

# All Living Things

unicellular →

Prokaryotes →

- Free floating genetic material
- No nucleus
- No membrane bound organelles

Bacteria

Archaea

Eukaryotes

Simplest and most ancient of cells

could be uni- or multi-cellular

- The difference between Bacteria and Archaea has a lot to do with the cell membranes
- Many Archaea are "extremophiles"

Plantae Protozoa Animalia Fungi

↓  
★ USA ★

↓  
★ yeast ★

## How are Prokaryotes and Eukaryotes Similar?

Both have:

- DNA
- Ribosomes
- Cytoplasm
- Cell Membrane

Nucleus: a membrane bound organelle that contains the cell's chromosomes

Organelle: a structure in the cell that has a specific job, kind of like organs in our bodies

Extremophile: an organism that thrives in extreme environments

## What makes Eukaryotes different?

- More complex, generally larger
- Distinct nucleus containing the genetic material
- Membrane bound organelles