

# CLASSIFICATION MADE SIMPLE



# CLASSIFICATION TERMS

- *Heterotrophs* – organisms that cannot make their own food – example: animals
- *Autotrophs* – organisms that CAN make their own food through chemical processes – example: plants

- **Prokaryotic** – organisms with no nucleus

- **Eukaryotic** – organisms with a nucleus

# **Prokaryotes vs. Eukaryotes**

## **Prokaryotes:**

- **Unicellular**
- **No membrane-bound nucleus or organelles**
- **Extremely small**
- **Earliest known forms of life**

# **Eukaryotes:**

- **Unicellular or multi-cellular**
- **Membrane-bound nucleus & organelles**
- **Relatively large**
- **Formed after Prokaryotes**

# **SIX KINGDOMS**

- **ARCHAEBACTERIA – formerly Monera**
- **EUBACTERIA – formerly Monera**
- **PROTISTA**
- **PLANTAE**
- **FUNGI**
- **ANIMALIA**

# **DOMAINS OF KINGDOMS**

**PROKARYOTIC**  
(aka Monera)



**Archaeobacteria**  
**Eubacteria**

**EUKARYOTIC**



**Protista**  
**Plantae**  
**Fungi**  
**Animalia**

# ARCHAEBACTERIA

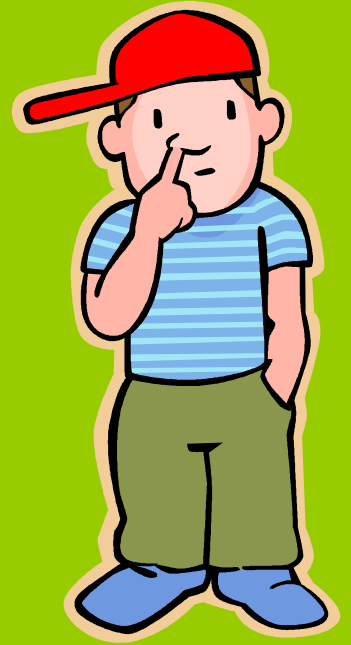
- Prokaryotic
- Single-celled
- Small size
- Heterotrophic or autotrophic
- Live in extreme environments
- Some can move
- Reproduce asexually or sexually

