Name _____ Class _____ Date _____

Reviewing Key Concepts

Multiple Choice *On the lines provided, write the letter of the answer that best completes the sentence.*

_____ **1.** The life cycle of bryophytes can be described as
- a. independent of water.
- b. dependent on water.
- c. independent of sunlight.
- d. dependent on seeds.

_____ **2.** Bryophytes are plants that lack
- a. a haploid generation.
- b. cell walls.
- c. vascular tissue.
- d. chlorophyll.

_____ **3.** Bryophytes transport water by
- a. osmosis.
- b. vascular tissue.
- c. active transport.
- d. transpiration.

Completion *On the lines provided, complete the following sentences.*

4. Three groups of bryophytes are _____, _____, and _____.

5. The dominant, recognizable stage of the life cycle in bryophytes is the _____.

6. The _____ stage carries out most of the plant's photosynthesis.

Reviewing Key Skills

7. Inferring Why can't a moss grow to be as tall as plants that have vascular tissue?

_____

_____

_____

8. Applying Concepts How does the structure of a rhizoid help it to absorb water and minerals?

_____

_____

_____

9. Predicting Why aren't bryophytes found in deserts?

_____

_____

10. Applying Concepts Describe two human uses of mosses.

_____

_____

Name _____ Class _____ Date _____

Reviewing Key Concepts

Multiple Choice *On the line provided, write the letter of the answer that best completes the sentence or answers the question.*

_____ **1.** The function of xylem tissue is to
a. carry water.
b. carry nutrients and carbohydrates.
c. carry out photosynthesis.
d. store minerals.

_____ **2.** Plants rely on phloem tissue for the transport of
a. chlorophyll.
b. water.
c. nutrients and carbohydrates.
d. sperm and egg cells.

_____ **3.** All of the following are seedless vascular plants except
a. club mosses.
b. liverworts.
c. ferns.
d. horsetails.

_____ **4.** Coal consists of the fossilized remains of the ancestors of
a. club mosses.
b. horsetails.
c. ferns.
d. *Equisetum*.

_____ **5.** Which plants have stems containing abrasive silica crystals and are the only living genus of the phylum Arthrophyta?
a. ferns
b. lycophytes
c. club mosses
d. horsetails

_____ **6.** Which group of plants have underground stems called rhizomes and leaves called fronds?
a. scouring rushes
b. arthrophytes
c. ferns
d. club mosses

_____ **7.** During the dominant stage of their life cycle, ferns are
a. haploid sporophytes.
b. diploid sporophytes.
c. haploid gametophytes.
d. diploid gametophytes.

_____ **8.** In the fern life cycle, a small, heart-shaped haploid gametophyte develops immediately after the germination of a(an)
a. sorus.
b. gamete.
c. egg cell.
d. spore.

Reviewing Key Skills

9. Inferring What can you infer about the needs of ferns from the fact that they thrive on the floors of thick forests?

_____

10. Formulating Hypotheses How might too much direct sunlight affect the conditions that ferns require for fertilization?

_____

_____

_____

Name _____ Class _____ Date _____

Matching *On the lines provided, write the letter of the definition that matches each term.*

_____ **1.** gametophyte
_____ **2.** sporophyte
_____ **3.** rhizoids
_____ **4.** vascular tissue
_____ **5.** tracheid
_____ **6.** xylem
_____ **7.** phloem
_____ **8.** root
_____ **9.** leaf
_____ **10.** vein
_____ **11.** stem
_____ **12.** rhizome

a. type of cell specialized to conduct water
b. underground stem
c. underground organ that absorbs water and minerals
d. tissue specialized to conduct water and nutrients
e. photosynthetic organ that contains one or more bundles of vascular tissue
f. tissue that carries water upward from the roots to other parts of the plant
g. supporting structure that connects the roots and leaves of a plant
h. tissue that transports solutions of nutrients and carbohydrates in a plant
i. vascular tissue gathered in leaves
j. long thin cells that anchor mosses to the ground
k. diploid generation
l. haploid generation

Multiple Choice *On the line provided, write the letter of the answer that best answers the question or completes the sentence.*

_____ **13.** Bryophytes include
a. ferns. c. trees.
b. horsetails. d. mosses.

_____ **14.** What type of seed plant bears its seed directly on the surface of cones?
a. a bryophyte c. a tracheid
b. a gymnosperm d. an angiosperm

_____ **15.** The plant shown below is classified as a(an)
a. bryophyte. c. angiosperm.
b. gymnosperm. d. endosperm.

Name _____ Class _____ Date _____

_____ **16.** What is the seed-bearing structure of a gymnosperm called?

a. a cone
c. a flower
b. a rhizoid
d. an embryo

_____ **17.** What is the seed-bearing structure of an angiosperm called?

a. a cone
c. a flower
b. a rhizoid
d. an embryo

_____ **18.** In seed plants, where is the male gametophyte contained?

a. in a pollen grain
c. in a cone
b. in a seed
d. in a fruit

_____ **19.** What is the name of the process in which pollen is carried to the female reproductive structure?

a. fertilization
c. reproduction
b. pollination
d. germination

_____ **20.** The embryo of a plant that is encased in a protective covering and surrounded by a food supply is called a

a. seed.
c. pollen grain.
b. gemmae.
d. fruit.

