

# Characteristics of Life

# Essential Questions

1. List and explain each of the five characteristics of life.
2. Describe how you could tell if an unknown object is living.

# The 5 Characteristics of Life

- If something is living it must have **ALL** 5 of the following characteristics!!!
  - Cells
  - Homeostasis
  - Reproduction
  - Metabolism
  - DNA/Hereditry

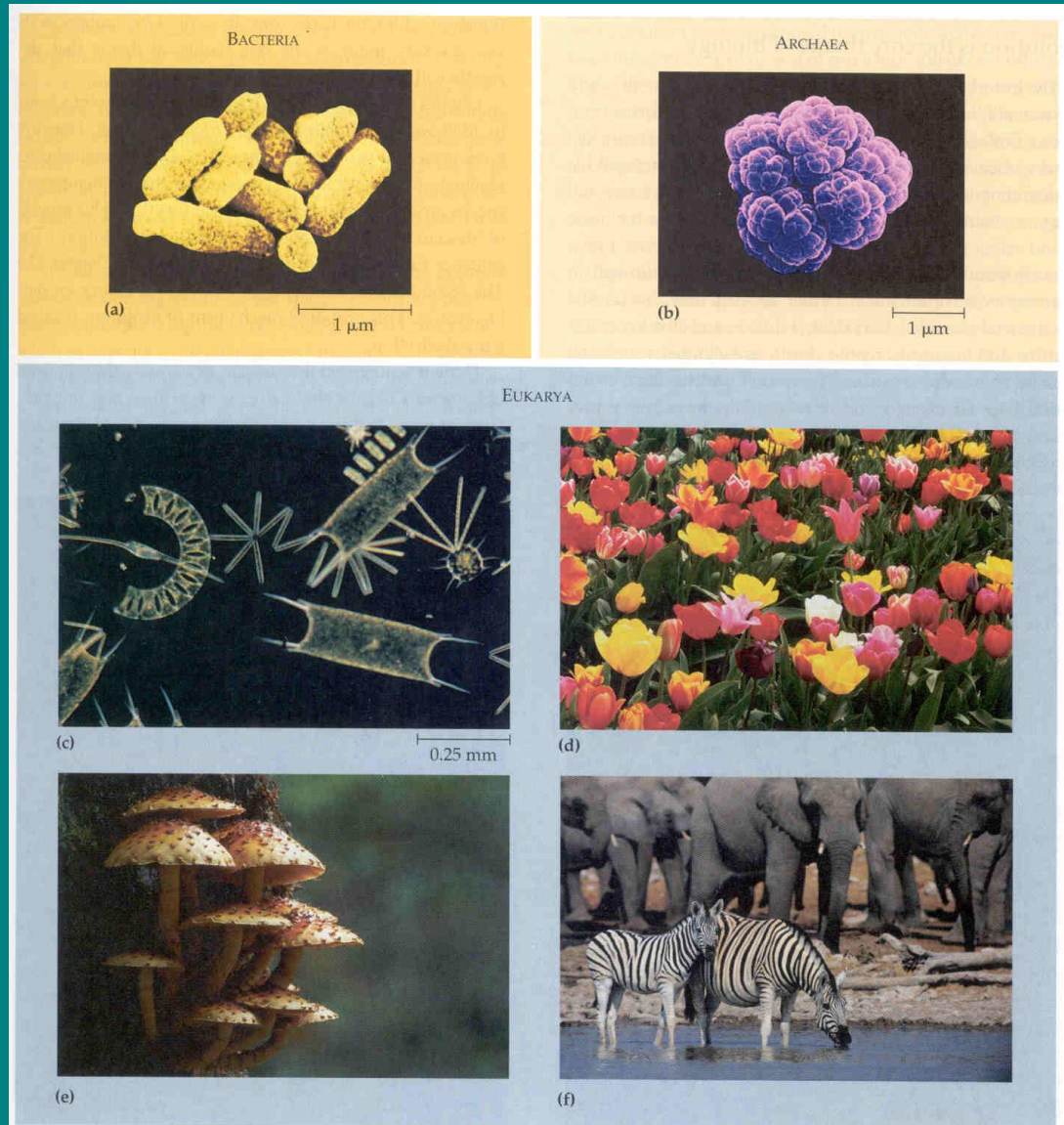


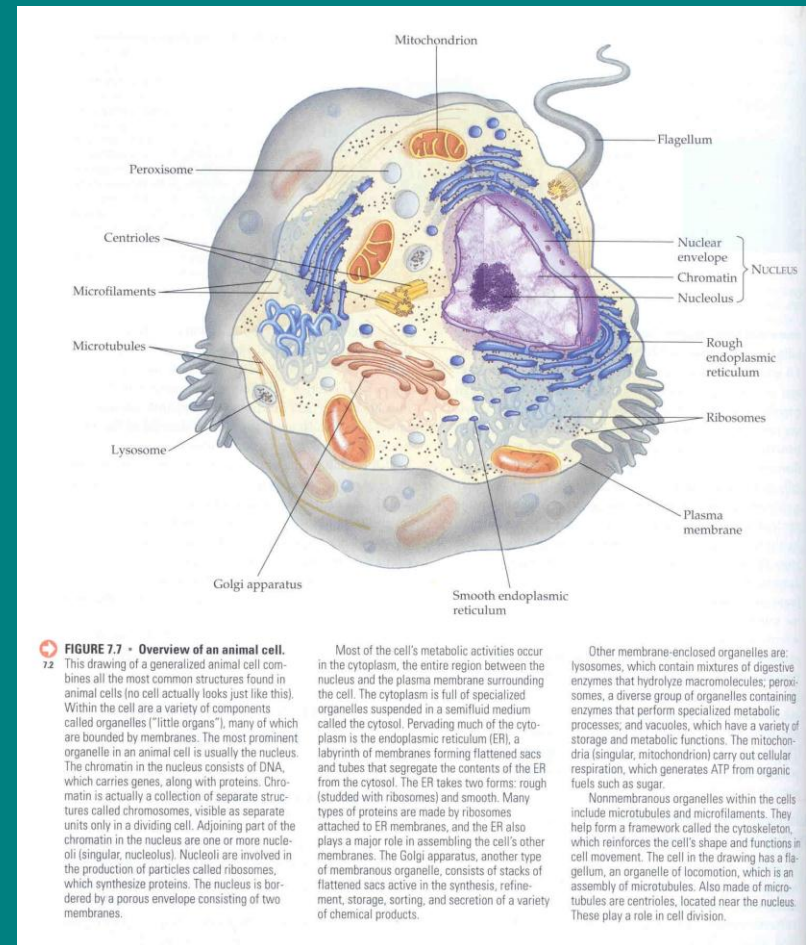
FIGURE 1.11 • Domains of life. The domains Bacteria, Archaea, and Eukarya are distinguished from other prokaryotes and kingdoms that better represent evolution and

# CELLS=

## Basic Unit of Life –

### Living things have one or more.

- Usually very small
  - Use a microscope to view
- What is the largest single cell?



