**Algae Package**

Fill in the blanks using the word bank below:

Photosynthetic

Stem

Chlorophyll a

Light

Bathes

water

Uni

Asexual

Lack

Cell wall

Multi

Protista

Root

leaf

Plantae

Sexual

1. Algae are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms that live in streams, ponds, lakes, swamps and all the oceans of the world.
2. Algae must in or near a source of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Algae \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an internal system of tubes to move water and materials from one part of the plant to another.
4. The water in which algae live \_\_\_\_\_\_\_\_\_\_\_\_\_ theirs cells with carbon dioxide, oxygen, and nutrients and carries away wastes produces by the cells.
5. Algae can be \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_ cellular.
6. The cells of all algae have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and they do not develop specialized \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ structures found on higher plants.
7. All algae contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. Light is necessary for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_process. Chlorophyll traps energy of light; however \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ absorbs much of this energy as sunlight passes through it.
9. Many species have a complicate reproductive cycle in which stages of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reproduction alternate with stages of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reproduction.
10. There is a disagreement among scientists about the classification of algae. Some scientists classify them in the kingdom \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, other classify them in the kingdom \_\_\_\_\_\_\_\_\_\_\_\_.

Complete the following table:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Chlorophyta | Phaeophyta | Rhodophyta |
| Common Name |  |  |  |
| Type of Chlorophyll(s) present |  |  |  |
| Accessory pigment(s) |  |  |  |
| Energy stored as |  |  |  |
| Found in  |  |  |  |
| Additional info,Defining characteristics |  |  |  |
| Example species |  |  |  |

1. How are algae adapted to life in water? Discuss at least 5 adaptations.

2. What are two important factors used to group algae?

3. What is an advantage of asexual reproduction?

4. What are some important uses for algae?

**Reproduction in Algae**

For each situation, decide whether it would be ore advantageous for an alga to undergo sexual or asexual reproduction. Justify your answers.

5. A green alga lives in a pond that is beginning to freeze.

6. A factory that manufactures fertilizer accidentally releases plant fertilizers into a nearby lake. There is now a great deal of food for the green algae that live in the lake.

7. A pond in a desert goes through alternating wet and dry periods during the year.

8. A population of small fish with huge appetites for algae is released by mistake in a small pond. All algae are eaten except for one plant. Suddenly the fish die.

**Interpreting Diagrams**

Label the diagram using the word bank below and fill in either n or 2n in the brackets:

Sperm ( )

Eggs ( )

Zygote ( )

Female gametophyte ( )

Male gametophyte ( )

Conceptacle ( )

Sporophyte ( )

