

CELL THEORY



CELL THEORY

- ❖ Spontaneous Generation: Life can arise from non-living materials
- ❖ Ex: putting sweaty underwear and wheat into a jar = mice
- ❖ Ex: maggots spontaneously appeared on raw meat



Meat decomposition
timelapse video

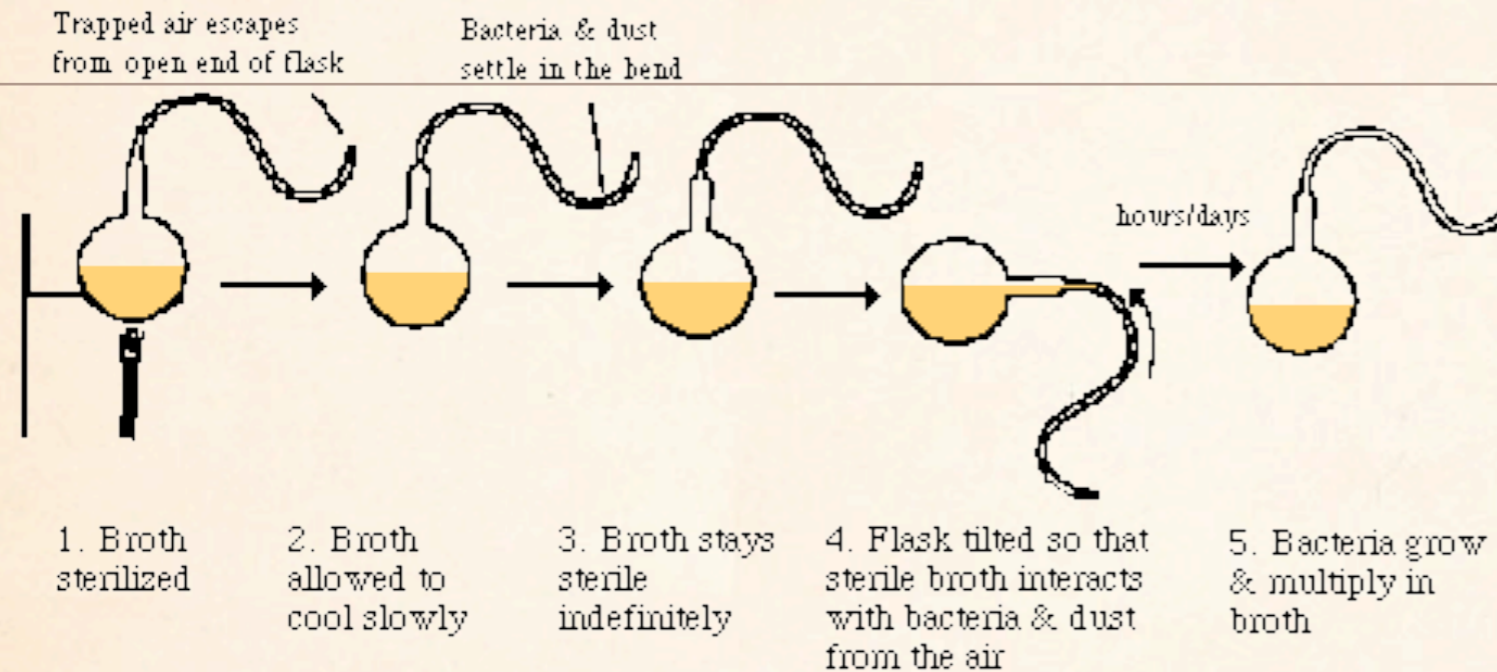
7 days in 1,5 minute

PASTEUR'S EXPERIMENT

- ❖ French Chemist who wanted to challenge the idea of spontaneous generation



PASTEUR'S EXPERIMENT



- ❖ Used a swan necked flask
- ❖ Boiled the contents to kill any microbes
- ❖ Swan necked flask did not allow microbes to enter keeping broth sterile
- ❖ When turning the flask, the broth comes into contact with microbes and bacteria begins to grow

EUREKA!

