

## Chapter 21 Fungi

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



**TEKS FOCUS:** 8C Characteristics of fungi

*This section describes the defining characteristics of fungi. It also describes the internal structure of a fungus and explains how fungi reproduce.*

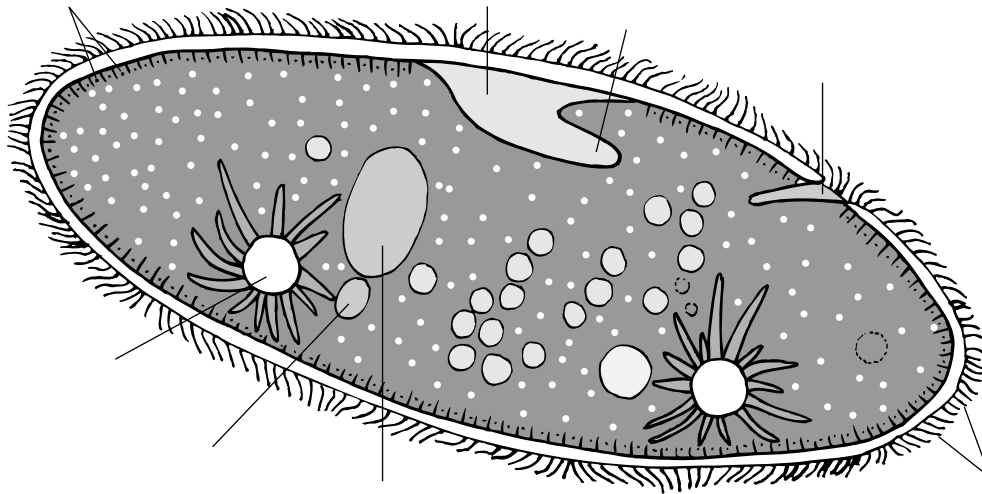
#### What Are Fungi? (page 527)

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 \_\_\_\_\_.
3. How do fungi digest their food? \_\_\_\_\_  
\_\_\_\_\_
4. Is the following sentence true or false? Some fungi are parasites. \_\_\_\_\_

#### 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 only reproduce 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 \_\_\_\_\_.

19. What is a gametangium? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

21. Circle the letter of each sentence that is true about sexual reproduction in fungi.
- a. The zygote is often the only diploid cell in the fungus's entire life cycle.
  - b. Mating types are called male and female.
  - c. Gametes of both mating types are about the same size.
  - d. One mating type is a "+" (plus) and the other is a "-" (minus).

**How Fungi Spread** (page 529)

22. Why do molds seem to grow in any location that has the right combination of moisture and food? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

23. Is the following sentence true or false? The spores of many fungi scatter easily in the wind. \_\_\_\_\_

24. For a fungal spore to grow, where must it land? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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

