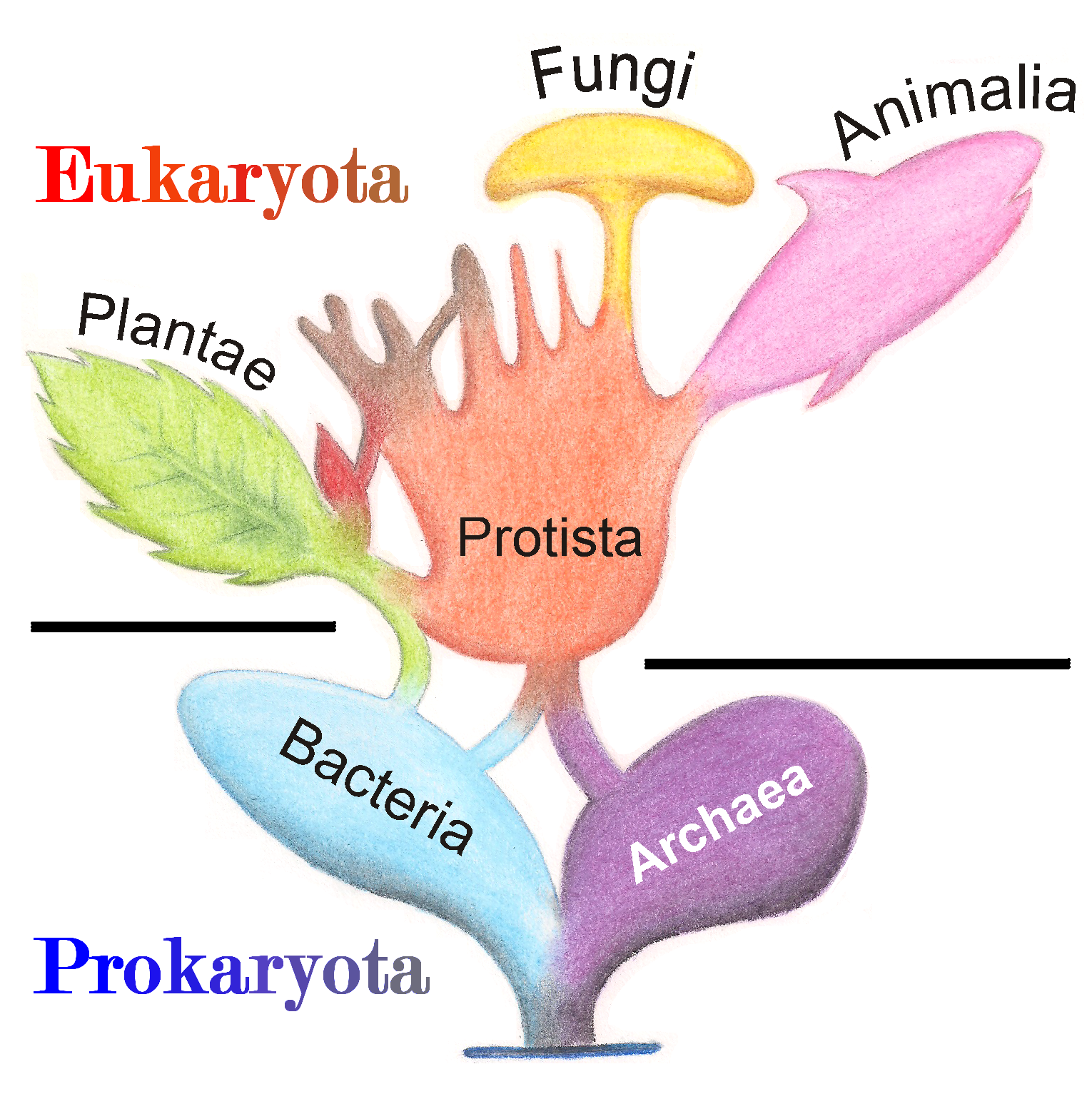
SBI3U Unit 1: Diversity of Living Things

Classifying Living Organisms The Kingdoms

There are 6 kingdoms of classification

Archaea

Bacteria

Fungi

Protista

Plantae

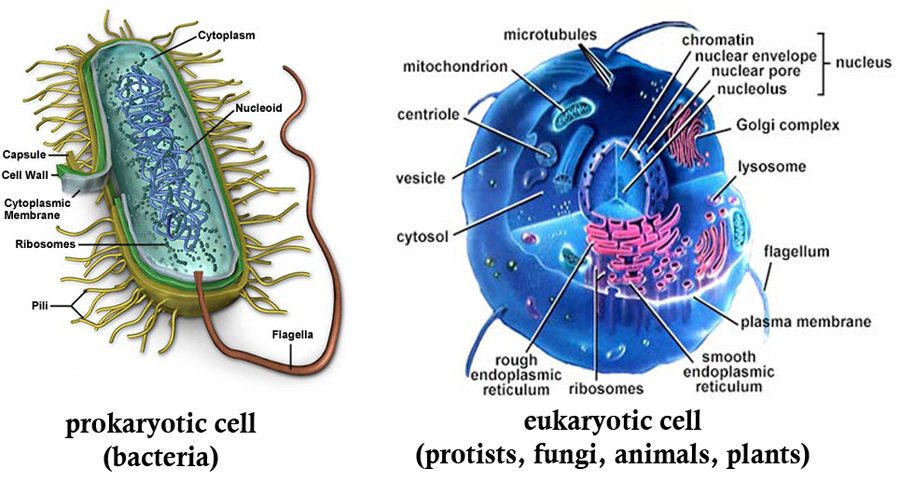
Animalia

\*Note\* Sometimes you will still see the kingdom **bacteria** referred to as **eubacteria**. Also the older term for **Archae** was **Archaebacteria.**

There are two major cell types:

Prokaryotic - a smaller, simple type of cell that does not have a membrane-bound nucleus

Eukaryotic - a larger, complex type of cell that does have a membrane-bound nucleus



There are 3 domains:

Archae - includes only the kingdom Archae (prokaryotes)

Bacteria - includes only the kingdom bacteria (prokaryotes)

Eukarya - includes the kingdoms: Protista, Fungi, Plantae, and Animalia (eukaryotes)

Background Info & Terms

Unicellular - 1 cell

Multicellular - >1 cell

Heterotroph - has to eat things to get energy, cannot make its own food

Autotroph - can photosynthesize to make its own food

Sexual Reproduction - with a mate

Asexual Reproduction - no mate required

Prokaryotic - few organelles, no nucleus, one plasmid instead of chromosomes

Eukaryotic - organelles, nucleus, more than one chromosome

Classifying Kingdoms

|  |  |  |
| --- | --- | --- |
| Characteristic | Possible example | Possible example |
| Nutrition | Heterotrophic  -consumes living or dead organisms to obtain energy | Autotrophic  -uses sun’s energy or chemicals  -makes own food |
| Number of Cells | **Unicellular**  -one cell | **Multicellular**  -more than one cell |
| Reproduction | **Asexual**  -offspring produced from a single parent (genetically identical to parent | **Sexual**  -production of offspring from fusion of 2 sex cells (offspring differ from parents) |
| Habitat | -where does the organism live? |  |
| Cell Type | Prokaryotic  -circular chromosome  -no membrane bound organelles (e.g. no true nucleus)  -very small (less than 2 um)  -reproduce by binary fission | Eukaryotic  -double stranded chromosomes in nucleus  -membrane bound organelles  -larger (10-100 um)  -reproduce by mitosis or meiosis |