

EXERCISE 6: FUNGI - DECOMPOSERS AND MORE

Once you have completed this exercise, you should be able to:

1. Describe characteristics that distinguish fungi from organisms in the other kingdoms.
2. Distinguish between mechanisms of asexual and sexual reproduction.
3. Based upon structure and method of spore production, distinguish among Chytridiomycota, Zygomycota, Ascomycota, and Basidiomycota.
4. Explain why water molds (Phylum Oomycota) are not classified into the Kingdom Fungi.
5. Describe the generalized life cycle of the following: Chytridiomycota, Zygomycota, Ascomycota, and Basidiomycota; distinguish between asexual and sexual stages of reproduction.
6. From a specimen, drawing, photo, or slide, identify the major reproductive structures of a zygomycete including: sporangiophore, sporangiospores, zygosporangium, and meiospores.
7. From a specimen, drawing, photo, or slide, identify the major reproductive structures of an ascomycete including: conidiophore, conidia, ascocarp, asci, and ascospores.
8. From a specimen, drawing, photo, or slide, identify the major reproductive structures of a basidiomycete including: basidia and basidiospores.
9. Describe two symbiotic associations of fungi.
10. Distinguish between ectotrophic mycorrhizae in Glomeromycota and endotrophic mycorrhizae in other fungi.
11. Identify the growth forms of lichens.
12. From a drawing, photo, or slide, identify the algal and fungal components of a lichen.
13. Define and identify the following terms:

Fungi
Chytridiomycota
Zygomycota
Ascomycota
Basidiomycota
Glomeromycota

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chitin
saprophyte
parasite
hyphae
septate
aseptate
mycelium
syngamy
plasmogamy
karyogamy
sporophyte
gametophyte
zoospores
sporangiophore
sporangiospores
zygosporangium
meiospores
conidiophores
conidia
ascocarp
asci
ascospores
basidiocarp
basidia
basidiospores
cap
gills
stalk
annulus
symbiotic
lichen
crustose
foliose
fruticose
endotrophic mycorrhizae
ectotrophic mycorrhizae