

Biology Chapter 22: Homework

Hmwrk 22-1

1. What are plants?
2. Describe the four things that plants need in order to survive.
3. Where did the first plants evolve from? What did they evolve from?
4. What are the three important features that divide the plant kingdom into four groups?
5. What is Deep Green?

Hmwrk 22-2

1. What are bryophytes? Name three examples.
2. What are gemmae?
3. Which stage of the life cycle in bryophytes is responsible for carrying out much of the plant's photosynthesis? What is the other stage in the life cycle and what does it rely on?
4. What is a protonema?
5. Name one human use of mosses.

Hmwrk 22-3

1. What is vascular tissue? What are the two types of vascular tissue? Define them.
2. Name three types of seedless vascular plants and list their generalized characteristics.
3. Define rhizomes and fronds.
4. What is the dominant stage in ferns and other vascular plants?

Hmwrk 22-4

1. What are the two groups of seed plants? Describe where each bears their seeds.
2. Since seed plants do not require water to fertilize gametes, describe the three adaptations they have instead.
3. What are the four groups of gymnosperms? Briefly describe each.
4. Why do most conifers have long and thin needle-like leaves?

Hmwrk 22-5

1. What are angiosperms?
2. What is fruit? How does this structure help the reproduction of angiosperms?
3. What are the differences between monocots and dicots?
4. What are the two types of stem characteristics that are discussed in the text? Name an example of each type.
5. What are the three categories of plant life spans? Define each.

Biology Chapter 22: Study Guide

Section 1

- Vocabulary

Sporophyte

Gametophyte

- Know what plants provide for life on Earth
- Know what plants are
- Know the two alternating phases of a plant life cycle
- Know the four things that plants need to survive
- Know how early plants evolved on Earth, where they evolved from and what they evolved from
- Know the four groups of plants and what their division is based on

Section 2

- Vocabulary

Bryophyte

Gemma

Antheridium

Rhizoid

Protonema

Archegonium

- Know what bryophytes are
- Know the three types of bryophytes that are discussed in the textbook and the characteristics of each
- Know the structure of a moss plant (see page 557)
- Know the dominant stage of the bryophyte life cycle
- Know what fertilization depends upon
- Know the life cycle of bryophytes
- Know some human uses of mosses

Section 3

- Vocabulary

Vascular tissue

Root

Frond

Tracheid

Leaf

Sporangium

Xylem

Vein

Sorus

Phloem

Stem

Lignin

Rhizome

- Know how the water transportation system of bryophytes differ from vascular plants
- Know the two forms of vascular tissue and how they are able to transport things
- Know the three types of seedless vascular plants discussed in the textbook and the characteristics of each
- Know the dominant stage of the fern life cycle
- Know what fertilization depends upon
- Know the life cycle of ferns

Section 4

- Vocabulary

Gymnosperm

Angiosperm

Cone

Flower

Pollination

Embryo

Pollen grain

Seed

Seed coat

- Know the two groups of seed-producing plants, characteristics of each and examples of each
- Know how seed-producing plants differ from bryophytes and ferns
- Know the three adaptations that allow seed-producing plants to reproduce in the absence of water
- Know how seed plants evolved
- Know the three types of gymnosperms, characteristics of each and examples of each
- Know what gymnosperm means
- Know why conifer leaves are shaped the way they are
- Know the term “evergreen” and what that means

Section 5

- Vocabulary

Fruit

Cotyledon

Perennial

Monocot

Annual

Dicot

Biennial

- Know what unique reproductive structure angiosperms have and what the advantages are
- Know what fruit is and why it is important to the reproductive success of angiosperms
- Know the categories of angiosperms
- Know the differences between dicots and monocots (see page 570)
- Know the different stem characteristics
- Know the different life spans of angiosperms