- ❖ Pasteur's experiment refuted the idea of spontaneous generation

During Pasteur's experiment he had experimental variables:

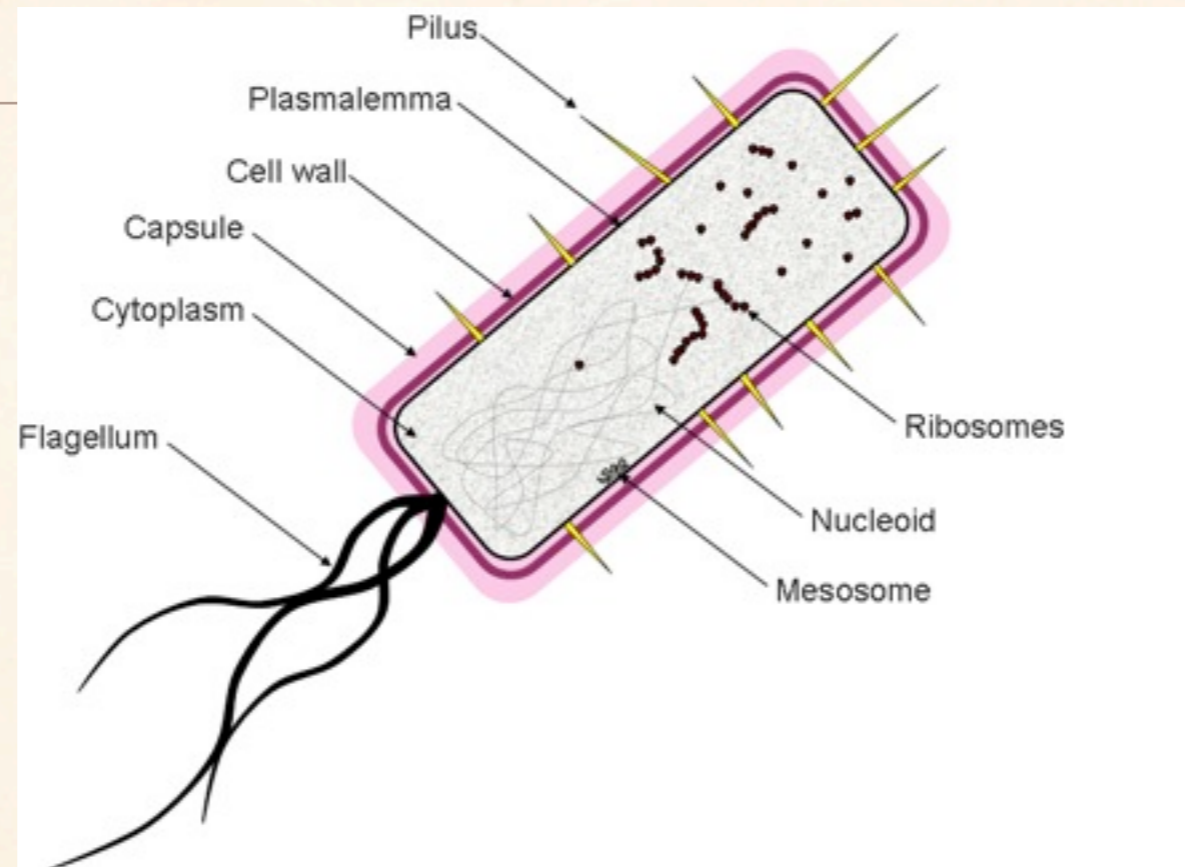
Controlled Variables
Manipulated Variables
Responding Variables
Control

CELL THEORY

❖ Cell theory states:

