Fungi

- Most are multicellular
- Cell wall has *chitin*

Structure

- **Hyphae**- Strings that make up the basic shape and structure
- **Mycelium**- Netlike mass of hyphae (underground)
- **Fruiting body**- Reproductive structure (visible to us above ground)
- **Cross walls**- hyphae can be dived into cells by walls called septa
    - Have hole to allow transport along th hyphae

Nutrition

- **Saprophytic**: Decomposers that recycle nutrients
- **Parasitic**: Absorb nutrients from the living cells of hosts
- **Mutualistic**: Work with another organism to help each other out

Reproduction

- **Budding**: Asexual reproduction where a daughter cell grows while attached to the parent cell
- **Fragmentation**: The mycelium gets disconnected, creating two
- **Spore Reproduction**: Asexual and sexual where a spore(haploid) is created and can continue to mature into a hyphae without gamettes.
    - May have sporangium (a case to protect the spore)
    - Relies on quality over probability of reproducing
    - Lightweight so they can fly away

Types

- **Chytrids** (Chytridiomycota)
    - Aquatic
    - Some paracitic
    - Have Flagellated spores
- **Common mold** (Zygomycota)
    - Mostly terrestrial
    - Some are mutualistic
    - Form hyphae called **stolons**
    - Hyphae **rhizoids** penetrate the food

    - Produce asexually (**sporangia**) or sexually (**gametangium**)
- **Sac Fungi** (Ascomycota)
    - Yeast is the only unicellular
    - Reproduce asexually through spores then sexually
- **Club Fungi** (Basidiomycota)
    - Includes mushrooms
    - Can be paracitic, mutualistic, or Saprophyic
    - Decompose wood
    - Mostly sexual reproduction through its **basidiocarp**
- **Imperfect fungi** (Deuteromycota)
    - Sexual reproduction has never been observed

Uses

- **Lichen**: symbiotic relationship between a fungus and an algae
- **Mycorrhizae**: mutualistic relationship between a specialized fungus and plant roots
- **Decomposers**
- **Medicinal**: Penicillin
- **Foods**: Mushrooms, cheese
- **Kill** plants
- **Parasitize**: athletes foot, ringworm, yeast infections