

Study Guide
MICROBIAL DIVERSITY
ToL 12

ToL 12 focuses on – hooray – the Fungi. The parts of this chapter for which you are responsible are addressed here.

1. How many species of Fungi are thought to exist?
2. What is the sister group to Fungi, and how long ago did they diverge?
3. What were the major characteristics of the last common ancestor of fungi and animals?
4. Although fungi and animals are both heterotrophs, fungi _____.
5. The most commonly observed fungal symbioses are _____, which they form with cyanobacteria, green algae, or both; and _____ and _____ in association with plants.
6. Name three human ailments caused by fungi.
7. How do humans use yeasts? To what phylum does *Saccharomyces* belong?
8. What are the various roles of the fungus *Penicillium*? To what phylum does it belong?
9. Are fungi monophyletic?
10. Which lineage of fungi comprises the largest number of described species? Are these species sexual, asexual, or a mix of both?

11. What are the two most important ecological roles of the Basidiomycota?

12. The order Glomales is exceptionally important. Why?

13. What is the distinguishing feature of the Chytridiomycota?

14. Describe the flagellum of the Chytridiomycota.

15. Where can one find Chytridiomycota in nature?

16. What is the significance of the Chytrid fungus known as *Batrachochytrium*?