

Kingdom Fungi Group Work (Checklist of Information)

Group #1

1. What are fungi and what main characteristics do they have?
 - Fungi are eukaryotic heterotrophs that have cell walls made of chitin (complex carbohydrate)
 - All are multicellular except for yeast

2. Using the phylum zygomycota answer the following questions:
 - a. What is it more commonly known as?
 - Common molds
 - b. Give at least 2 examples of this type of fungi.
 - mold found on bread, cheese, fruit, etc...
 - c. Briefly describe the life cycle of this type of fungi.
 - has both a sexual and asexual phase
 - Hyphae of different mating types fuse making a zygote
 - zygotes develop into zygospores which eventually undergo meiosis making spores
 - the spores are released

Group #2

1. Explain how fungi gain their nutrients.
 - They digest food outside of their bodies and then absorb it.
 - Normally they absorb nutrients from decaying matter in the soil, others can live as parasites absorbing nutrients from hosts.

2. Using the phylum Ascomycota answer the following questions:
 - a. What is it more commonly known as?
 - sac fungi
 - b. Give at least 2 examples of this type of fungi.
 - cup fungi
 - yeast
 - c. Briefly describe the life cycle of this type of fungi.
 - includes both sexual and asexual reproduction
 - during asexual reproduction, spores form at the tips of hyphae, if the spore lands on a suitable location it will grow
 - during sexual reproduction, hyphae of two mating types grow close together and produce a fruiting body
 - yeast will reproduce through the process of budding

Group #3

1. Describe and illustrate the structure and function of fungi.

Hyphae =

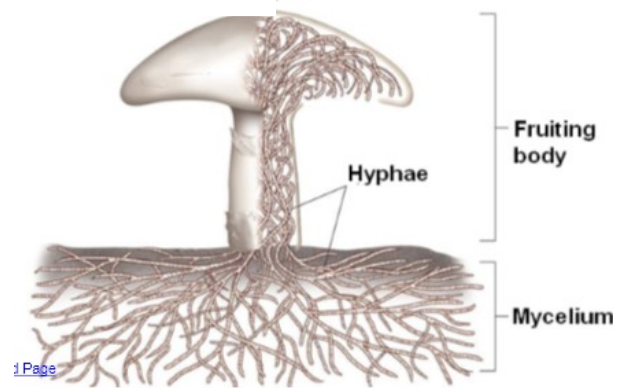
- all but yeast have these
- they compose the bodies
- made up of thin filaments.
- some are only one cell thick

Mycelium

- a thick, tangled mass of hyphae
- absorbs food
- covers large surface area

Fruiting Body

- part recognized as mushroom



2. Using the phylum Basidiomycota answer the following questions:

a. What is it more commonly known as?

- club fungi

b. Give at least 2 examples of this type of fungi.

- mushroom, puffball

c. Briefly describe the life cycle of this type of fungi.

- basidia line the gills
- they come together forming a zygote that creates spores which connect together making chains of hyphae making mycelium
- when there is the right conditions spores can produce fruiting bodies that push above the ground

Group #4

1. Explain how fungi are able to reproduce asexually as well as sexually.

- most fungi reproduce both asexually and sexually
- Asexually
 - when cells or hyphae break off from a fungus and begin to grow on their own (fragmentation)
 - some produce spores which are capable of growing into organisms on their own through mitosis
- Sexually
 - involves hyphae consisting of 2 different mating types (+ and -)
 - when hyphae of opposite mating types meet, they start the process by fusing opposite nuclei together
 - the fused nuclei create a zygote
 - the zygote enters mitosis creating spores capable of growing into new organisms

2. Using the phylum Deuteromycota answer the following questions:
 - a. What is it more commonly known as?
 - Imperfect Fungi
 - b. Give at least 2 examples of this type of fungi.
 - *Penicillium*, *Aspergillus*
 - c. Briefly describe the life cycle of this type of fungi.
 - Do not appear to have a sexual phase or at least it has not yet been observed
 - until a sexual phase is discovered, scientists place it here