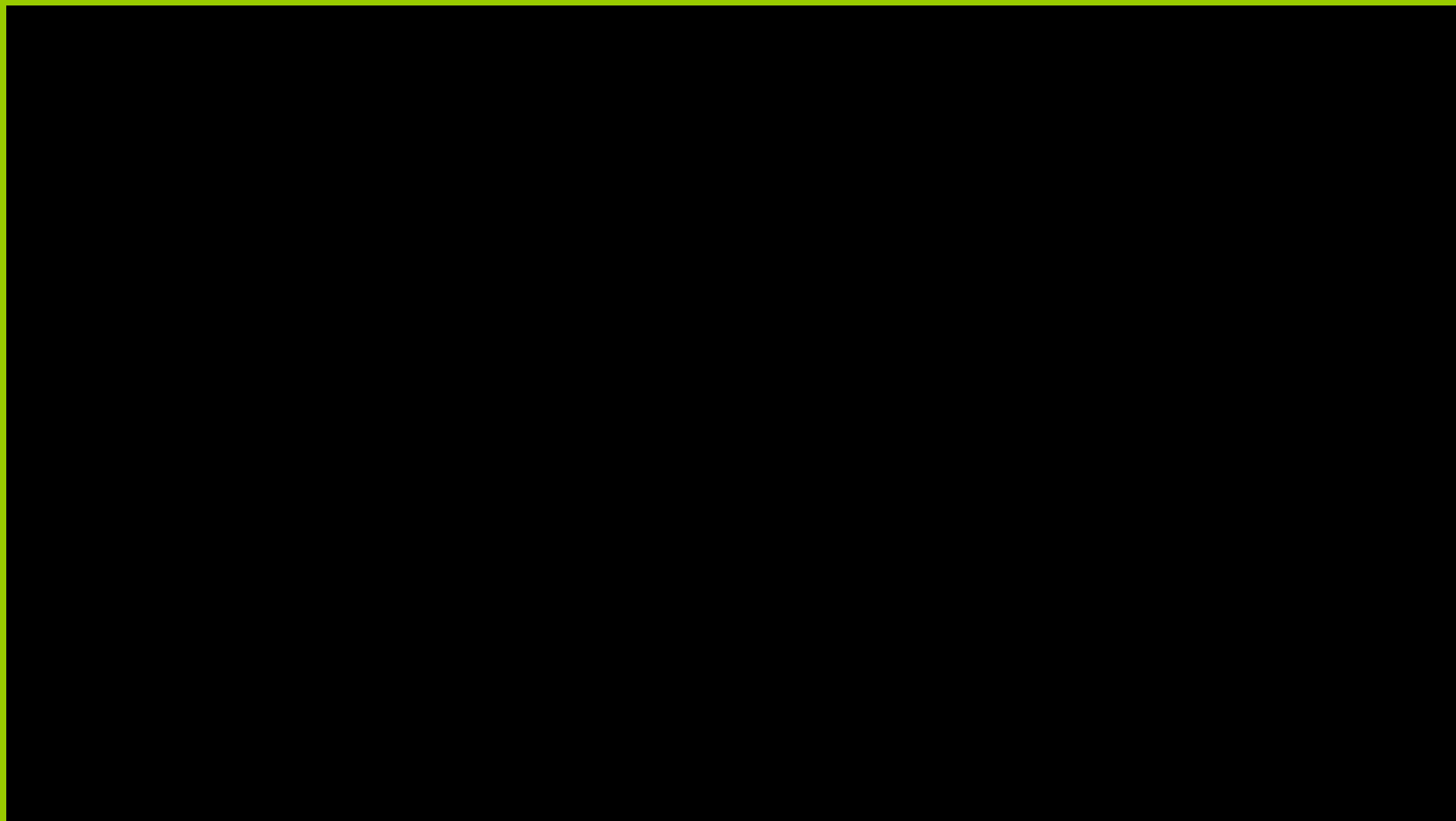




# EUBACTERIA

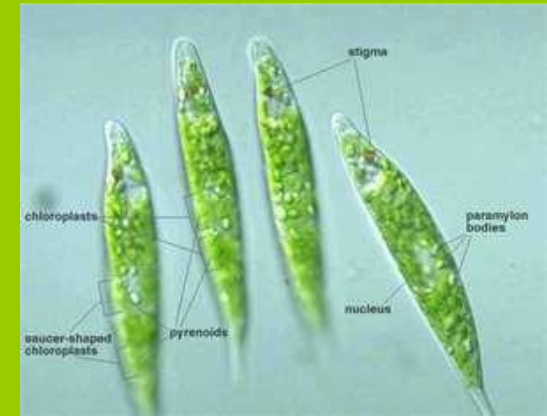
- Prokaryotic
- Single-celled
- Small size
- Heterotrophic or autotrophic
- Some can move
- Cannot live in extreme environments
- Reproduce asexually or sexually

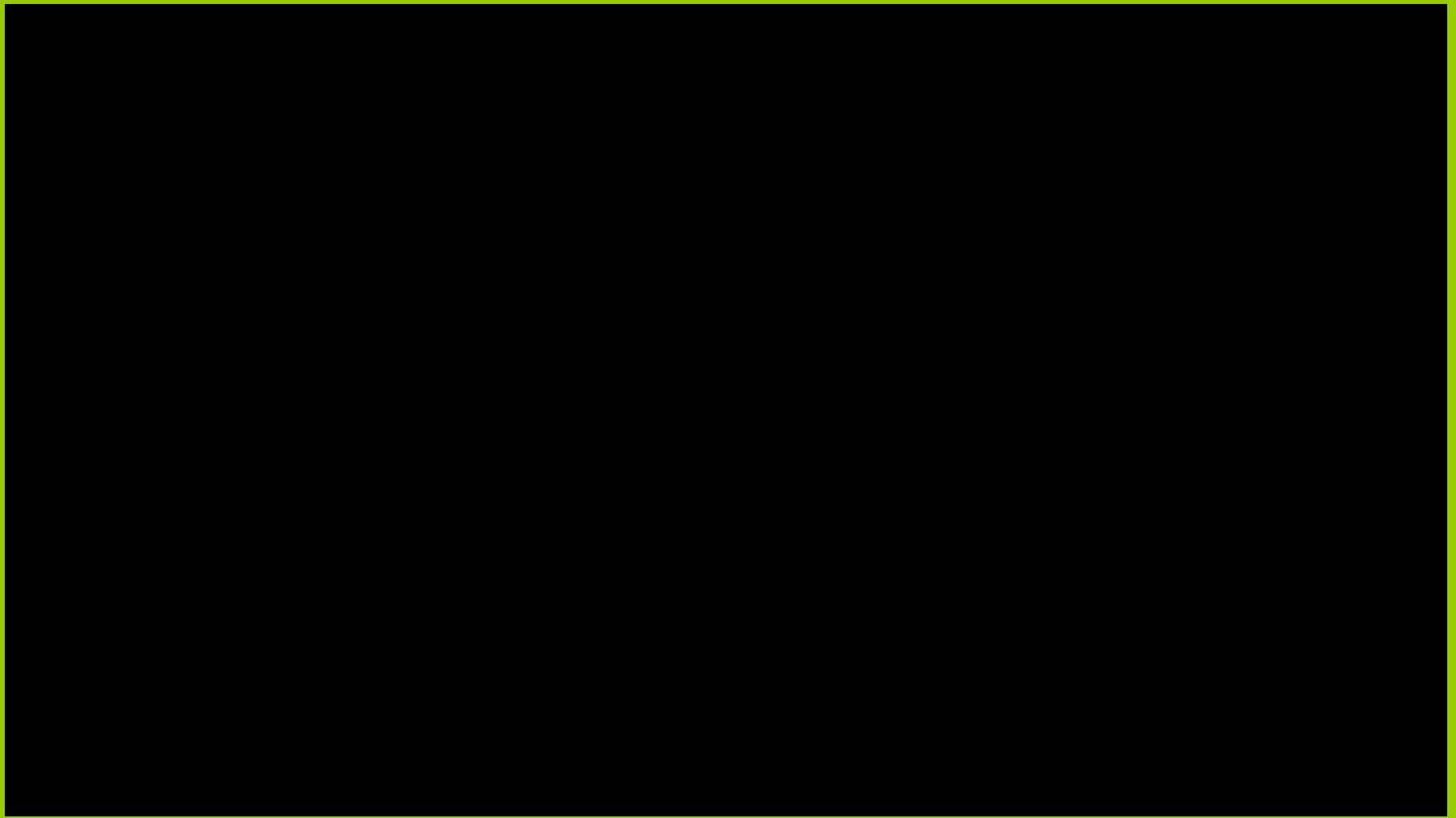




# PROTISTA

- Eukaryotic
- Some have cell walls
- Multi- and unicellular
- Heterotrophic or autotrophic
- Some can move
- Reproduce sexually or asexually





