Human Development

Use with textbook pages 52–53.

1. Skim, Scan, and Study

As you read Concept 3, determine the purpose for reading pages 52 and 53. Review the three different purposes for reading and the different approaches.

Purpose	Reading Approach
Preview the text to get an idea of what the text contains.	Skim: Read the text over quickly.
Find specific information.	Scan: Read the text somewhat quickly.
Learn a new concept.	Study: Read the text slowly.

You can determine the reading approach by the placement and features of the text. For example, text that is placed in the introductory paragraph is often meant to stimulate interest and may not include important concepts. Text with boldfaced words should be read slowly.

Choose the reading approach that you think should be used for each of the following tasks and explain why. Skim, scan, or study to complete each task and determine whether the approach chosen is appropriate.

a) Get a general idea about Figure 1.22.

_____

_____

b) Determine when the embryonic stage and the fetal stage occur during prenatal development.

_____

_____

c) Learn what happens during each of the nine months in prenatal development.

_____

_____

2. Using Graphic Organizers

Summarizing concepts with a graphic organizer can help you comprehend and remember concepts better. Use lines and arrows to show sequence relationships. Create a graphic organizer of your choice to summarize the events that occur during prenatal development.

Different Types of Sexual Reproduction

Use with textbook pages 54–55.

1. Summarizing

Summarizing means to restate the main ideas in your own words. A summary can be in point form, in sentence form, or graphic form. For example, the first row of the table below shows you how to create a summary of the concepts covered on pages 54 and 55. Complete the rest of the table.

Section of the Text	Main Topic	What the Text Says about the Main Topic	Supporting Details
Page 54, statement 1 about mammals	Development inside the female occurs in mammals.	"Development from fertilized egg to offspring of most mammals occurs inside the female, who is also the source of nourishment."	• A cow carries a young elk inside her and gives birth. • The fetus of a sea otter develops inside the female sea otter. • A baby orca grows inside the mother.
Page 54, statements 2–5 about insects			
Page 54, statement 6 about fungi			
Page 55, statements 1–2 involving eggs			
Page 55, statements 3–4 about plants			

1.3 Assessment

Match each term on the left with the best description on the right. Each description may be used only once.

Term	Description
1. ____ diploid	A. a sex cell
2. ____ gamete	B. union of the egg and sperm
3. ____ haploid	C. has a full set of chromosomes
4. ____ meiosis	D. process that produces haploid cells
5. ____ fertilization	E. has half the number of chromosomes

Circle the letter of the best answer for questions 6 to 20.

6. What does the female parent contribute in sexual reproduction?

A. an egg
C. a zygote
B. a sperm
D. an ovary

7. Where are sperm produced?

A. in the brain
C. in the testes
B. in the uterus
D. in the ovaries

8. How are eggs and sperm similar?

A. They are diploid cells.
C. They are produced by mitosis.
B. They are haploid cells.
D. They are produced by fertilization.

9. What is formed when a sperm fertilizes an egg?

A. a zygote
C. a haploid cell
B. a gamete
D. a homologous chromosome

10. The Vancouver Island marmot has 40 chromosomes in its body cells. How many chromosomes would you expect a male marmot to have in its sperm cells?

A. 10 chromosomes
C. 40 chromosomes
B. 20 chromosomes
D. 80 chromosomes

11. The gametes of a white-tailed deer have 35 chromosomes. When the sperm of a white-tailed buck combines with the egg of a white-tailed doe, how many chromosomes would the zygote have?

A. 17.5 chromosomes

B. 35 chromosomes

C. 70 chromosomes

D. 140 chromosomes

12. What usually combines during fertilization?

A. zygotes

B. embryos

C. gametes

D. diploid cells

13. Which of the following shows the series of events in human development?

A. embryo → zygote → sperm + egg → fetus

B. sperm + egg → fetus → zygote → embryo

C. zygote → fetus → embryo → sperm + egg

D. sperm + egg → zygote → embryo → fetus

14. What allows a zygote to develop into an embryo?

A. the zygote dividing by mitosis over several weeks

B. the zygote dividing by meiosis over several weeks

C. the zygote developing into gametes through mitosis over several weeks

D. the zygote fusing with another zygote and then dividing by meiosis over several weeks

15. Which of the following is associated with sexual reproduction?

I	meiosis
II	pollination
III	fertilization

A. I and II only

B. I and III only

C. II and III only

D. I, II, and III

16. Which of the following applies to meiosis?

	Number of Cell Divisions	Number of Daughter Cells
A.	2	4
B.	2	2
C.	1	4
D.	1	2

17. Paired chromosomes are called

A. diploid.

B. haploid.

C. asexual.

D. homologous.

18. During which phase of meiosis are the homologous chromosome pairs lined up in the middle of the cell?

A. prophase I

B. anaphase I

C. telophase I

D. metaphase I

19. Four nuclei form around the sets of chromosomes during

A. prophase II.

B. anaphase II.

C. telophase II.

D. metaphase II.

20. When is the nuclear membrane disappearing during meiosis?

A. interphase and prophase I

B. prophase I and prophase II

C. telophase I and telophase II

D. metaphase I and anaphase II

21. Complete the following Frayer model for gametes.