# Homeostasis = The maintenance of a relatively stable internal environment.

- *Examples: Body temp., oxygen level, blood sugar level, pH, water level.*

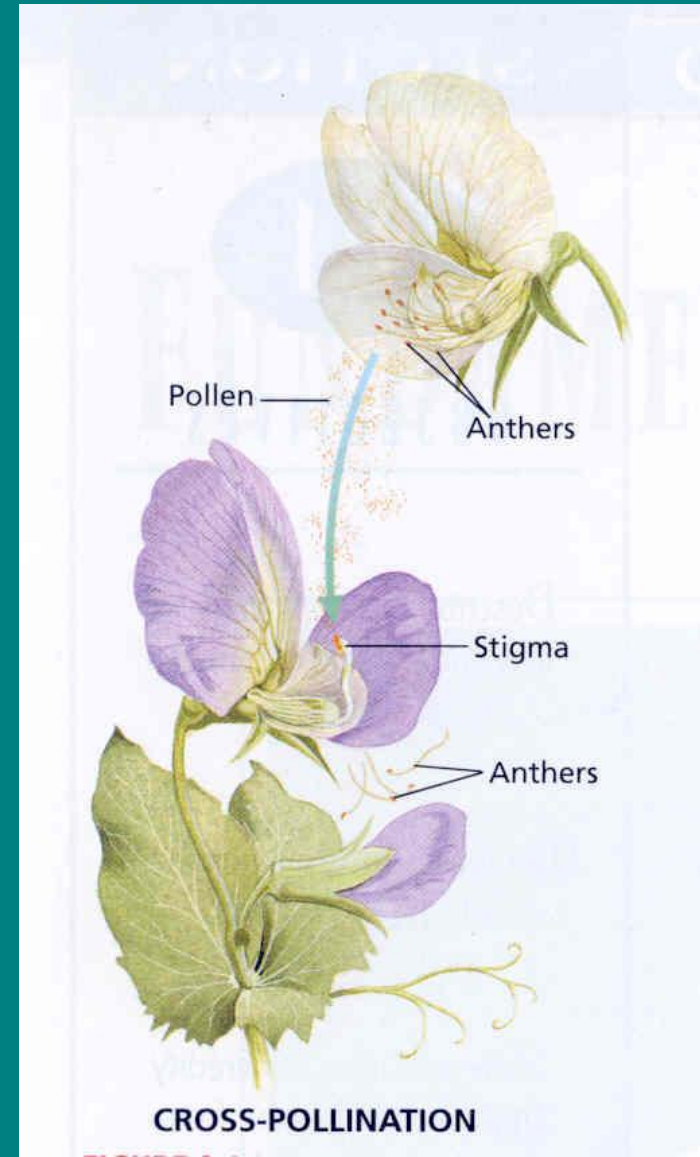


# Reproduction = The ability to form a new offspring.

*Can be sexual or asexual.*

Sexual Reproduction – 2 organisms combining genetic material for new offspring.

Asexual Reproduction – 1 individual providing exact copy of genetic material.