_____ **21.** What is the early developmental stage of the sporophyte plant called?

a. an endosperm
c. a monocot
b. a dicot
d. an embryo

_____ **22.** What surrounds and protects a plant embryo?

a. a sorus
c. a seed coat
b. a monocot
d. a lignin

_____ **23.** What is the thick wall of tissue that surrounds a seed called?

a. a fruit
c. a sporangia
b. a cotyledon
d. a protonema

_____ **24.** An angiosperm that has one seed leaf in its embryo is called a

a. monocot.
c. cotyledon.
b. dicot.
d. lignin.

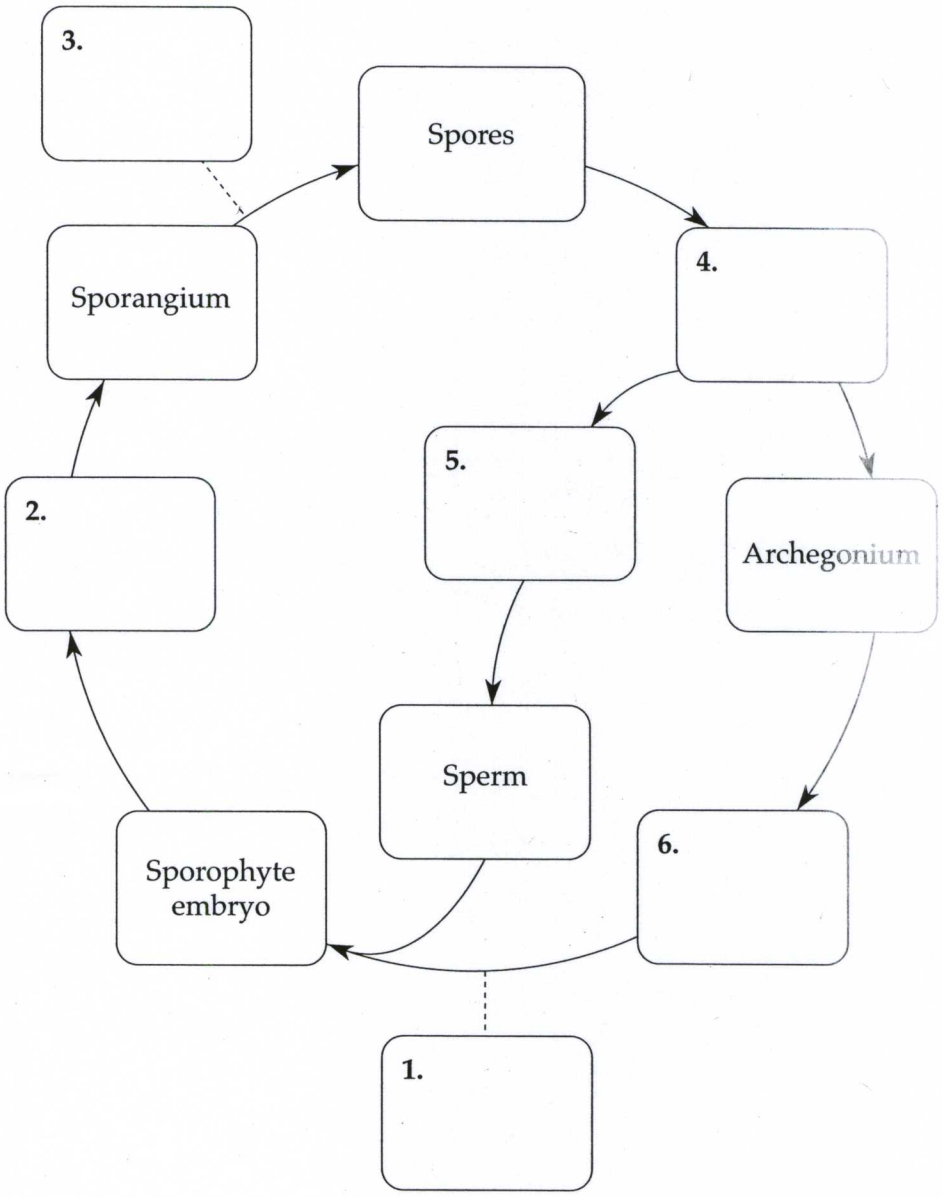
_____ **25.** Which type of angiosperm lives for more than two years?