# FUNGI



- **Have cell walls**
- **Heterotrophic**
- **Non-motile (cannot move)**
- **Multi-cellular or unicellular**
- **Eukaryotic**
- **Reproduces sexually or asexually**



# **Fungi Killing a Nematode (worm) with its mycelium**

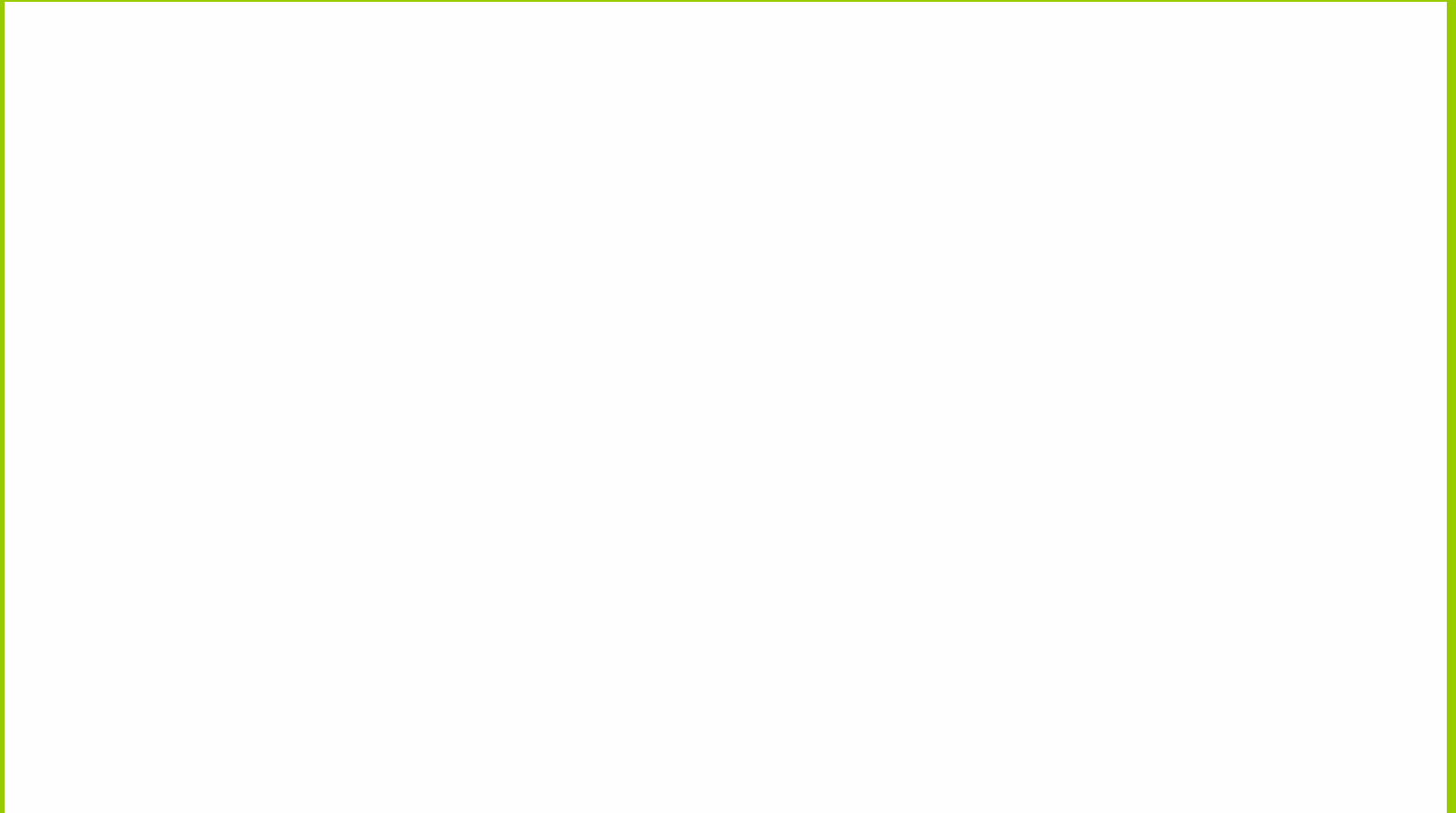


# **PLANTAE**

- **Have cell walls**
- **Autotrophic – has chloroplasts**
- **Non-motile (cannot move)**
- **Multi-cellular**
- **Eukaryotic**
- **Reproduces sexually or asexually**



