Section 21–1 The Kingdom Fungi (pages 527–529)

Key Concepts

- What are the defining characteristics of fungi?
- What is the internal structure of a fungus?
- How do fungi reproduce?

What Are Fungi? (page 527)

1. Circle the letter of each sentence that is true about fungi.
   a. They are heterotrophs.
   b. They have cell walls.
   c. They are photosynthetic.
   d. They are eukaryotic.
2. The cell walls of fungi are made of a complex carbohydrate called _____.

Structure and Function of Fungi (pages 527–528)

5. Which group of fungi are not multicellular? _____
6. What are hyphae? _____
7. How thick is each hypha? _____
8. In some fungi, what divides the hyphae into cells containing one or two nuclei? _____
9. What is a mycelium? _____
10. Why is a mycelium well suited to absorb food? _____
11. What is a fruiting body of a fungus? _____

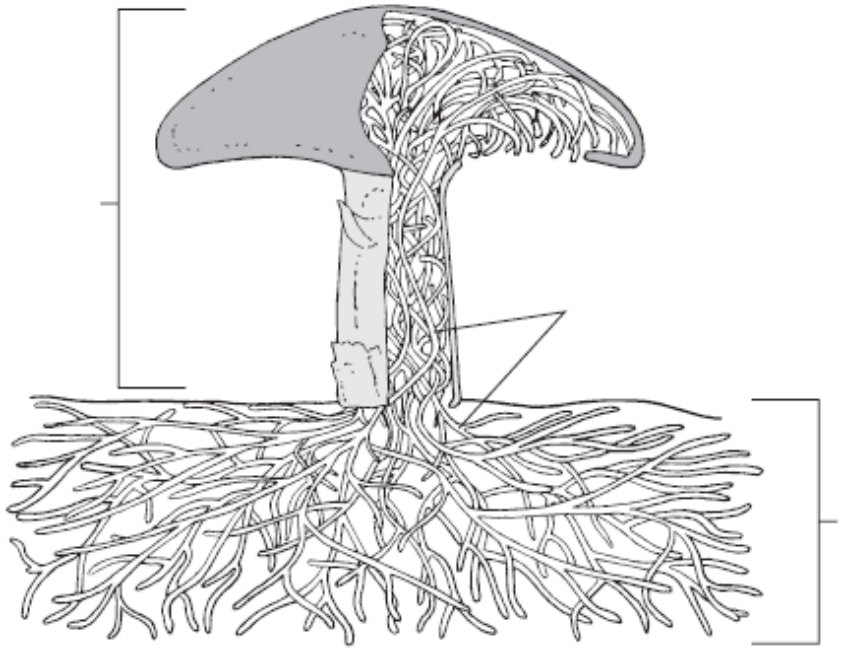
12. What is a fairy ring, and why does it form? _____

_____

_____

_____

13. Label the parts of the fungus.



Reproduction in Fungi (pages 528–529)

14. Is the following sentence true or false? Most fungi can reproduce only asexually.

_____

15. How does asexual reproduction occur in fungi? _____

_____

_____

_____

16. In some fungi, spores are produced in structures called _____.

17. Where are sporangia found in a fungus? _____

_____

_____

18. Sexual reproduction in fungi usually involves two different _____.

20. How does a zygote form in fungal sexual reproduction? _____

_____

_____

_____

How Fungi Spread (page 529)

22. Is the following sentence true or false? The spores of many fungi scatter easily in the wind. _____

23. For a fungal spore to grow, where must it land? _____

_____

_____

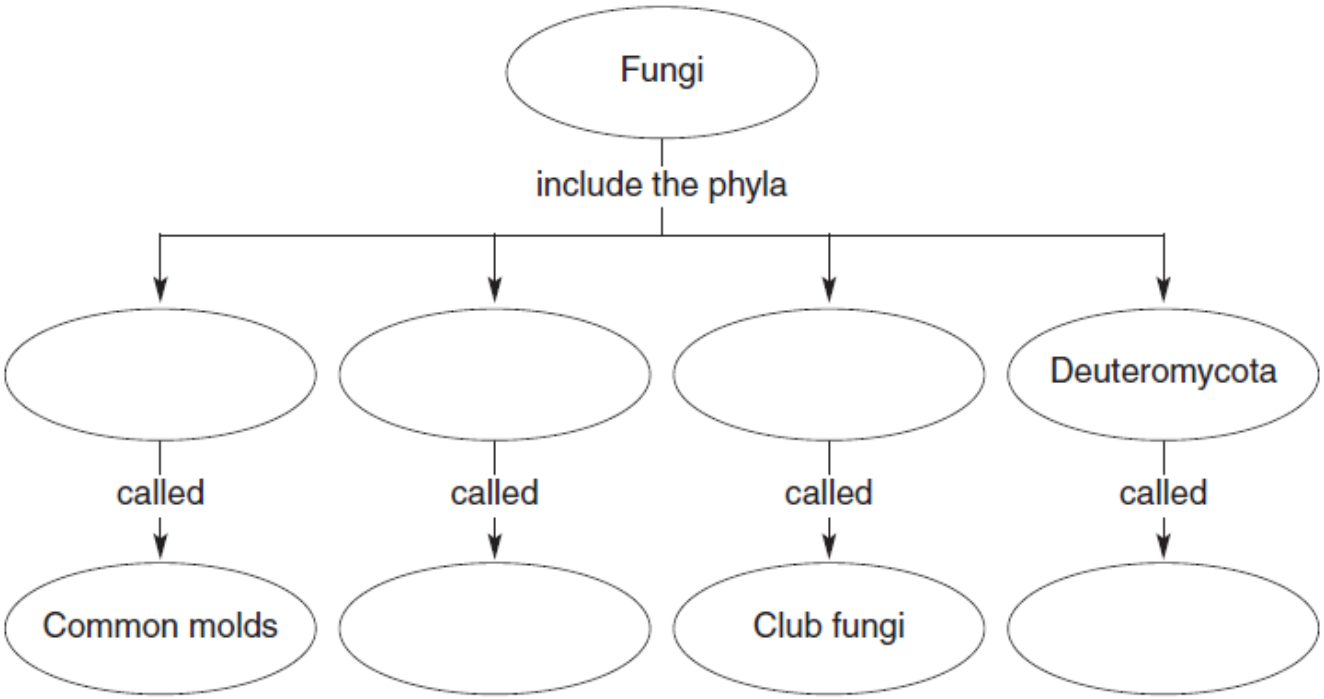
Section 21–2 Classification of Fungi (pages 530–536)

