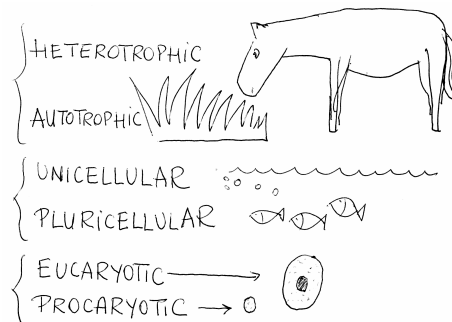


UNIT 6: THE DIVERSITY OF LIFE

THE FIVE KINGDOMS.

Dear language assistant,

1.The first part of the class is for learning **six basic concepts**: autotrophic, heterotrophic, unicellular, pluricellular, eukaryotic and procaryotic. You can write autotrophic-heterotrophic on the board and explain them using the notes below, then you can do the same with two more concepts (unicellular-pluricellular) and, eventually, eukaryotic-procaryotic. I would like you to explain this topic using your own words and drawing this on the board:



We know two main types of living beings: animals and plants. What differences are there between animals and plants? Sometimes we think animals move and plants don't but this is not the most important difference. Besides there are some animals which cannot move (corals, for instance). The most important difference is the way they feed. We are going to distinguish two ways:

- *The **autotrophic** beings, like plants, do not need anything other than water, salt and gasses such as carbon dioxide and oxygen. They use the energy from the sunlight in order to manufacture their own food. This process is called photosynthesis*
- ***Heterotrophic** beings, like animals, cannot make their own food and instead they have to take this from their surroundings. This is why they feed off other living beings or they feed off organic matter which is decomposing*

*An important characteristic of living beings is that they all are made up of cells. Cell is the smallest living thing. So, cell is the unit of life. There are two types of living beings according to the number of cells they have. The **unicellular** beings are made up of only one single cell. The **pluricellular** beings are made up of more than one cell and range from beings of just a few cells to those which are made up of million of them.*

Then you can draw two very different sized cells and explain that there are two types of cells:

- *The **eucaryotic** cells are those which have a nucleus, they use to be larger (about tenth of a millimetre).*
- ***Procaryotic** cells are much more simple. They have no nucleus and only appear in some unicellular beings. Their size is around a thousandth of a millimetre*

The students have to look for the six basic concepts on the textbook (p.71) and underline them.

2. After explaining these six concepts they are ready to learn that living beings are not only animals and plants. Perhaps you have heard of Animal Kingdom and Plant Kingdom but there are **Five Kingdoms** (translate kingdom, please). Ask them to look into the table on page 7 and ask them some questions in order to check if they have understood the chart. I'm interested they to practice belong to, similar to, different from... Perhaps we can work together in the first activities and then, the pupils can work on their own.

	Type of cells	Grouping of cells	Feed	EXAMPLES
Reino Monera	Prokaryotic	Unicellular (sometimes simple cell chains)	Autotrophic: heterotrophic:	ALGAE BACTERIA
Reino Protista	Eucaryotic	Unicellular (sometimes very simple groups of cells)	Autotrophic: heterotrophic:	ALGAE PROTOZOO
Reino Fungi (de los hongos)	Eucaryotic	The majority are multicellular but without real tissues.	Only heterotrophic:	MUSHROOMS MOULD
Reino Animal	Eucaryotic	Pluricellular	Only heterotrophic	COW
Reino Vegetal	Eucaryotic	Pluricellular	Only autotrophic	PINSAPO

9. Which kingdoms are the most wellknown? (Plants and Animals)
10. Which kingdoms are formed only by heterotrophic beings? (Fungi and Animals).
11. Which difference is there between fungi and plants? (Fungi are heterotrophic and plants are autotrophic)
12. Which kingdom do bacteria belong to? (They belong to Monera Kingdom)
13. Is there any similarity between fungi and animals? (They are both formed by heterotrophic living beings and their cells are eukaryotic)
14. What living beings are able to make their own food? (Algae and Plants)
15. Which kingdom does a tree belong to? (It belongs to Plant Kingdom)
16. Do protists and moneras have something in common? (They include unicellular beings)
17. Is there any difference between protists and moneras? (Protists are made of eucaryotic cells while Moneras are made of prokaryotic cells)
18. Which kingdom do mushrooms belong to? (They belong to Fungi Kingdom)
19. Which kingdoms are formed mainly by microscopic organisms? (Protists and Moneras but there are some microscopic animals as well. In addition many mould are microscopic)
20. What do animals and plants have in common? (They are eukaryotic, pluricellular living beings)
21. Which kingdom do you belong to? (I belong to Animal Kingdom.)

Thank you