

A fluorescence micrograph showing a network of plant cells. The cell walls are stained red, forming a complex, interconnected pattern. Inside the cells, there are numerous bright green, oval-shaped structures, which are chloroplasts. The overall appearance is that of a dense, porous cellular structure.

Chapter 3

Section 1

What is the structure of a cell?



KEY IDEA:

Cells are the basic units of structure and function in living things.



Cells and structure

Cells and function

Size of Cells

All living things are made of cells

Cells are involved with

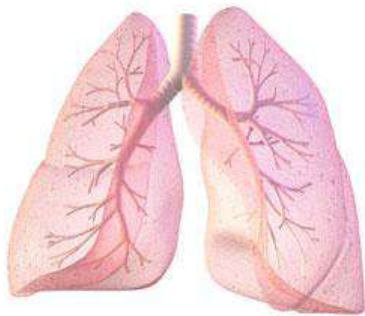
- Obtaining oxygen
- Getting rid of wastes
- Obtaining food
- Growing

Viewable with a microscope



Table Talk: Without looking at your notes, take turns discussing with your tablemates, the 4 functions of cells.

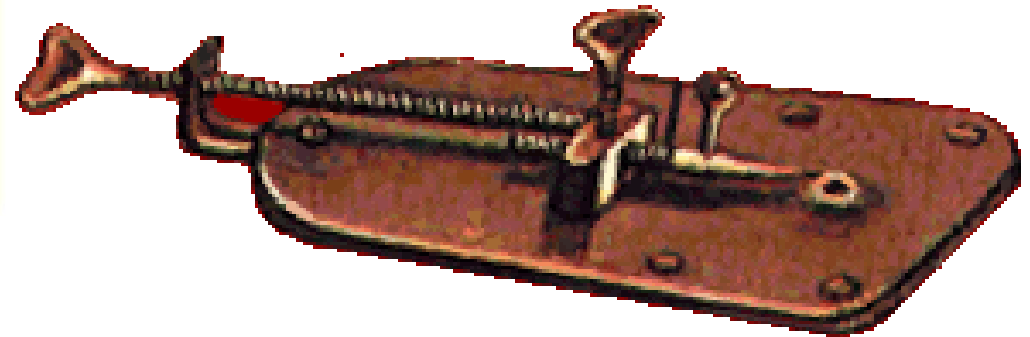
(Use these pictures to help remind you.)



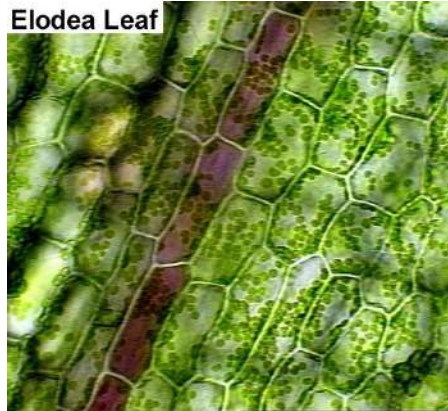
First observation of cells

The invention of the microscope made it possible for people to learn about cells

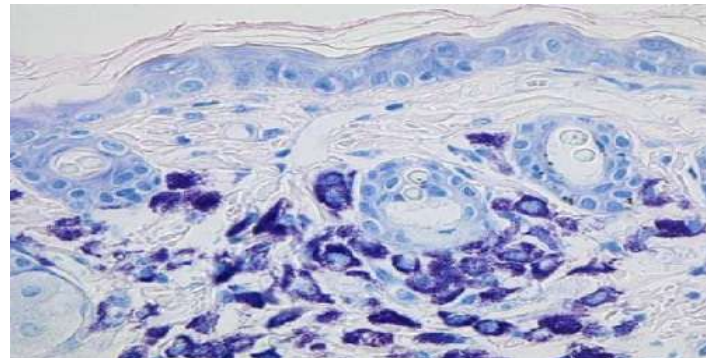
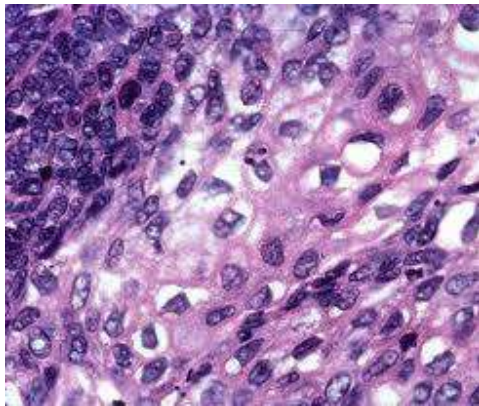
- Robert Hooke (1660 – compound microscope)
- Anton van Leeuwenhoek (1674 – simple microscope)



