

Name: _____

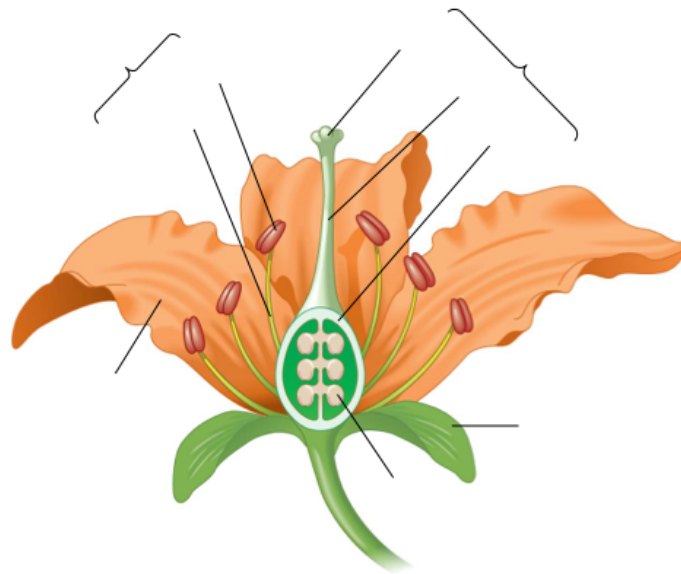
AP Biology

Chapter 30 Active Reading Guide

Reproduction and Domestication of Flowering Plants

Section 1

1. Label all parts of the flower and give the function of each. Then, circle the flower parts that are essential for reproduction.



2. What is another name for the microsporangia? _____
3. Each microspore mother cell undergoes meiosis to form four haploid _____.
4. Each microspore undergoes mitosis to produce the male _____.
5. The male gametophyte is composed of only two cells. Name each cell, and tell what will come from each of them.

6. What are the three components of a pollen grain?
7. Meiosis in the female part of the plant produces four megaspores. How many survive? _____
8. What occurs in pollination?
9. Study Figure 30.6 in your text. List four modes of pollination. For each mode, describe a feature of the flower that aids pollination.
 - 1)
 - 2)
 - 3)
 - 4)
10. Study the section in this concept under the heading Double Fertilization very carefully (Figure 30.7). Describe what is happening in each step.
 - 1)
 - 2)
 - 3)
11. You should be able to count a total of seven cells and eight nuclei. Which of these are fertilized in double fertilization?
12. When the polar nuclei are fertilized, what is formed? _____
13. The chromosome number of endosperm is (a) haploid, (b) diploid, or (c) triploid? ____
14. The chromosome number of the zygote is (a) haploid, (b) diploid, or (c) triploid? ____

15. What is the role of the endosperm?
16. After double fertilization, what does each ovule become?
17. After double fertilization, what does each ovary become?
18. Let's compare the seeds of eudicots and monocots. How many cotyledons does each type have?
19. What is the function of a seed coat?
20. What part of the embryo plant emerges first?
21. What are some mechanisms that maintain seed dormancy?
22. What is imbibition?
23. To a botanist, a fruit is a ripe _____. It does not have to be sweet! A pea pod is a fruit. A green pepper is a fruit.
24. An important function of the fruit is to aid in dispersal. Study Figure 30.12 in your text. What are three primary methods of each?
 - 1)
 - 2)
 - 3)

Section 2

25. Asexual reproduction in plants is also known as vegetative propagation. Describe three different types of asexual reproduction in plants.

26. Why is it important for plants to have mechanisms to prevent self-fertilization?

27. What are two mechanisms to prevent self-fertilization?

Section 3

28. Humans have used selective breeding to develop useful varieties since the dawn of agriculture. Today, biotechnology has accelerated the introduction of desirable traits. List four genetically modified plant species, and describe the advantage each species shows.

a.

b.

c.

d.

29. Genetically modified organisms (GMOs) offer great promise but are also controversial. What are three of the possible risks?

a.

b.

c.