# Flower Reproduction

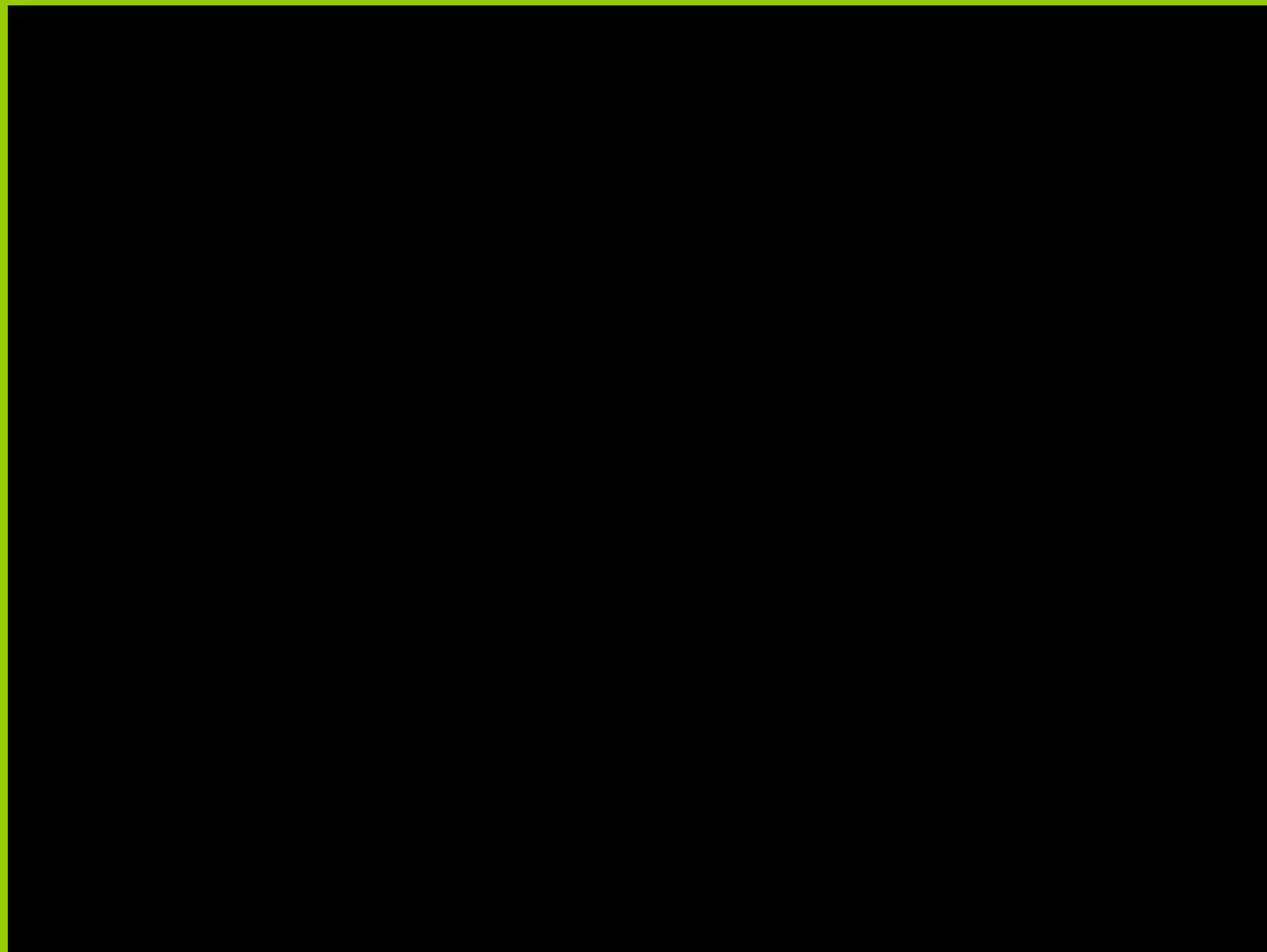


# **ANIMALIA**

- **No cell walls**
- **Heterotrophic by ingestion**
- **Complex nervous system**
- **Usually mobile (can move)**
- **Multi-cellular & eukaryotic**
- **Reproduces sexually or asexually**