a. biennial
c. perennial
b. annual
d. terrestrial

Name _____ Class _____ Date _____

Cycle Diagram

The following cycle diagram represents the life cycle of a fern. Fill in the missing information using the following terms: egg, mature sporophyte, fertilization, antheridium, meiosis, gametophyte. *If there is not enough room in the diagram to write your answers, write them on a separate sheet of paper.*



Name _____ Class _____ Date _____

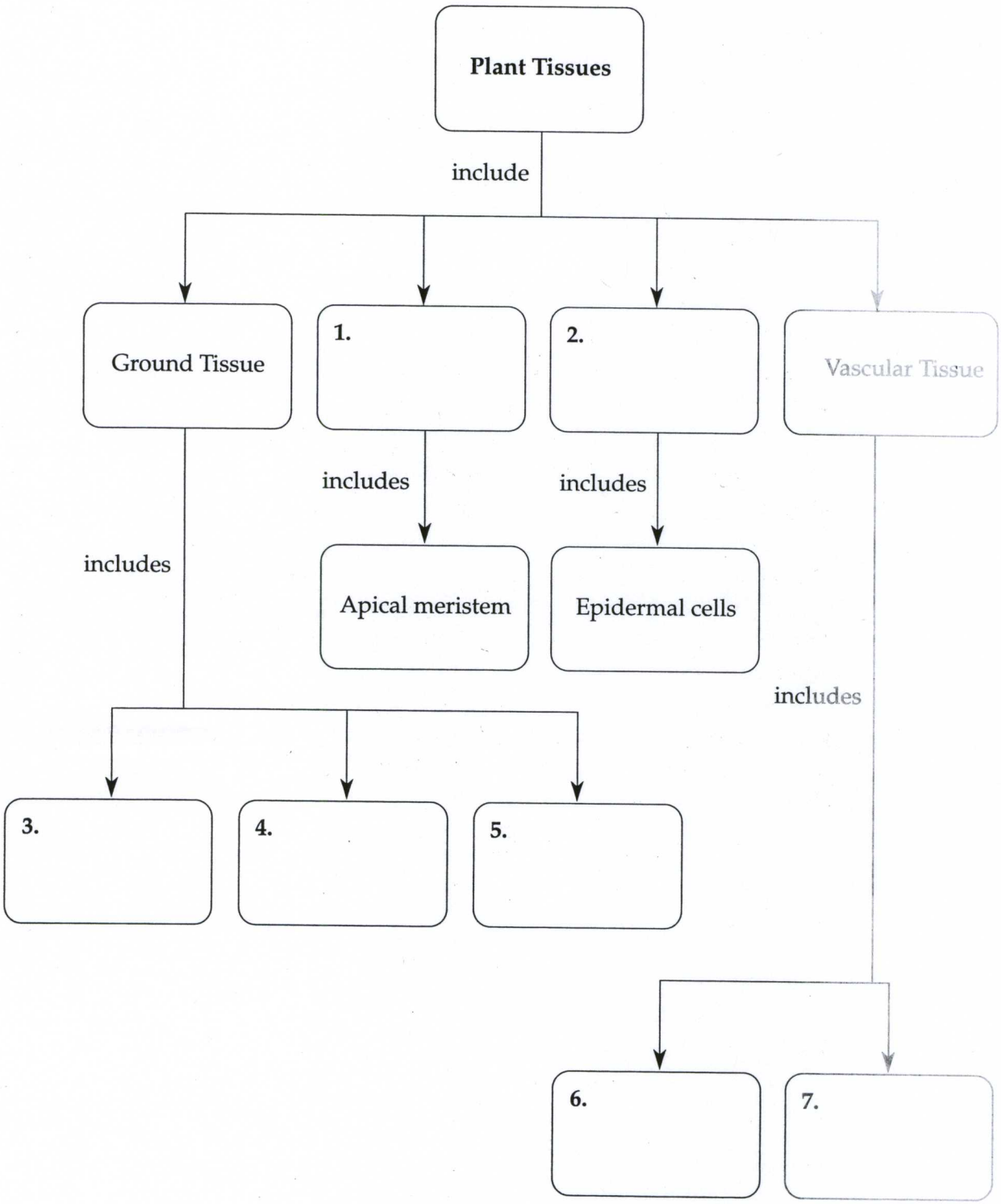
Completion *On the lines provided, complete the following sentences:*

