Name _____ Class _____ Date _____

SECTION 21-1 REVIEW

THE KINGDOM FUNGI

VOCABULARY REVIEW **Define the following terms.**

1. **hypha** _____

_____

2. **mycelium** _____

_____

3. **chitin** _____

_____

4. **sporangiophore** _____

_____

5. **fruiting body** _____

_____

MULTIPLE CHOICE **Write the correct letter in the blank.**

_____ 1. All fungi are

a. multicellular and prokaryotic.
b. prokaryotic and photosynthetic.
c. eukaryotic and heterotrophic.
d. unicellular and heterotrophic.

_____ 2. Unlike animals, fungi

a. ingest their nutrients before digesting them.
b. secrete enzymes and then absorb the digested nutrients into their hyphae.
c. have cell walls made of cellulose without chitin.
d. do not have a filamentous body.

_____ 3. The body of a multicellular fungus is composed of a mass of hyphae called a

a. mycelium. b. gametangium. c. sporangia. d. spore.

_____ 4. How do most fungi reproduce?

a. only sexually
b. only asexually
c. both sexually and asexually
d. fungi do not reproduce

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SHORT ANSWER Answer the questions in the space provided.

1. How do the cell walls of fungi differ from those of plants? (p.527)_____

   _____

2. What do "plus" and "minus" mean when used in reference to fungi? (p.529)_____

   _____

3. What characteristic do fungi share with animals? (p527)_____

   _____

4. Where are sporangia found in a fungus? (p.528)_____

   _____

5. For a fungal spore to grow, where must it land? (p.529)_____

   _____

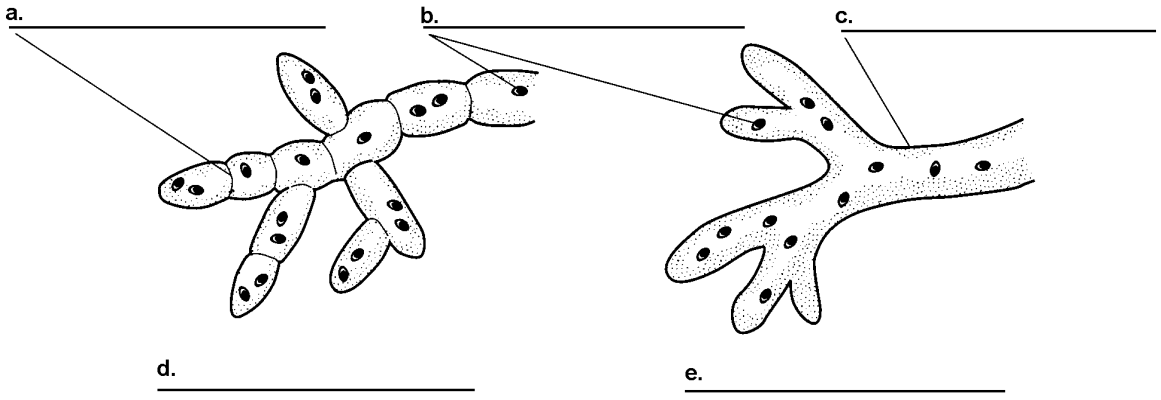
6. What is a fairy ring, and why does it form? (p.528)_____

   _____

7. Which group of fungi are not multicellular? They are unicellular and used by the baking and brewing industries. (p.527)

   _____

STRUCTURES AND FUNCTIONS Identify the structures labeled *a-c*. In the spaces below the drawings, name the type of hyphae each drawing represents, *d-e*. The drawings below depict two types of fungal hyphae. Use the following terms: cell wall, nucleus, cross-wall, hyphae with cross walls, and hyphae without cross-walls. (p.527)



Name _____ Class _____ Date _____

SECTION 21-2 REVIEW

CLASSIFICATION OF FUNGI

VOCABULARY REVIEW Define the following terms.