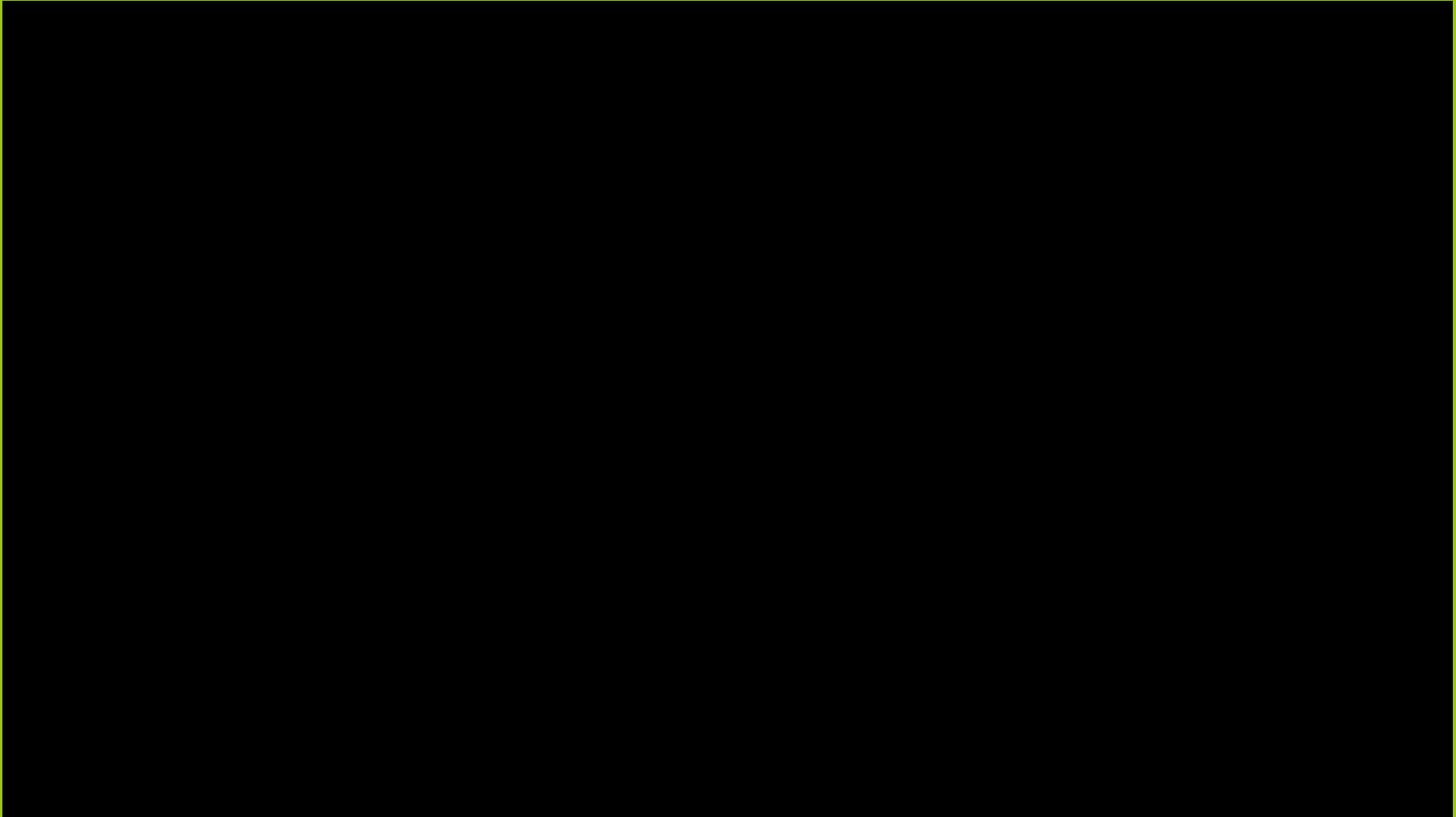
one



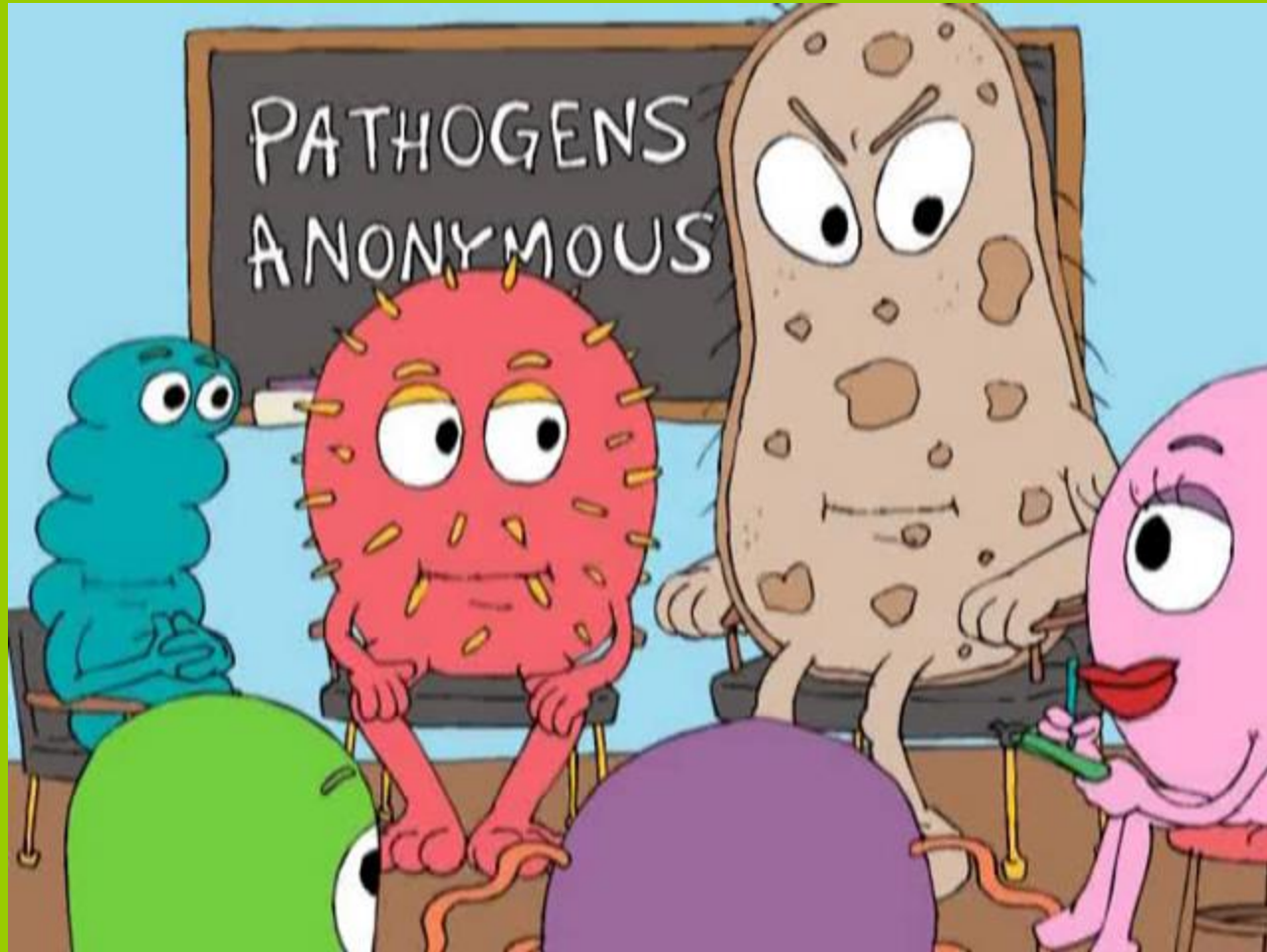


# **What and Where are Micro-organisms?