11. Vessel elements, sieve tube elements, and companion cells are all parts of _____ tissue.
12. Along a stem, leaves and buds are separated by regions of a stem called _____.
13. In a dicot stem, parenchyma cells inside the ring of vascular tissue are known as the _____.
14. A type of growth called _____ growth increases the length of a stem, whereas _____ growth increases the width of a stem.
15. The older xylem near the center of a woody stem is called _____.
16. The older xylem near the center of a woody stem is surrounded by a lighter-colored part of the stem called _____.
17. A part of a tree called _____ includes all tissues outside the vascular cambium.
18. The blade of a plant is attached to the stem by a thin stalk called a(an) _____.
19. The bulk of most leaves is composed of a specialized ground tissue known as _____, where nearly all photosynthetic activity occurs.
20. The layer of column-shaped, closely packed cells that absorbs most of the light that enters a leaf is called the _____.
21. An opening on the underside of a leaf that allows carbon dioxide and oxygen to diffuse in and out of a leaf is called a(an) _____.
22. A(an) _____ controls the opening and closing of stomata by responding to changes in water pressure.
23. The loss of water from a plant through its leaves is called _____.
24. The tendency for water to rise in a thin tube is called _____.
25. According to the _____, materials move from a source cell, where photosynthesis produces a high concentration of sugars, to a sink cell, where sugars are lower in concentration.

Name _____ Class _____ Date _____

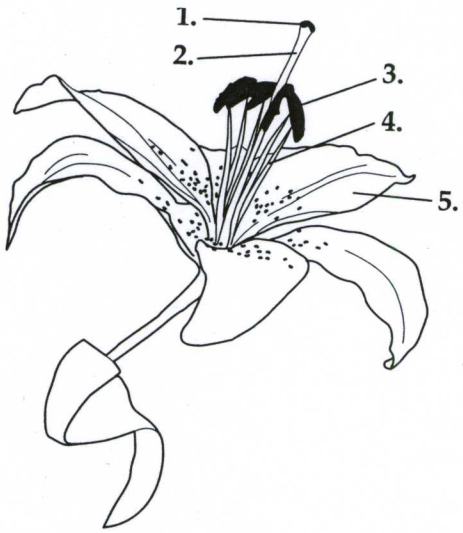
Concept Map

Using information from the chapter, complete the concept map below. If there is not enough room in the concept map to write your answers, write them on a separate sheet of paper.



Name _____ Class _____ Date _____

Labeling Diagrams *On the lines provided, label the names of the parts of the flower as one of the following:* anther, filament, petal, stigma, *and* style.



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

Matching *On the line provided, write the letter of the definition that matches each term.*

_____ **6.** pollen cone
_____ **7.** seed cone
_____ **8.** ovule
_____ **9.** pollen tube
_____ **10.** sepal
_____ **11.** petal
_____ **12.** stamen
_____ **13.** anther
_____ **14.** carpel
_____ **15.** ovary

a. produces pollen grains in angiosperms
b. flower structure containing one or more ovules
c. male cone that produces male gametophytes
d. brightly colored part of a flower that attracts insects
e. innermost floral part that produces the female gametophyte
f. male part of a flower consisting of an anther and a filament
g. cone that produces female gametophytes
h. structure in which the female gametophyte develops
i. encloses the bud before it opens and protects the developing flower
j. structure that grows from the pollen grain to the female gametophyte

Multiple Choice *On the line provided, write the answer that best completes the sentence.*

_____ **16.** The female gametophyte of a flowering plant is called
a. pollen.
b. the ovule.
c. the egg cell.
d. the embryo sac.

Name _____ Class _____ Date _____

_____ **17.** As it grows, the seedling is nourished by

a. a seed cone. c. an anther.

b. a seed coat. d. endosperm.

_____ **18.** The process in angiosperms that produces a zygote and an endosperm is called

a. germination. c. double fertilization.

b. pollination. d. single fertilization.

_____ **19.** An embryo is alive but not growing during

a. vegetative reproduction. c. germination.

b. dormancy. d. pollination.

_____ **20.** The early stage of growth in which a seed absorbs water, causing the seed coat to crack open is called

a. dormancy. c. germination.

b. grafting. d. dispersal.

_____ **21.** When a corn seedling germinates, its cotyledon

a. emerges above ground. c. remains underground.

b. protects its foliage leaves. d. forms two foliage leaves.