1. **rhizoid** _____

_____

2. **stolon** _____

_____

3. **budding** _____

_____

4. **ascus** _____

_____

5. **basidium** _____

_____

MULTIPLE CHOICE Write the correct letter in the blank.

_____ 1. The fungi that are often called bread mold belong to the phylum _____. Their hyphae will not have cross walls.

a. Zygomycota. b. Basidiomycota. c. Ascomycota. d. Deuteromycota.

_____ 2. The mushroom seen above ground is the organism's

a. rhizoid. b. stolon. c. zygosporangium. d. fruiting body.

_____ 3. Fungi that produce spores inside sac-like compartments belong to the phylum

a. Zygomycota. b. Basidiomycota. c. Ascomycota. d. Deuteromycota.

_____ 4. Which statement about *Penicillium* is correct?

a. It produces mushrooms.
b. It is a source of an antibiotic.
c. It causes bread to rise.
d. It uses fermentation to produce alcohol.

_____ 5. Fungi feed on

a. only living organisms.
b. both living and dead organisms.
c. only dead organisms.
d. only other fungi.

Name _____ Class _____ Date _____

SHORT ANSWER Answer the questions in the space provided.

1. How do the above-ground, sexual reproductive structures of basidiomycetes differ in appearance from those of ascomycetes? (p.532 and p.534)_____

_____

2. How are fungi imperfecti different from other fungi? (p.536)_____

_____

3. What structures are used to classified fungi into their four different phyla? (p530)

_____

_____

4. Explain why mushrooms cannot be grouped with deuteromycetes. (pp.534-536)_____

_____

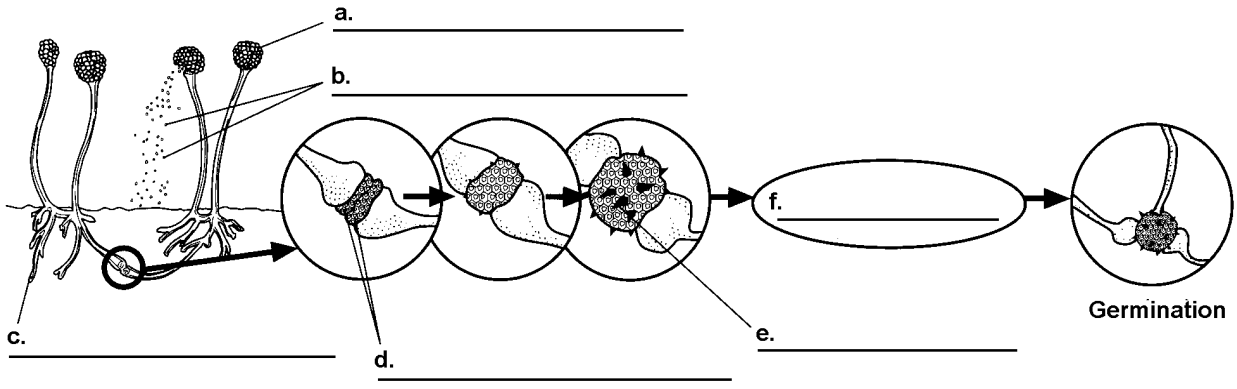
5. Suppose you like mushrooms and saw some growing in a yard. Would you pick and eat them? Explain your answer. (p.536)_____

_____

6. Complete the table below about the different kinds of hyphae in black bread mold. (pp.530-531)

Type of Hypha	Description of the Hypha
Rhizoids	
Stolons	
	Hyphae that push up into the air and form sporangia at their tips

STRUCTURES AND FUNCTIONS Label each structure or process in the spaces provided. The diagram below illustrates asexual and sexual reproduction in zygomycetes. Use the following terms: zygosporangium, meiosis, spores, sporangium, rhizoid, and gametangia. (p.531)



Name _____ Class _____ Date _____

SECTION 21-3 REVIEW

ECOLOGY OF FUNGI

VOCABULARY REVIEW Define the following terms.