**

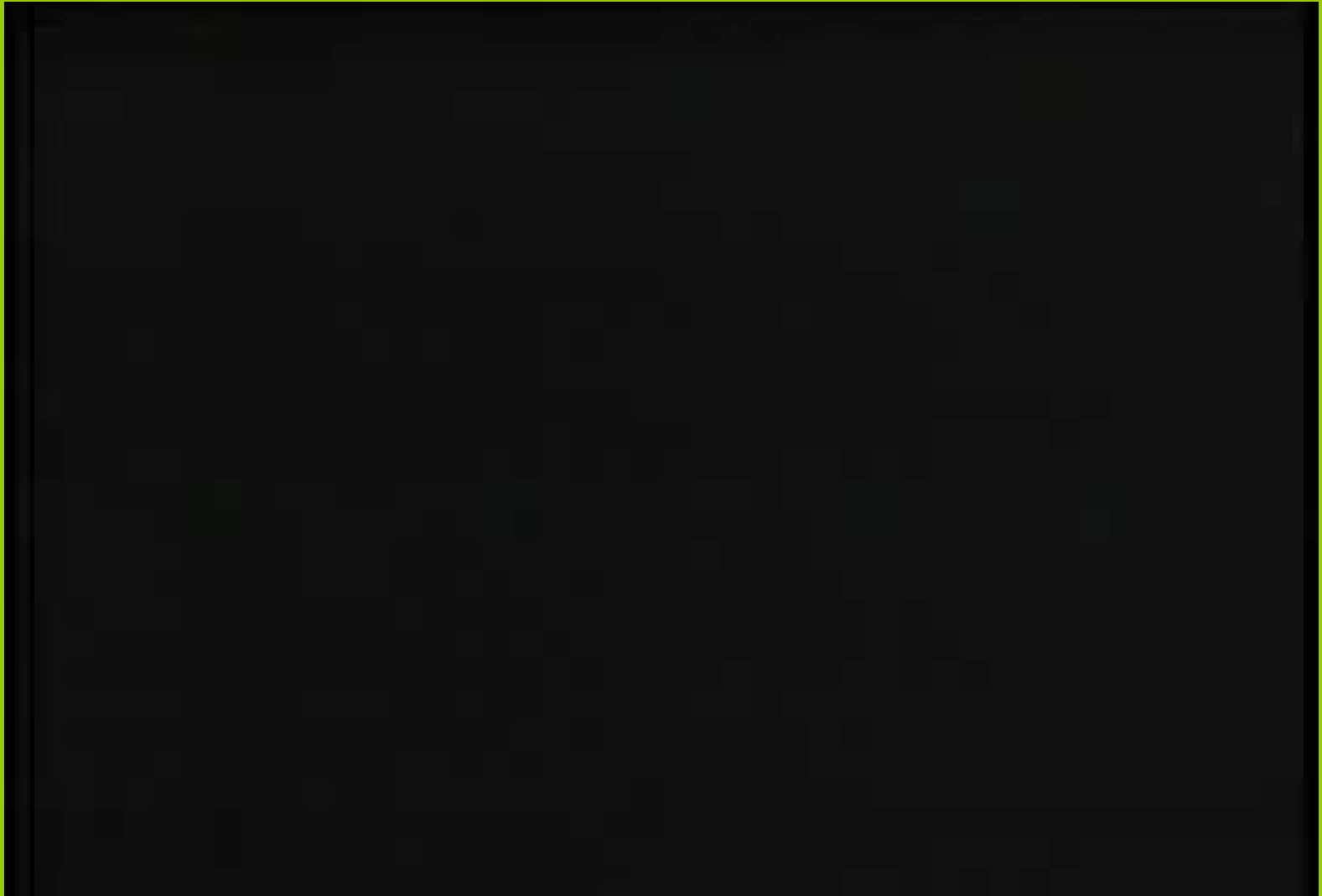
# TYPES OF REPRODUCTION



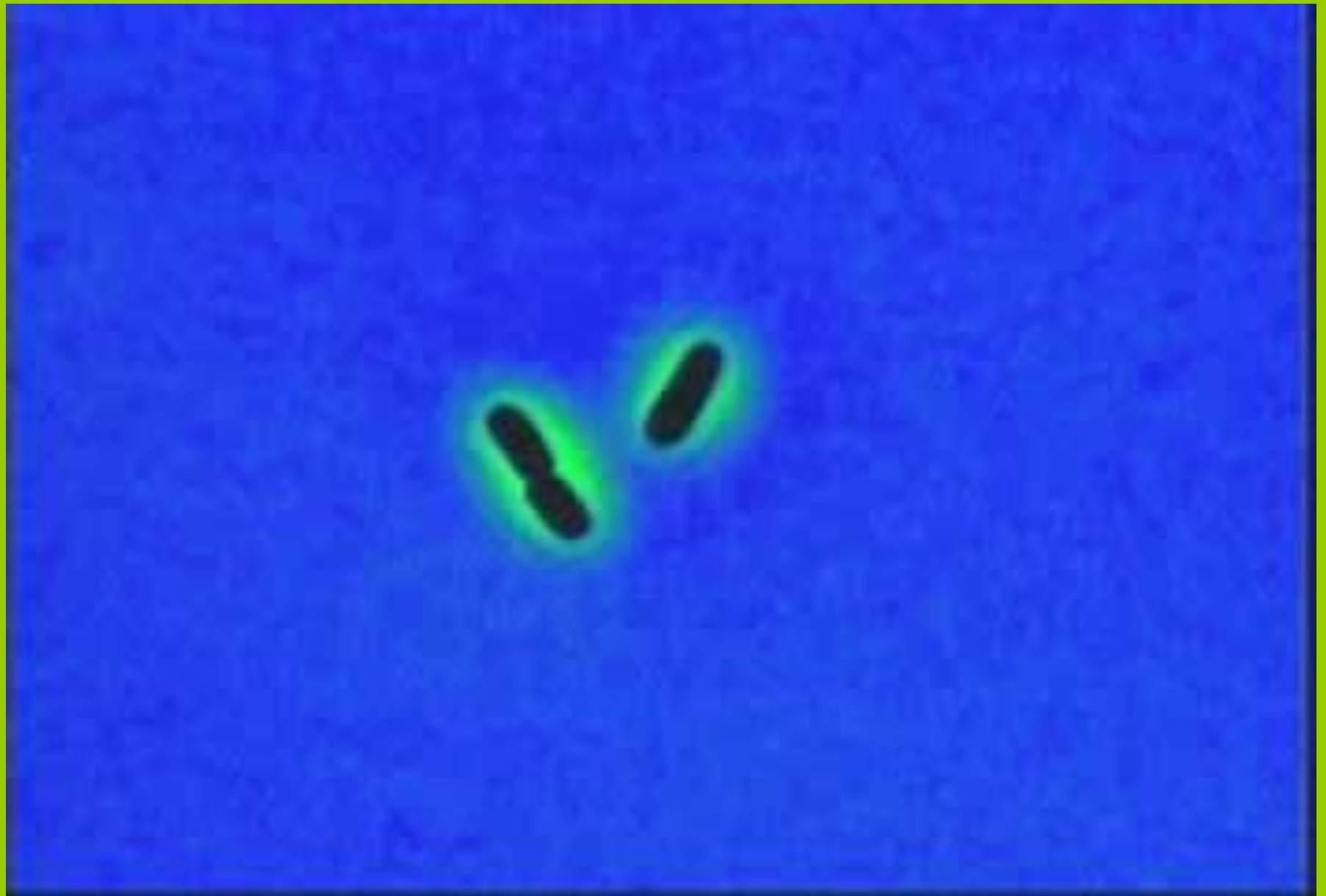
