

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



**TEKS FOCUS:** 1A Safe practices in investigations; 2A Implement investigations; 6E Significance in mitosis; 8C Characteristics of fungi; 11D Microorganisms in ecosystems; 12B Interactions among organisms

*This section explains what the main role of fungi is in natural ecosystems. It also describes problems that parasitic fungi cause and describes the kinds of symbiotic relationships that fungi form with other organisms.*

### All Fungi Are Heterotrophs (page 537)

1. Fungi cannot manufacture their own food because they are \_\_\_\_\_.
2. What are saprobes? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Circle the letter of how the fungus *Pleurotus ostreatus* is classified.
  - a. carnivorous
  - b. omnivorous
  - c. herbivorous
  - d. detritivorous

### Fungi as Decomposers (page 538)

4. Fungi recycle nutrients breaking down the bodies and wastes of other \_\_\_\_\_.
5. How do fungi break down leaves, fruit, and other organic material into simple molecules? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Fungi as Parasites (pages 538–539)

6. Parasitic fungi cause serious plant and animal \_\_\_\_\_.
7. Circle the letter of each example of a fungal plant disease.
  - a. wheat rust
  - b. corn smut
  - c. thrush
  - d. mildews
8. Rusts are members of the phylum \_\_\_\_\_.
9. What two kinds of plants do wheat rusts need to complete their life cycle?  
\_\_\_\_\_  
\_\_\_\_\_
10. One deuteromycete can infect the areas between the human toes, causing an infection known as \_\_\_\_\_.
11. What happens when the fungus that causes athlete's foot infects other areas of the body? \_\_\_\_\_  
\_\_\_\_\_

### **Symbiotic Relationships** (pages 540–542)

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

\_\_\_\_\_

13. What are lichens? \_\_\_\_\_

\_\_\_\_\_

14. What is the photosynthetic organism in a lichen? \_\_\_\_\_

\_\_\_\_\_

15. Where do lichens grow? \_\_\_\_\_

\_\_\_\_\_

16. What benefits do the fungus and the photosynthetic organism derive from the association in a lichen? \_\_\_\_\_

\_\_\_\_\_

17. What are mycorrhizae? \_\_\_\_\_

18. Why is the presence of mycorrhizae essential for the growth of many plants?

\_\_\_\_\_

\_\_\_\_\_

### **WordWise**

*Complete the sentences by using one of the scrambled words below.*

#### **Word Bank**

yodb iiugntrf    chlnei    ziiohrd    roeazrhcy    mmieulcy    sscua  
iiausbmd    pyheah

1. A rootlike hypha of a zygomycete is a(an) \_\_\_\_\_.
2. A symbiotic association between a fungus and a photosynthetic organism is a(an) \_\_\_\_\_.
3. The reproductive structure that develops from mycelia growing underground is a(an) \_\_\_\_\_.
4. The body of a multicellular fungus composed of many hyphae tangled together into a thick mass is a(an) \_\_\_\_\_.
5. Associations of plant roots and fungi are \_\_\_\_\_.
6. A tough sac in ascomycetes that contains spores is a(an) \_\_\_\_\_.
7. The spore-bearing structure of basidiomycetes is a(an) \_\_\_\_\_.
8. Multicellular fungi are composed of tiny filaments called \_\_\_\_\_.