

Protists and Fungi

Chapter 7



Kingdom Protista

- Junk-drawer kingdom
- Protists are divided into three categories:
 - Animal-like
 - Fungus-like
 - Plant-like

Animal-like protists

- Protozoans: Able to move and obtain their food
- Heterotrophic
- Unicellular

- Four methods of movement:
 - Pseudopods: Temporary bulges of the cell membrane. “false foot”
 - Cilia: Hair-like projections that move with a wavelike pattern

–Flagella

–Other – Usually parasites



Fungus-like Protists

- Like fungi, these protists are heterotrophs, have cell walls, and use spores to reproduce.
- Unlike fungi, these protists are able to move.
- Spore: A tiny cell that is able to grow into a new organism

- Mold and mildew



Plant-like Protists

- Commonly called algae
- Autotrophic

- Types:
 - Green, red, brown algae
 - Diatoms
 - Dinoflagellates
 - Euglenoids

- Euglenoids
 - Green, unicellular algae that are found mostly in fresh water



Kingdom Fungi

- Most fungi share three important characteristics:
 - Eukaryotes
 - Use spores to reproduce
 - Heterotrophs

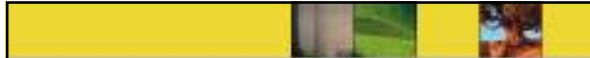
- Hyphae: Branching, threadlike tubes that make up the bodies of multicellular fungi





How do fungi obtain food?


- The fungus grows hyphae into its food source
- Digestive chemicals ooze from the hyphae into the food

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- The digestive chemicals break down the food into small substances that can be absorbed into the hyphae.



Fungi Reproduction

- Asexual
 - Budding – a small yeast cell grows from the body of a fungus. It eventually breaks away.

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- Sexual
 - The hyphae of two fungi grow together and genetic material is exchanged. A new structure grows from the joined hyphae.



Roles of Fungi

- Environmental decomposers
- Provide food
- Cause diseases
- Fight diseases



Fungi Classification

- Four groups based on the shape of the spore-producing structures, and ability to reproduce sexually:
 - Threadlike, Sac, Club, Imperfect

- Threadlike Fungi – 600 species of molds, produce spores in their hyphae



- Sac Fungi – 30,000 species, produce spores in structures that look like sacks



- Club Fungi – 25,000 species, produce spores in structures that look like clubs



- Imperfect Fungi – 25,000 species, do not reproduce sexually, *Penicillium* is in the group