# CELLULAR DIVISION



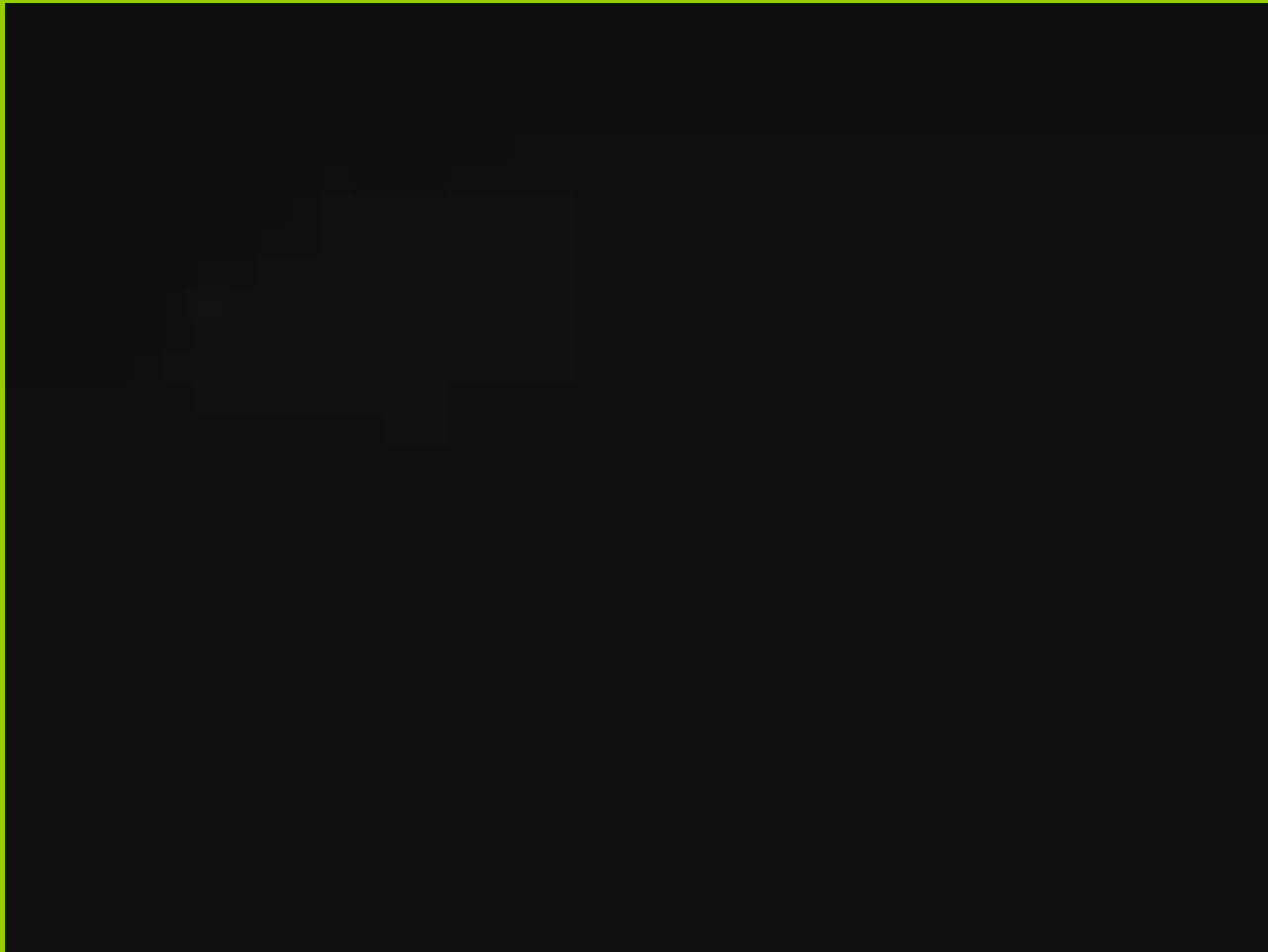
- BINARY FISSION: the cell copies its DNA and then splits.