Key Concept

- What are the characteristics of the four main phyla of fungi?

Introduction (page 530)

1. Complete the concept map about the four main groups of fungi.



The Common Molds (pages 530–531)

2. What are zygomycetes? _____

_____

_____

3. The resting spore formed during the sexual phase of the mold's life cycle is called a(an) _____.

5. What is the common name for *Rhizopus stolonifer*? _____

The Sac Fungi (pages 532–533)

8. What is an ascus? _____

_____

9. Is the following sentence true or false? Ascomycetes make up the largest phylum in the kingdom Fungi. _____

12. Is the following sentence true or false? Yeasts are multicellular ascomycetes.

_____

13. Why are yeasts classified as ascomycetes? _____

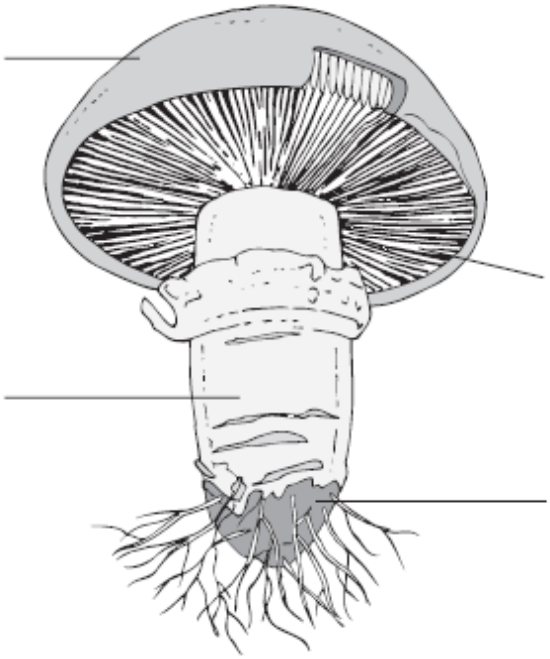
14. What process do yeasts carry out to obtain energy when they are in a nutrient mixture such as bread dough? _____

The Club Fungi (pages 534–536)

15. From what does the phylum Basidiomycota get its name? _____

_____

16. Label the parts of a mushroom.



17. Where are basidia found on a basidiomycete? _____

_____

_____

18. The cap of a basidiomycete is composed of tightly packed _____.

20. Circle the letter of each example of basidiomycetes.

a. puffballs b. shelf fungi c. rusts d. yeasts

21. Why should you never pick or eat any mushrooms found in the wild?

_____

_____

The Imperfect Fungi (page 536)

23. The phylum Deuteromycota is composed of what fungi? _____

_____

_____

_____

24. What is *Penicillium notatum*, and where does it grow naturally? _____

_____

25. What is produced from *Penicillium notatum*? _____

_____

Section 21–3 Ecology of Fungi (pages 537–542)

All Fungi Are Heterotrophs (page 537)

1. Fungi cannot manufacture their own food because they are _____.
2. What are saprobes? _____

_____

_____

Fungi as Decomposers (page 538)

3. Fungi recycle nutrients breaking down the bodies and wastes of other _____.

Fungi as Parasites (pages 538–539)

5. Parasitic fungi cause serious plant and animal _____.
6. Circle the letter of each example of a fungal plant disease.

   a. wheat rust b. corn smut c. thrush d. mildews

9. One deuteromycete can infect the areas between the human toes, causing an infection known as _____.

Symbiotic Relationships (pages 540–542)

11. Lichens and mycorrhizae are both examples of what kind of symbiotic relationship?

_____

12. What are lichens? _____

_____

13. What is the photosynthetic organism in a lichen? _____

_____

15. What benefits do the fungus and the photosynthetic organism derive from the association in a lichen? _____

_____

_____