1. **saprobe** _____

_____

2. decomposer _____

_____

3. parasite _____

_____

4. **lichen** _____

_____

5. **mycorrhiza** _____

_____

MULTIPLE CHOICE Write the correct letter in the blank.

_____ 1. Organisms that obtain food from decaying organic matter are called

a. saprobes. b. autotrophs. c. parasites. d. mutualists.

_____ 2. A symbiotic association between a fungus and an algae is called a

a. mycorrhiza. b. fruiting body. c. lichen. d. mushroom.

_____ 3. Which of the following is not a single organism?

a. lichen b. rust c. mildew d. smut

_____ 4. The human disease ringworm is caused by

a. a parasitic worm.
b. a fungus.
c. an unknown bacteria.
d. a viral infection.

_____ 5. The association of plant roots and fungi hyphae in mycorrhizae illustrates a type of relationship called

a. parasitism. b. mutualism. c. competition. d. predation.

_____ 6. One type of fungus can infect the areas between the human toes, causing an infection known as

a. cancer. b. thrush. c. shingles. d. athlete's foot.

Name _____ Class _____ Date _____

SHORT ANSWER Answer the questions in the space provided.

1. What role do fungi play as decomposers in an ecosystem? (p.538)_____

   _____

2. Wheat rust is an example of a plant disease caused by a fungus. Describe the complex relationship between the two host plants and the rust fungus. (p.538) _____

   _____

   _____

3. Lichens are classified by their general appearance, or shape. Describe the shapes of the following lichen types: (p.540)

   a. crustose - _____

   b. fruticose - _____

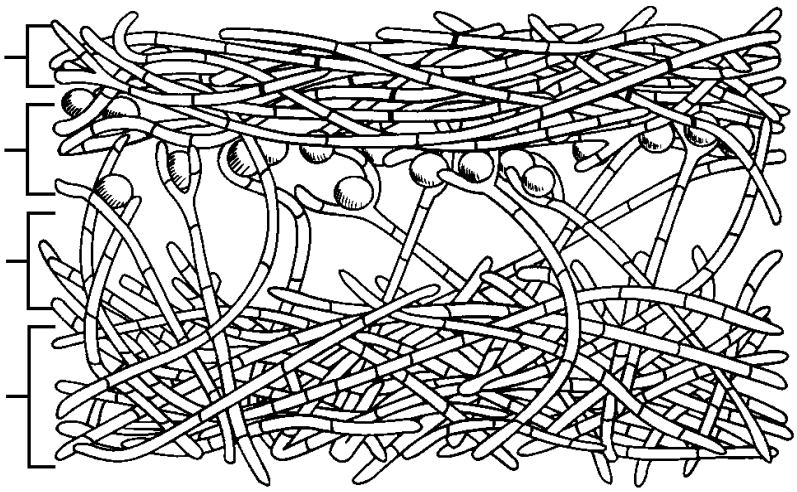
   c. foliose - _____

4. Lichens are said to be true pioneer organisms in a developing ecosystem. Of what key value do they play in an ecosystem? (p.540)_____

   _____

STRUCTURES AND FUNCTIONS Label the structures that make up a lichen. Use the following terms: densely packed hyphae, loosely packed hyphae, and algae or cyanobacteria layer. (p.540)