Completion *On the lines provided, complete the following sentences.*

22. A single plant can produce many offspring genetically identical to itself in the process of _____ reproduction.

23. A long trailing stem called a(an) _____ produces roots when it touches the ground.

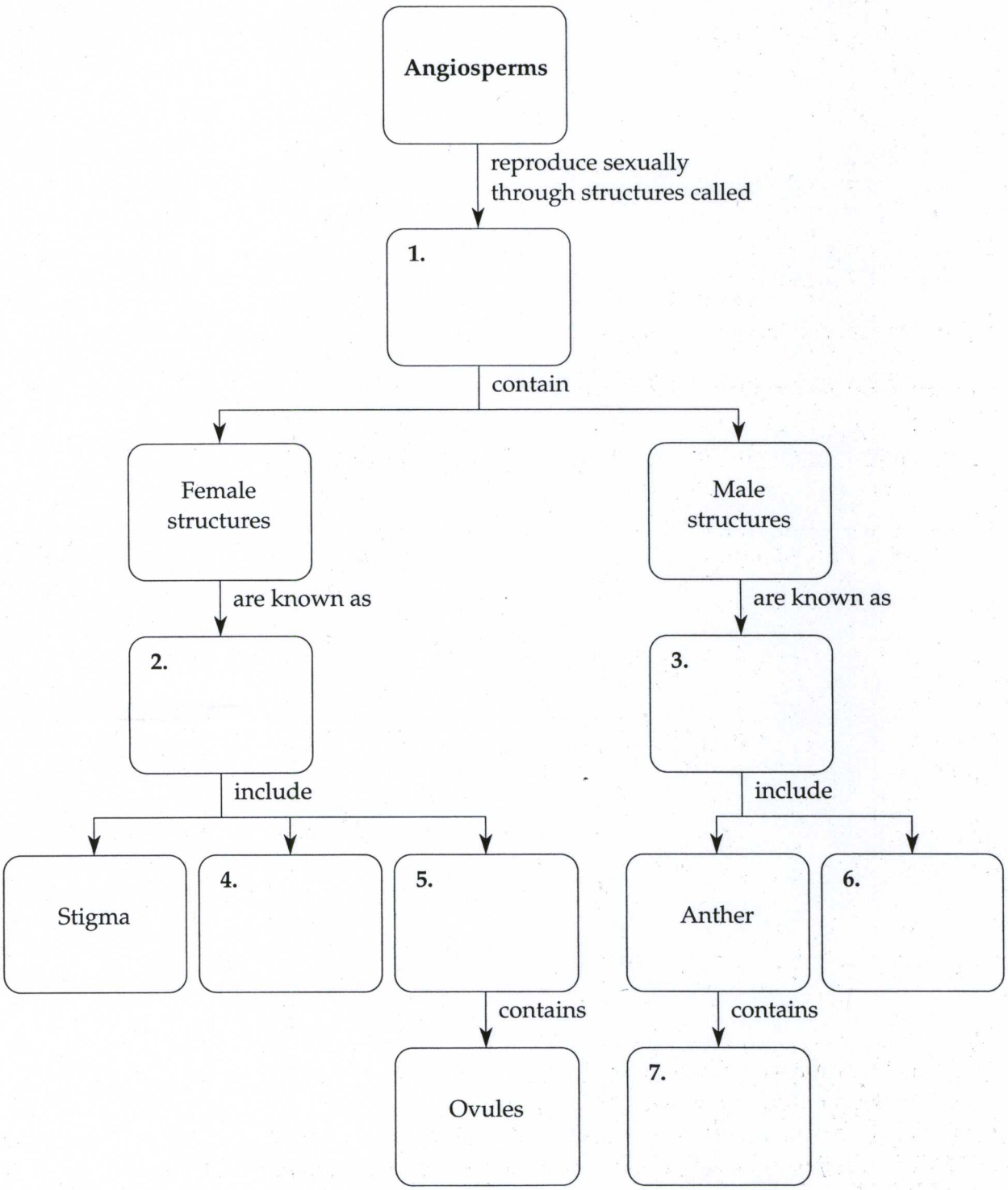
24. The process in which stems cut from a parent plant are attached to another plant is called _____.

25. The process in which lateral buds cut from a parent plant are attached to another plant is called _____.

Name _____ Class _____ Date _____

Concept Map

Using information from the chapter, complete the information in the concept map below. If there is not enough room in the concept map to write your answers, write them on a separate sheet of paper.



Name _____ Class _____ Date _____

Concept Map

Comparing Processes

Using information from the chapter, complete the information in the concept map below. If there is not enough room in the concept map to write your answers, write them on a separate sheet of paper.