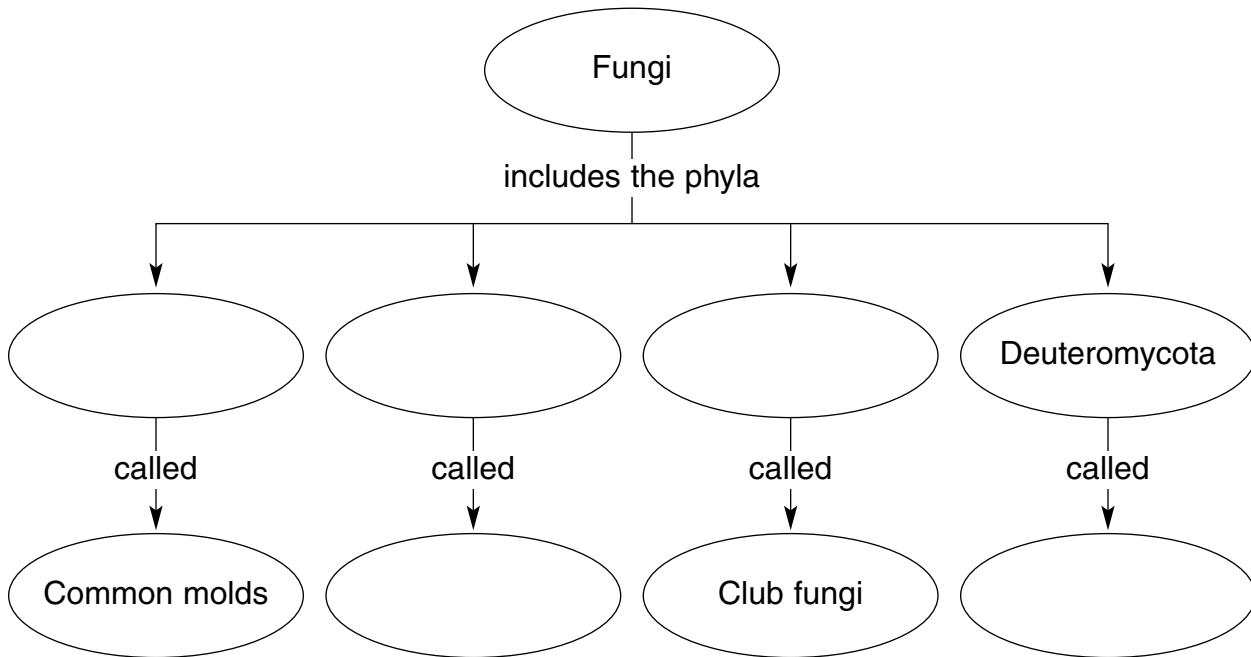


**TEKS SUPPORT:** 6E Significance of mitosis in asexual and sexual reproduction

This section describes the characteristics of the four main phyla of fungi.

### Introduction (page 530)

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



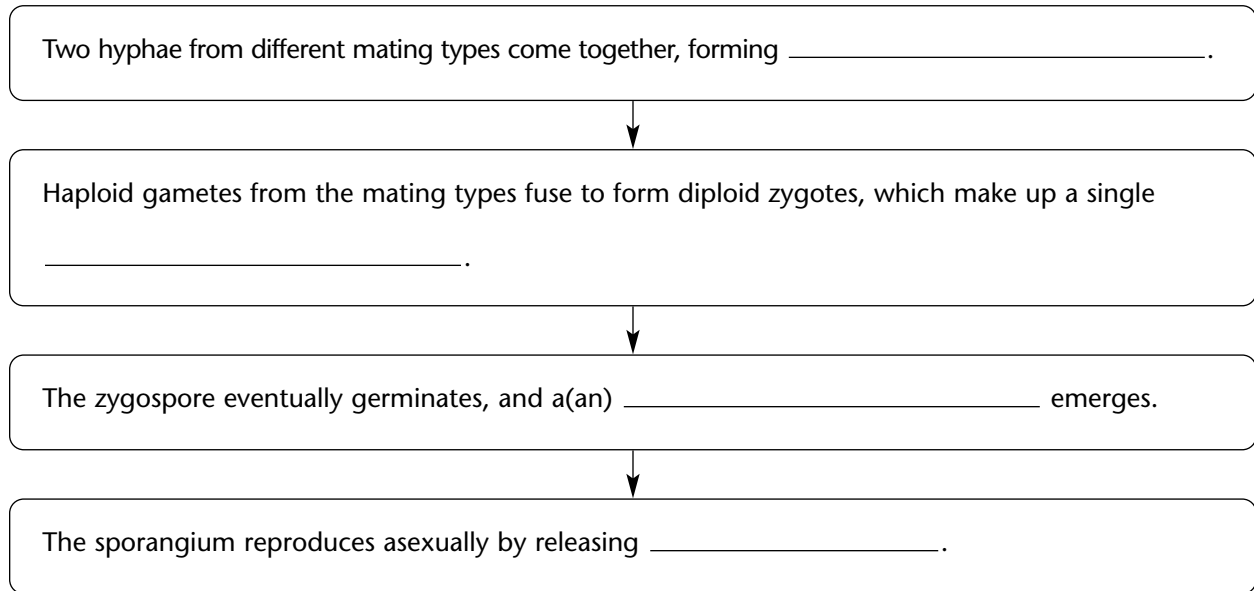
### The Common Molds (pages 530–531)

2. What are zygomycetes? \_\_\_\_\_  
\_\_\_\_\_
3. The resting spore formed during the sexual phase of the mold’s life cycle is called a(an) \_\_\_\_\_.
4. Is the following sentence true or false? The hyphae of zygomycetes are generally divided by cross walls. \_\_\_\_\_
5. What is the common name for *Rhizopus stolonifer*? \_\_\_\_\_
6. Complete the table about the kinds of hyphae of black bread mold.

