

Kingdom Fungi

Specific Objectives

The learner should be able to:

1. State the characteristic of fungi
2. State characteristics of Rhizopus or Mucor, yeast and mushroom.
3. State the economic importance of fungi
4. Name the common fungal diseases
5. Describe the method of preventing fungal diseases
6. Explain the use of yeast in brewing alcohol and bread making

Characteristics

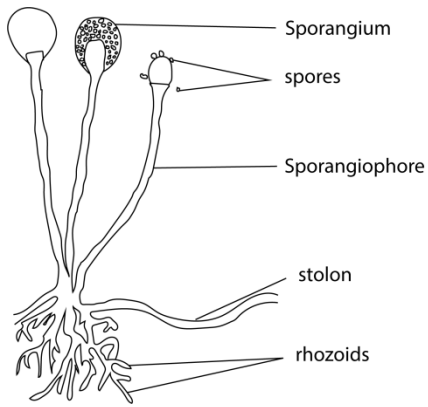
1. Have no chlorophyll; do not photosynthesize.
2. Heterotrophic
3. Cell wall contain chitin rather than cellulose
4. Body usually a mycelium
5. Carbohydrates stored as glycogen
6. Reproduction by means of spores without flagella

Classification

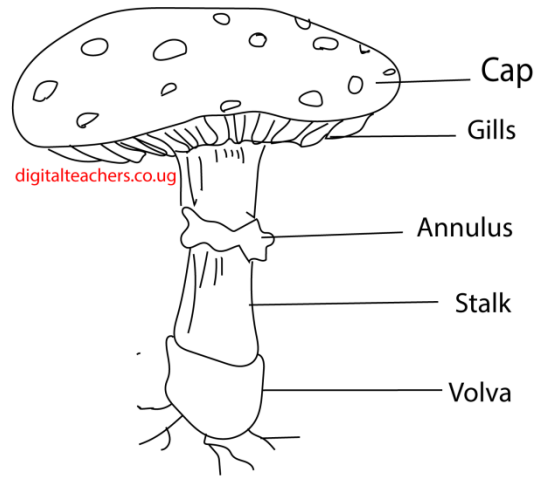
| Phylum: Zygomycota | Phylum: Ascomycota | Phylum: Basidiomycota |
|---|---|---|
| No septa in hyphae; large branched mycelium formed | Septa in hyphae | Septa in hyphae, large 3-dimensional structure often formed |
| Asexual reproduction by sporangia producing spores or y conidia | Asexual reproduction by conidia | Asexual reproduction unusual but by spores |
| Sexual reproduction by conjugation that gives rise to zygospore | Sexual reproduction by ascospores forming in an ascus | Sexual reproduction by formation of basidiospores outside basidia |
| Example: mould or Mucor Rhizopus- bread mould | e.g., yeast | E.g. Agaricus Campestris - field mushroom |

Parts of Rhizopus

parts of mushroom

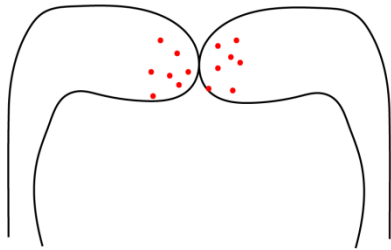


Economic importance of fungi

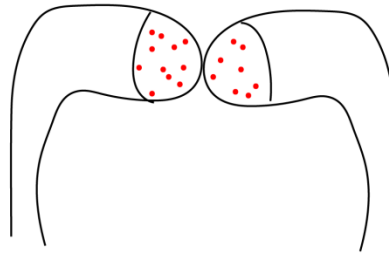


Mushroom

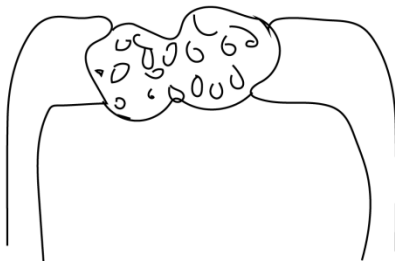
Sexual reproduction in rhizopus



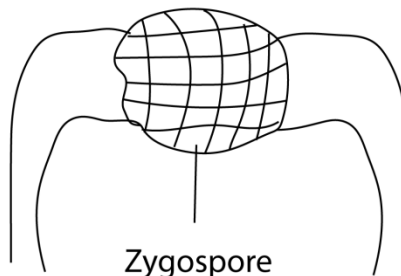
1. Swollen tips of hhyphae come together



2, Cross wals apperar and enclose sevelral nuclei



3. end wall disappear and nuclei fuse and outer covering begin to develop



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under favorable conditions zygospore germinate

Beneficial

1. Decompose and recycle organic matter
2. Production of antibiotics e.g. penicillin
3. Production of alcohols
4. Baking e.g. yeast

Nonbeneficial

1. Cause diseases e.g. ringworm,
2. Food decay

Example fungal disease in plants

Anthraco-nose;

1. Rots;
2. Mildews
3. Rusts

Example of fungal diseases to animals

1. Athletic foot
2. Ringworm
3. Candida
4. meningitis

