

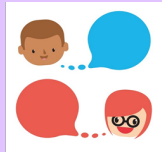
WALT: understand what a living organism is.

M: understand and explain what can be classed as a living thing.

S: understand and explain what a living thing requires.

C: use the correct scientific terminology.

T: justify my theories on living things.



What can you remember about your living things unit in year 4?
Make a mindmap of what you can remember.

1. How are living things grouped?
2. How many different 'groups' can you think of? (E.g. mammals)
3. What living things can you name from each group (How many mammals can you think of)
4. What different habitats would you expect to find these living things in?

Science week 1- what is a living organism?

Watch these videos to check your understanding and make sure you don't have any misconceptions before we move onto the year 5 learning!

What is classification?

<https://www.bbc.co.uk/bitesize/topics/zn22pv4/articles/z3nbcwx>

What is a vertebrate?

<https://www.bbc.co.uk/bitesize/topics/zn22pv4/articles/zp6g7p3>

What is an invertebrate?

<https://www.bbc.co.uk/bitesize/topics/zn22pv4/articles/z8mbqhv>

Explain to an adult or yourself: what is a living thing? How do you know?

Am I a living thing? Explain why?

Is a potato a living thing? Explain why?

What is more living, me or a potato?

Explain your reasoning.

Science week 1- what is a living organism?

There are 7 processes that help scientists to determine whether something is a living thing or not.

We use the mnemonic MRS GREN (or NERG) to help us remember each of the processes.

If you do not know the meaning of these words then use a dictionary to help you.

M	ovement
R	espiration
S	ensitivity
G	rowth
R	eproduction
E	xcretion
N	utrition

Mrs Gren
Movement

All living things move.

Animals move around to get from place to place.

Plants grow and turn towards the light.



Thinking point: why do living things need to move around in order to survive?

Mrs Gren

Respiration

All living things respire.

All living things release energy from their food by respiration. Most organisms need oxygen to do this.



Mrs Gren

Sensitivity

All living things are sensitive.

Every living thing can detect changes in their surroundings.



Thinking point: What might different living things be sensitive to?

Mrs Gren **Growth**

All living things grow.

Animals grow from babies to adults.

Seeds grow into plants.



Mrs Gren **Reproduction**

All living things reproduce.

Animals have young.

Plants produce seeds from which more plants grow.



Mrs Gren **Excretion**

All living things excrete.

Waste products are removed from the body.

Both plants and animals have to get rid of excess gas and water.



Mrs Gren **Nutrition**

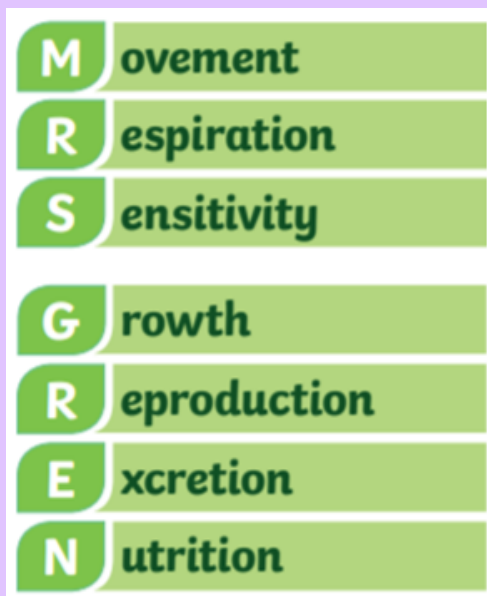
All living things need nutrition.

Animals eat food in order to get nutrients whereas plants produce their own food by turning sunlight into energy. This is called photosynthesis.



Thinking point: How can we use MRS GREN to help us settle our living things debate?

What is more living Me or a potato?



Science week 1- what is a living organism?

Task 1:

With your talk partner have a go at matching the scientific vocabulary in MRS GREN to its description and an explanation.

Task 2:

Then, with a partner, use MRS GREN to help you decide which of these things is living and which is not living. **Make sure that you use scientific vocabulary and explain your reasoning!**

Car, cucumber, Mr Samson, Bread, tree, Koala, computer, seed, table, jack-in-the-box

EXT: Can non-living things have some characteristics of a living thing?

Characteristic	Description	Explanation
Movement	Can detect changes in the environment <i>eg</i> temperature	We need materials to repair old cells
Respiration	Happens because our muscles push and pull at our bones.	Used to protect us from things that could hurt our bodies
Sensitivity	Oxygen + Glucose → Carbon dioxide + Energy + Water	Needed so we can develop into adults
Growth	This is how our body increases in size	Without this we could not hunt or collect food
Reproduction	The removal of waste products	Body heat is produced to keep us warm
Excretion	Taking materials into the body to provide energy and nutrients	Waste products are poisonous that we need to get rid of
Nutrition	This is how more of the same species is produced	We cannot survive as a species without this

Task 3:

You need to make your book mark for this science unit.

On one side you need to include the MRS GREN mnemonic and on the other side you need to write all the key words and write a definition for the key words that you do not know the meaning of.

Once you've done that, you can decorate your book mark ready for it to be laminated tomorrow!

Key words:

reproduction, gamete, cell, pollen, ovule, fusion, fertilisation, pollination, cuttings, roots, male, female, fertilise, pregnancy, gestation, marsupial, young, growth, respiration, sensitivity, movement, nutrition, excretion.

Living
things

M
R
S

G
R
E
N

Science week 1- what is a living organism?

Plenary:

Create your own living thing debate.

Find 10 things inside or outside your house and order them from most living to least living.

Make sure you explain the reasoning behind your order **using scientific vocabulary and MRS GREN**