#### KINDS OF HYPHAE

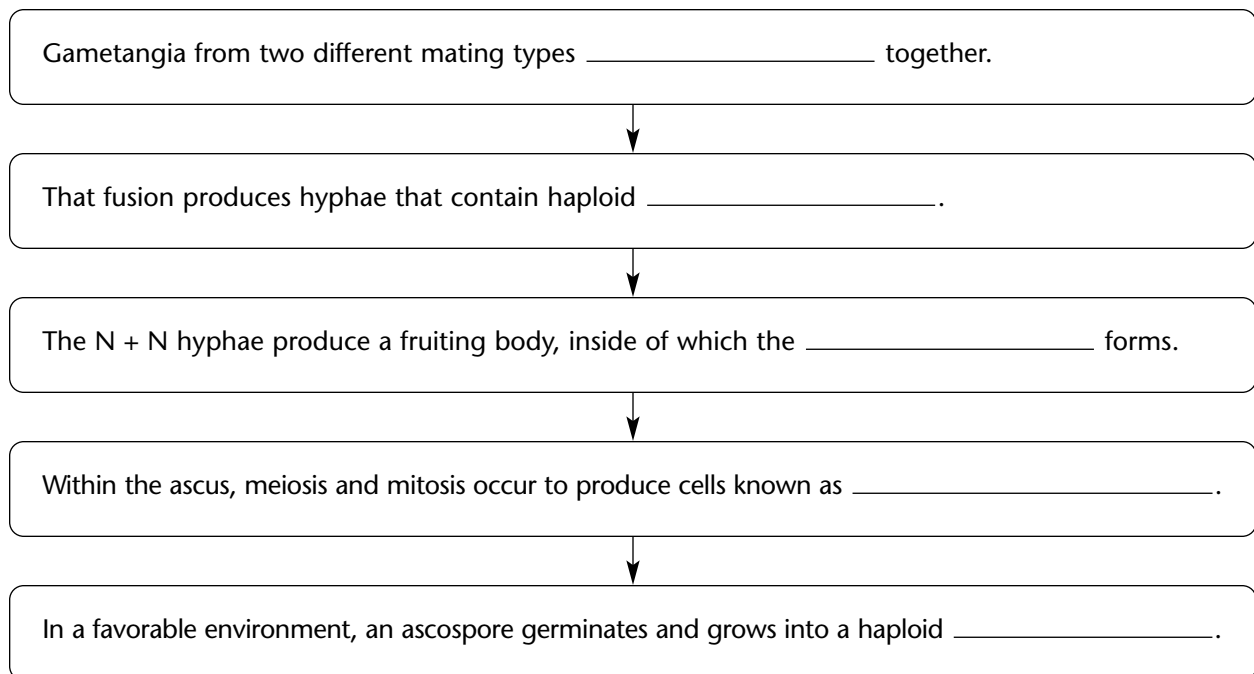
Kind	Description
Rhizoids	
Stolons	
	Hyphae that push up into the air and form sporangia at their tips.

7. Complete the flowchart about sexual reproduction in zygomycetes.



**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. \_\_\_\_\_
10. What occurs among sac fungi during asexual reproduction? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. Complete the flowchart about sexual reproduction in ascomycetes.

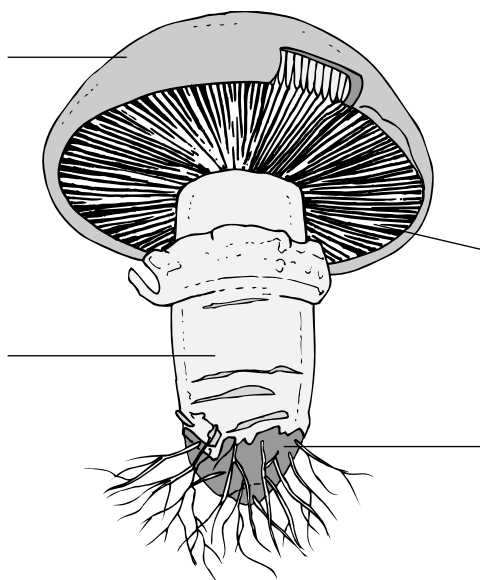


Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

12. Is the following sentence true or false? Yeasts are multicellular ascomycetes.  
\_\_\_\_\_
13. Why are yeasts classified as ascomycetes? \_\_\_\_\_  
\_\_\_\_\_
14. The common yeasts used for baking and brewing are members of the genus \_\_\_\_\_.
15. 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)