CONJUGATION: two cells  
share hereditary material

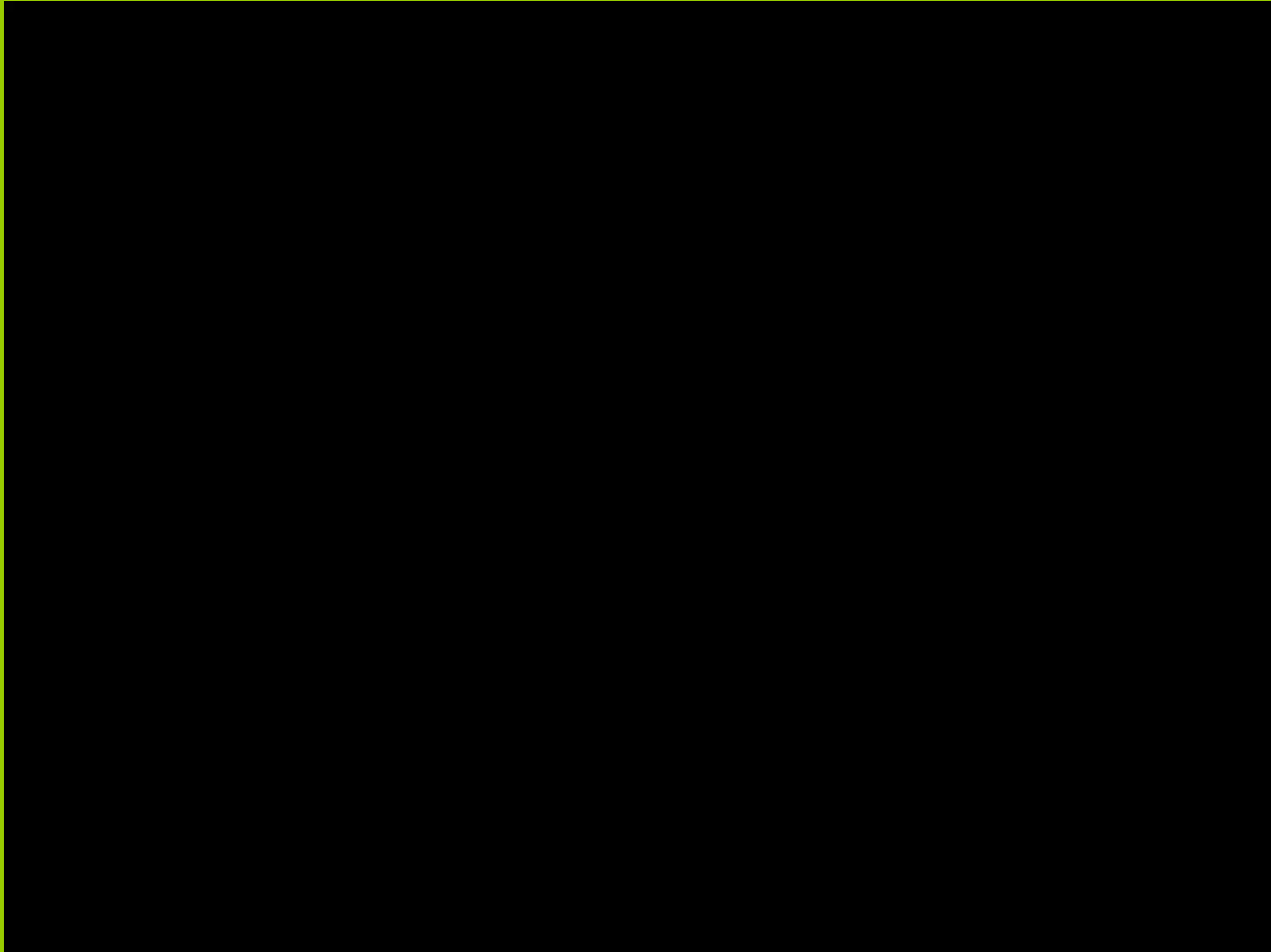




- SPORES: tiny reproductive cells – can happen in protists, fungi & some plants.



**BUDDING:** asexual reproduction in which a new organism develops from a bud on the body of the parent





# **Asexual Reproduction** **(Brainpop)**