Name_____Hour_____

Section 20-3 Plantlike Protists: Unicellular Algae (pages 506-509)

Introduction (Page 506)

1. Plantlike protists are commonly called _____

2. Is the following sentence true or false? Algae include only multicellular organisms _____

Chlorophyll and Accessory Pigments (pages 506)

3. In the process of photosynthesis, what substances trap the energy of sunlight?

_____

_____

4. How does water affect the sunlight that passes through it? _____

_____

5. Why does the dim blue light that penetrates deep into the sea contain little energy that chlorophyll *a* can use? _____

_____

6. How have various groups of algae adapted to conditions of limited light?

_____

7. What are accessory pigments? _____

_____

8. Why are algae such a wide range of colors? _____

_____

Chrysophytes (page 507)

9. The yellow-green algae and the golden-brown algae are members of the phylum

_____

10. What color are the chloroplasts of chrysophytes? _____

11. Circle the letter of each sentence that is true about chrysophyes.

    a. The cell walls of some contain the carbohydrate pectin.

    b. They reproduce sexually but not asexually.

    c. They generally store food in the form of oil.

    d. Some form threadlike colonies.

Diatoms (page 507)

12. Diatoms are members of the phylum _____

13. Circle the letter of each sentence that is true about diatoms.

    a. They are very rare in almost all environments.

    b. Their cell walls are ricj in silicon.

    c. They are shaped like a petri dish or flat pillbox.

    d. They are among the most abundant organisms on Earth.

Dinoflagellates (page 508)

14. Dinoflagellates are members of the phylum _____

15. How do dinoflagellates obtain nutrition? _____

_____

16. Circle the letter of each sentence that is true about dinoflagellates.

    a. They generally have one flagella.

    b. Many species are luminescent.

    c. Most reproduce by binary fission.

Ecology of Unicellular Algae (pages 508-509)

17. How do plantlike protists make much of the diversity of aquatic life possible?

_____

18. What are phytoplankton? _____

_____

19. What are algal blooms? _____

_____

20. How can algal blooms be harmful? _____

_____

Name_____Hour_____

Section 20-4 Plantlike Protists: Red, Brown, and Green Algae (pages 510-515)

Introduction (page 510)

1. What are seaweeds? _____

2. What are the most important differences among the three phyla of multicellular algae? _____

Red Algae (page 510)

3. Red algae are members of the phylum _____.

4. Why are red algae able to live at great depths? _____

_____

5. What pigments do red algae contain? _____

_____

6. Which color of light are phycobilins especially good at absorbing?

   a. red b. green c. yellow d. blue

7. Circle the letter of each sentence that is true about red algae.

   a. They can grow in the ocean at depths up to 260 meters.

   b. Most are unicellular.

   c. All are red or reddish-brown.

   d. Coralline algae play an important role in coral reef formation.

Brown Algae (page 511)

8. Brown algae are members of the phylum _____.

9. What pigments do brown algae contain? _____

_____

10. Where are brown algae commonly found growing? _____

_____

11. What is the largest known alga? _____

Match each structure with its description.

Structure	Description
____12. Holdfast	a. Flattened stemlike structure
____13. Stipe	b. Gas-filled swelling
____14. Blade	c. Structure that attaches alga to the bottom
____15. Bladder	d. Leaflike structure

Green Algae (pages 511-512)

16. Green algae are members of the phylum _____.

17. What characteristics do green algae share with plants? _____

_____

18. What do scientists think is the connection between mosses and green algae?

_____

19. The freshwater alga *Spirogyra* forms long threadlike colonies called _____

20. How can the cells in a *Volvox* colony coordinate movement? _____

_____

21. "Sea lettuce" is the multicellular alga _____.

Human Uses of Algae (page 515)

22. Whay have algae been called the "grasses" of the sea? _____

_____

23. Through photosynthesis, lagae produce much of Earth's _____

24. What is the compound agar derived from, and how is it used? _____

_____

_____

_____

Name_____Hour_____

Section 20-5 Funguslike Protists (pages 516-520)

Introduction (page 516)

1. How are funguslike protists like fungi? _____

_____

_____

2. How are funguslike protists unlike most true fungi? _____

_____

Slime Molds (pages 516-518)

3. What are slime molds? _____

_____

4. Cellular slime molds belong to the phylum _____.

5. Is the following sentence true or flase? Cellular slime molds spend most of their lives as free-living cells. _____

6. What do cellular slime molds form when their food supply is exhausted? _____

_____

7. What structure does a cellular slime mold colony produce, and what is that structure's function? _____

_____

_____

8. Acellular slime molds belong to the phylum _____.

9. What is a plasmodium? _____

_____

_____

10. The plasmodium eventually produces sporangia, which in turn produce haploid _____.

Water Molds (pages 518-519)

11. Water molds, or oomycetes, are members of the phylum _____

12. Water molds produce thin filaments known as _____

13. What are zoosporangia? _____

_____

_____

14. Where are male and female nuclei produced in water mold sexual reproduction?

_____

_____

_____

15. Fertilization in water molds occurs in _____

Ecology of Funguslike Protists (page 519)

16. Why aren't there bodies of dead animals and plants littering the woods and fields you walk through? _____

_____

_____

17. What are examples of plant diseases that water molds cause? _____

_____

Water Molds and the Potato Famine (page 519)

18. What produced the Great Potato Famine of 1846? _____

_____

19. What did the Great Potato Famine lead to? _____

_____

_____