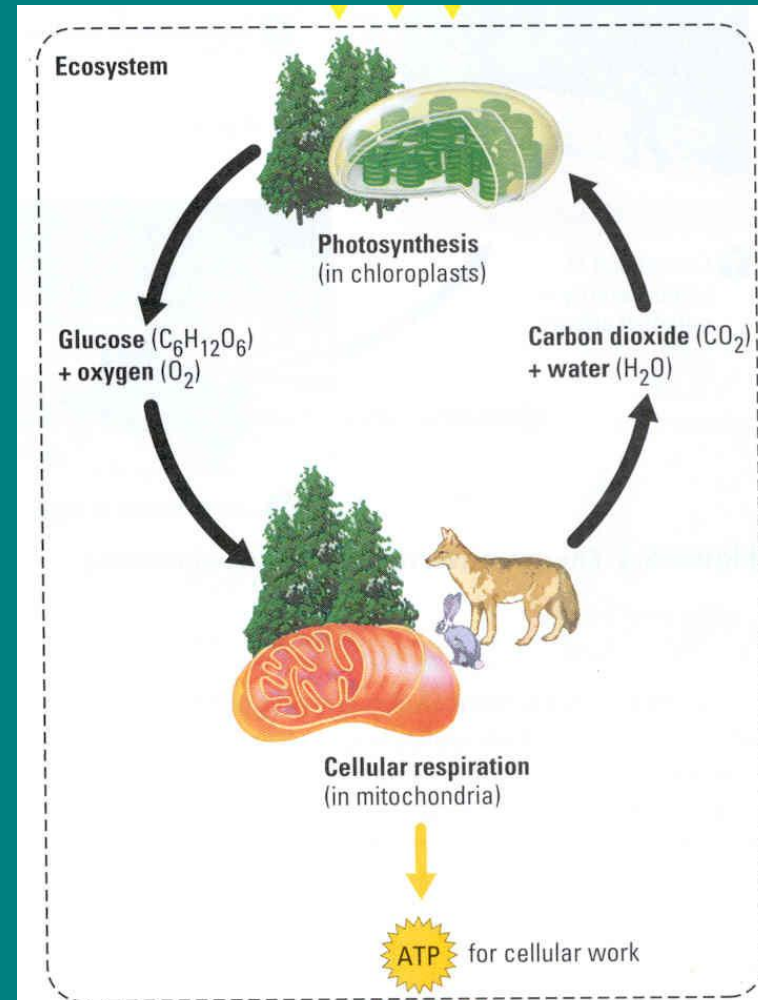


# Metabolism = The ability to obtain and use energy for growth and movement

*Examples: Cellular  
Respiration,  
Photosynthesis*

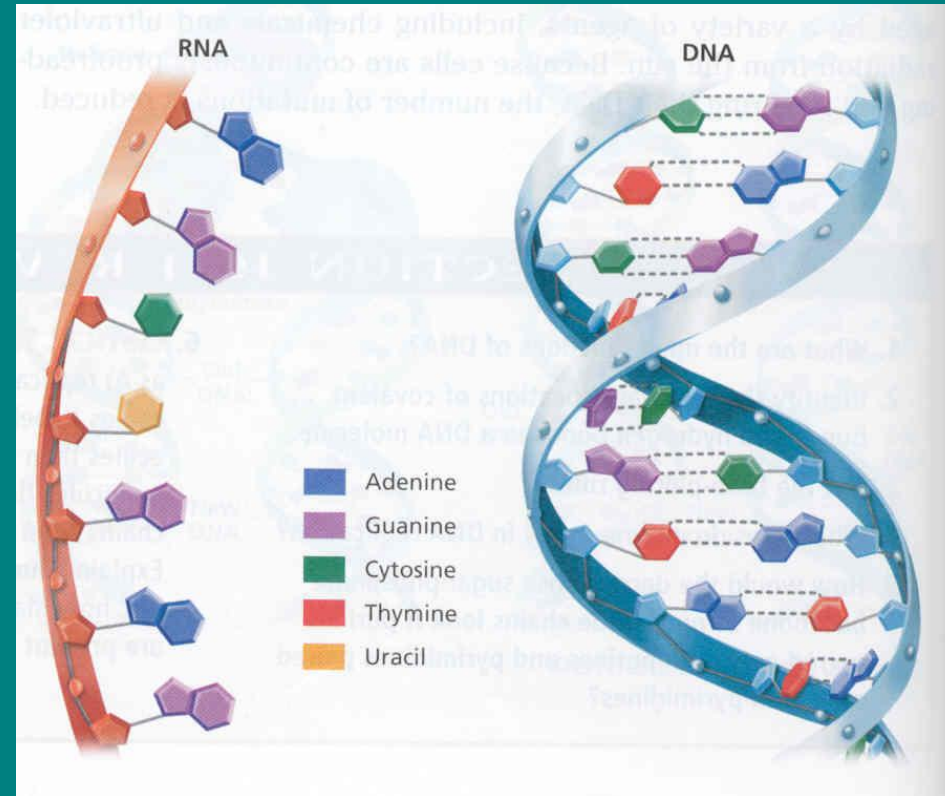
How do you know?

*If it grows or causes  
movement.*



# DNA/Hereditiy = Genetic material that is passed on during reproduction.

- DNA & RNA tell each cell what and how to make proteins.
- How do you know if it has DNA?
  - Use a microscope





1. **Cells** = Living things have one or more cells.
2. **Homeostasis** = The maintenance of a relatively stable internal environment.
3. **Reproduction** = The ability to form a new offspring.
4. **Metabolism** = The ability to obtain and use energy for growth and movement
5. **DNA/Heredity** = Genetic material that is passed on during reproduction.

*Easy way to remember this Essential Skill...*

*Look at the initials.. Every living thing must be*

**CHRMD** (charmed)