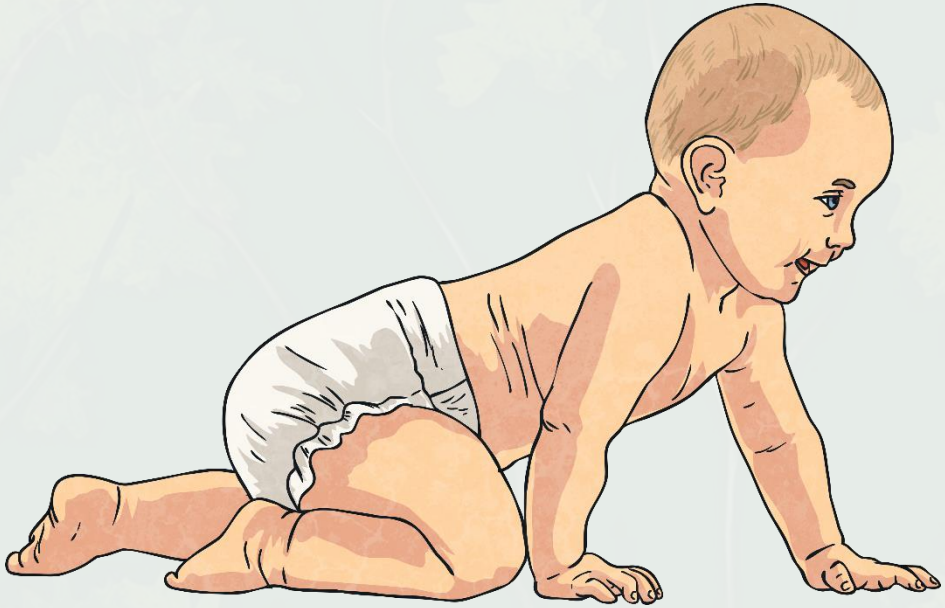
E.g. a washing machine, car or plastic ruler.

Is a bike living or non- living?

It can move but it can't eat or breathe.

A bike is non-living.

Is a baby living or non-living?



They eat, move and will reproduce when they grow up.

A baby is a living thing.

Is a cloud living or non-living?

It looks like it grows before it rains.

It doesn't use energy or reproduce.

It doesn't follow the 7 characteristics

A cloud is non-living.