Cell Theory



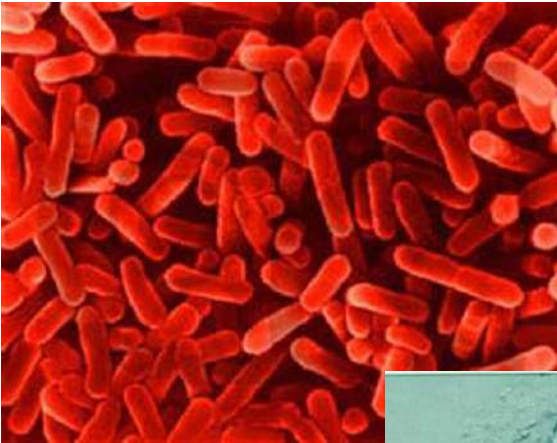
- All living things are made of cells
- Cells are the basic units of structure and function in living things
- All cells are produced from other cells



Unicellular organisms

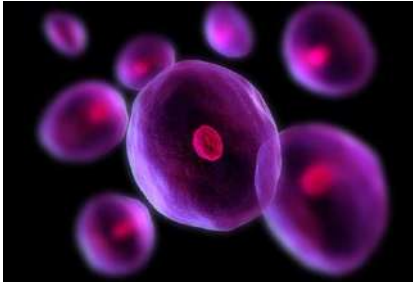
- Single celled organisms, like bacteria

Multicellular organisms

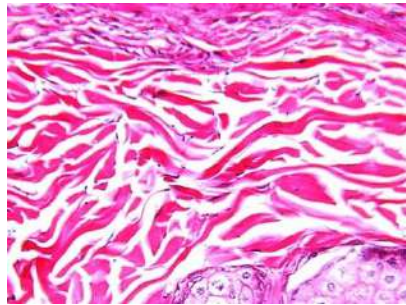


- Cells are organized into:
 - **tissues** – a group of similar cells that work together to perform a particular function.
 - **organs** – like the brain – made up of different kinds of tissues that work together
 - **organ systems** – a group of organs that work together to perform a major function, like digestion
 - **Organism** – a living plant or animal

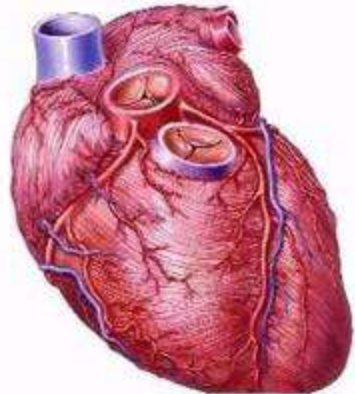
Table Talk: In order of increasing size, can you name the levels of organization in living things?



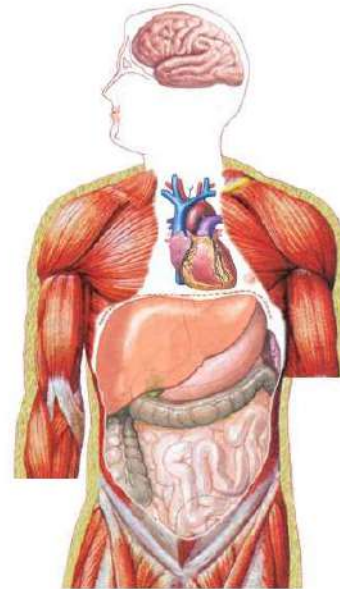
CELL



TISSUE



ORGAN



ORGAN SYSTEM



ORGANISM

WRITE THIS DOWN! 😊