1. _____
2. _____
3. _____
4. _____



5. Explain how each partner benefits the other in this relationship called mutualism. (p.540)_____

   _____

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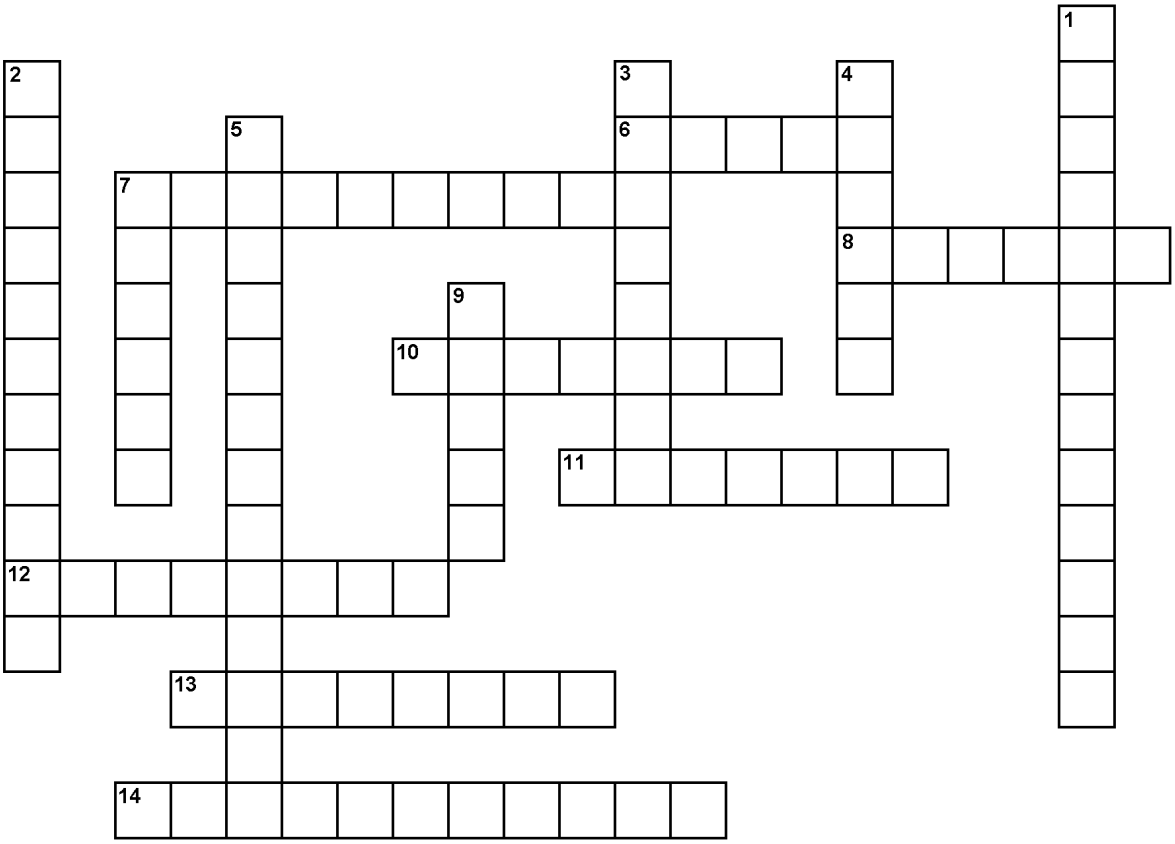
VOCABULARY - CHAPTER 21

The crossword puzzle is a simple way to master some of the more important vocabulary terms in this chapter.



Across

6. unicellular fungi often used in the baking and brewing industries
7. _____ hyphae are multinucleated filaments that lack cross-walls
8. the symbiotic relationship between a green alga and a fungus
10. asexual reproduction in yeast
11. poisonous mushroom called Death Angel
12. the genus name of a common bread mold
13. root-like hyphae that anchor the fungus to a food source
14. symbiotic relationship between fungal hyphae and plant roots

Down

1. the phylum name for fungi that are incapable of reproducing sexually; also called Fungi Imperfecti
2. the sexual reproductive body of a fungus called a mushroom
3. the tangled mass of hyphae
4. hyphae that grow along the surface of a food source like bread
5. all fungi are _____; they are not autotrophic
7. plants have a cell wall made of cellulose; many bacteria use peptidoglycan for their cell wall; fungi have a cell wall made of _____
9. the kingdom represented by mostly multicellular, heterotrophic, eukaryotic organisms that ingest their food by absorption

The following terms are **not** in this chapter, but are found in this puzzle. You will need to look up their meaning from a reference source elsewhere. **coenocytic and basidiocarp**.