

## The Primary Stage of Grades (4-5) School Year 2022 - 2023

Name: \_\_\_\_\_

Subject: Cells Study sheet

Date: / /

Class: Grade Five national (All Sections)

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All living things are made of cells.

**Objectives:** -Know that all living things are made up of cells.  
-Differentiate between unicellular and multicellular organisms.

### Cells

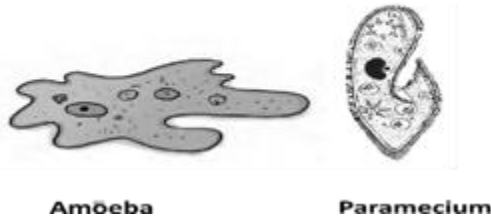
- They are the building blocks of all living things.
- They are the smallest unit of an organism.
- They can only be seen using a microscope. (microscopic)

**Organisms can be either Unicellular or Multicellular.**

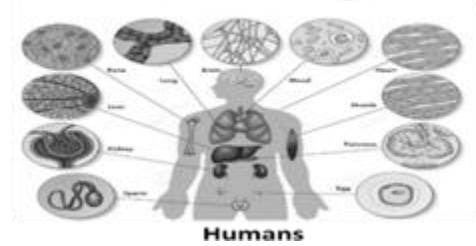
**1-Unicellular organisms:** are made up of only one cell. (Examples: bacteria, amoeba)

**2-Multicellular organisms:** are made of multiple cells. (Examples: Animals, plants, humans)

#### Unicellular Organisms



#### Multicellular Organisms



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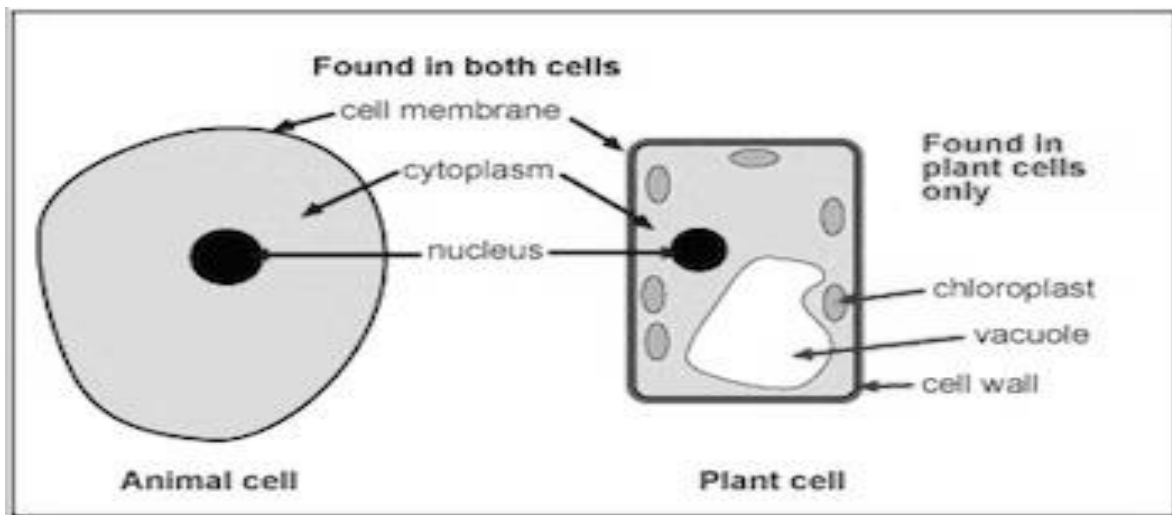


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All cells have three parts in common:

**1- The cell membrane:**

Holds the cell together, gives it its shape and controls what passes in and out of the cell.

**2- The nucleus:**

One of the largest parts of the cell and is located near its middle. It controls the reactions in the cell.

**3- The cytoplasm:**

The jelly-like fluid inside of the cell which has all the organelles. Such as Mitochondria and vacuoles.

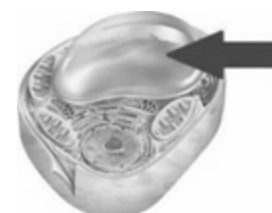
**Mitochondria:**

Supplies the cell with energy.



**Vacuole:**

open spaces that hold food, water and wastes.



\*Plant cells have special parts named Chloroplast.

**Chloroplast:**

These are small green containing Chlorophyll which give plants their green color required for photosynthesis.



**1-Multicellular organisms (Plant and animal cells):**

**Animal and plant cells are similar in some ways and different in others.**

- 1- both are small. (microscopic)
- 2- both are filled with cytoplasm with small structures inside (organelles).
- 3- both have a cell membrane.
- 4- both have a nucleus

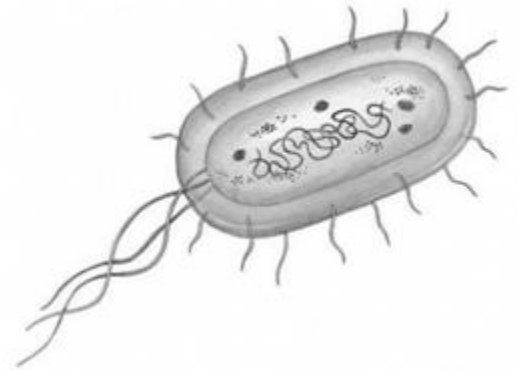
**Difference between animal and plant cells:**

<b>Animal cell</b>	<b>Plant cell</b>
Doesn't have a cell wall.	Have a cell wall.
Doesn't have chloroplasts.	Have chloroplasts.
Have variety of shapes determined by its function.	Regular, fixed shape.

## 2- Unicellular organisms (Bacteria and Amoeba):

### Bacteria:

- They use air or water to move from one place to another.
  - Sometimes they have a tail that allows them to move (flagella)
  - Some live in the air, others on ground and others are parasites (inside other organisms)
- Bacteria can be beneficial, they help decompose or break up dead organisms.
- Some bacteria provide medicines (antibiotics) to help fight diseases.
- Some bacteria can be pathogenic which means they cause diseases.



### Amoeba:

- Unicellular organism
  - Can be found in any ecosystem
  - Bigger than bacteria
  - Have no specific form
- Some amoebas live freely in damp places, others are parasites in humans or animals.
- Amoebas that are parasites in humans cause diseases.
- \*Parasites means they live off other organisms.