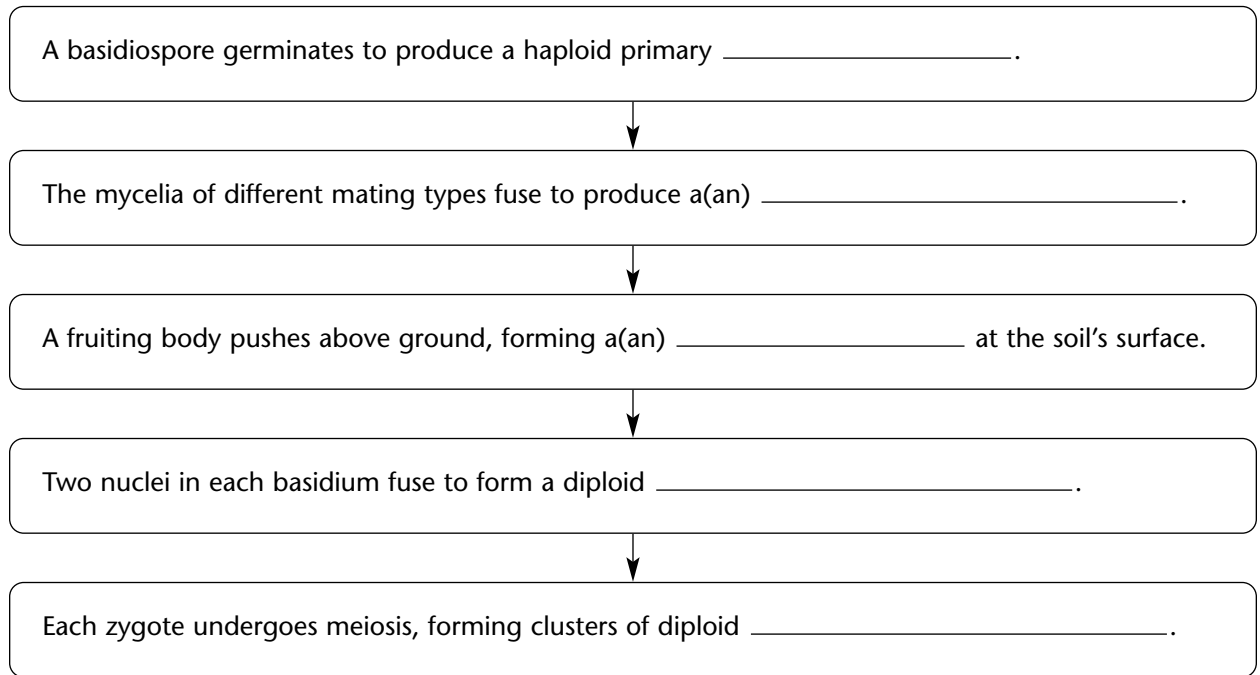
16. From what does the phylum Basidiomycota get its name? \_\_\_\_\_  
\_\_\_\_\_
17. Label the parts of a mushroom.



18. Where are basidia found on a basidiomycete? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
19. The cap of a basidiomycete is composed of tightly packed \_\_\_\_\_.
20. Is the following sentence true or false? The remarkable growth of mushrooms overnight is caused by cell enlargement. \_\_\_\_\_
21. Circle the letter of each example of basidiomycetes.  
a. puffballs    b. shelf fungi    c. rusts    d. yeasts
22. Why should you never pick or eat any mushrooms found in the wild?  
\_\_\_\_\_  
\_\_\_\_\_

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23. Complete the flowchart about reproduction in basidiomycetes.



### The Imperfect Fungi (page 536)

24. The phylum Deuteromycota is composed of what fungi? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
25. What is *Penicillium notatum*, and where does it grow naturally? \_\_\_\_\_  
\_\_\_\_\_
26. What is produced from *Penicillium notatum*? \_\_\_\_\_  
\_\_\_\_\_

#### Reading Skill Practice

You can often increase your understanding of what you've read by making comparisons. A compare-and-contrast table helps you to do this. On a separate sheet of paper, make a table to compare the four main groups of fungi you read about in Section 21-2. For more information about compare-and-contrast tables, see Organizing Information in Appendix A of your textbook.