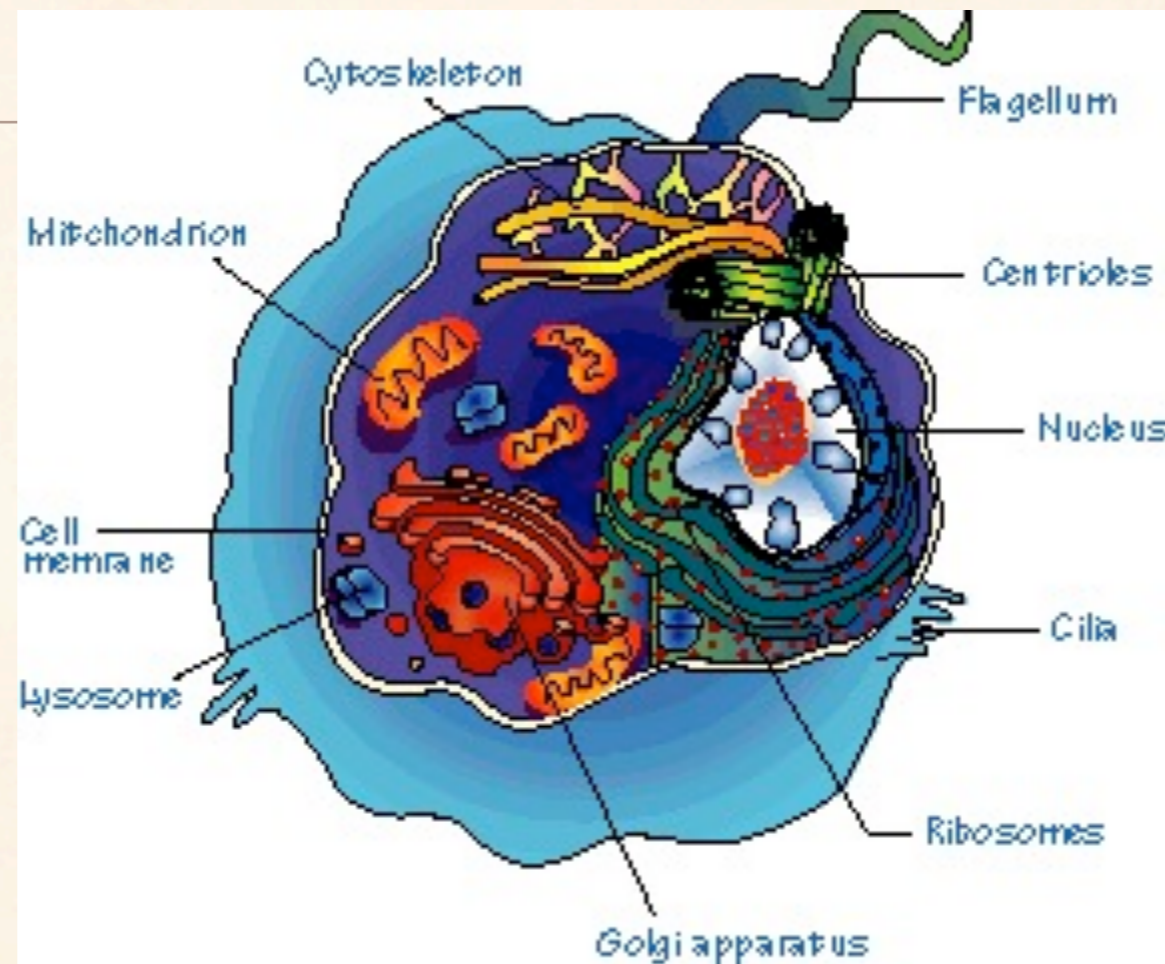
- All living things are made up of one or more cells; Cells are the basic units for life
- All functions take place in the cell= smallest unit of life
- All cells are produced from pre-existing cells

PROKARYOTIC CELLS



- ❖ These cells are in unicellular organisms; What does that mean?

EUKARYOTIC CELLS



- ❖ These cells are in multicellular organisms; What does that mean?

CHARACTERISTICS

Prokaryotic	Eukaryotic
free floating DNA	DNA in nucleus
membrane	membrane and/or cell wall
small ribosomes	large ribosomes
no organelles	membrane bound organelles
small	large
asexual reproduction	sexual reproduction