

Chapter Outline

The Human Reproductive System

Lesson 1: Reproductive Systems

A. _____ reproductive systems mature and other characteristics develop as boys get older.

1. Male _____ organs produce and transfer sperm.

a. Organs of sperm _____, including the testes, **seminiferous tubules**, **epididymis**, and vas deferens, are located outside the body in a baglike structure called the _____.

b. Sperm are produced inside the _____ and stored in the _____.

c. The epididymis connects to tubes or ducts called _____.

d. The male's _____ transfers sperm in **semen** to a female's reproductive system.

e. During ejaculation, the sperm moves from the vas deferens through the _____.

B. _____ reproductive systems produce and carry developing eggs.

1. Female reproductive organs are all inside the _____.

a. The labia protects the opening to the _____, where semen is deposited.

b. The _____, above the vagina, is a thick, muscular organ where fertilized eggs develop.

c. A tissue called the _____ lines the uterus.

d. The opening of the uterus into the vagina is the _____.

e. A pair of _____ produces the eggs, releasing them into the **fallopian tube**.

f. _____ usually occurs in the fallopian tube.

g. _____ lining the fallopian tube carry the egg toward the uterus.

2. Cell division by _____ begins to produce egg cells before the female is born.

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- a. Cell division stops at prophase I, until the female begins _____ between 9 and 13.
 - b. At puberty, chemicals signal _____ oocytes to continue meiosis until metaphase II.
 - c. _____ oocytes are the egg cells, which do not complete meiosis until fertilization.
 - d. An egg cell and its surrounding cells are _____.
 - e. _____, which occurs every four weeks, is the release of an egg into a fallopian tube.
3. Changes that take place before, during, and after ovulation are part of the _____.
- a. Before ovulation the endometrium thickens and the number of blood vessels _____.
 - b. If the released egg is not _____, the endometrium breaks down.
 - c. The broken-down endometrium, some blood, and the unfertilized egg leave through the vagina as _____ flow over a period lasting four to seven days.
 - d. Two weeks after the first day of menstrual flow, _____ occurs.
 - e. If the egg is fertilized, a _____ forms and an embryo develops.
 - f. The developing embryo _____ in the uterus and menstrual bleeding does not occur.
 - g. Chemicals called _____ regulate the timing of the menstrual cycle and ovulation.
4. _____ is the stage of life when a woman stops ovulating, usually between the ages of 46 and 54.
- a. Male reproductive systems _____ sperm throughout their lives.
5. _____ occurs when a sperm reaches a fallopian tube near the time of ovulation.
- a. Only one in _____ of deposited sperm will fertilize a single egg.

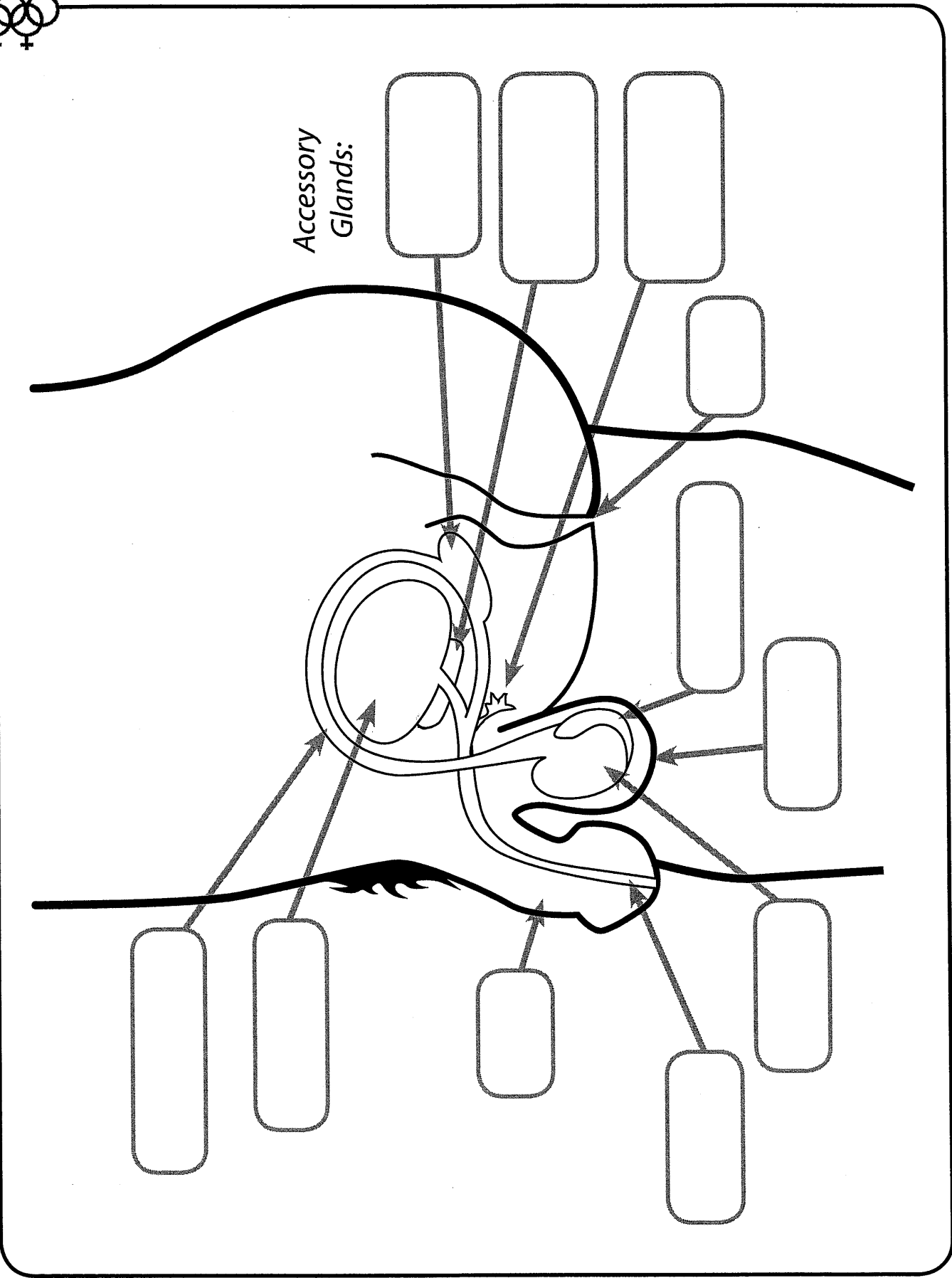
Chapter **Outline** CONTINUED

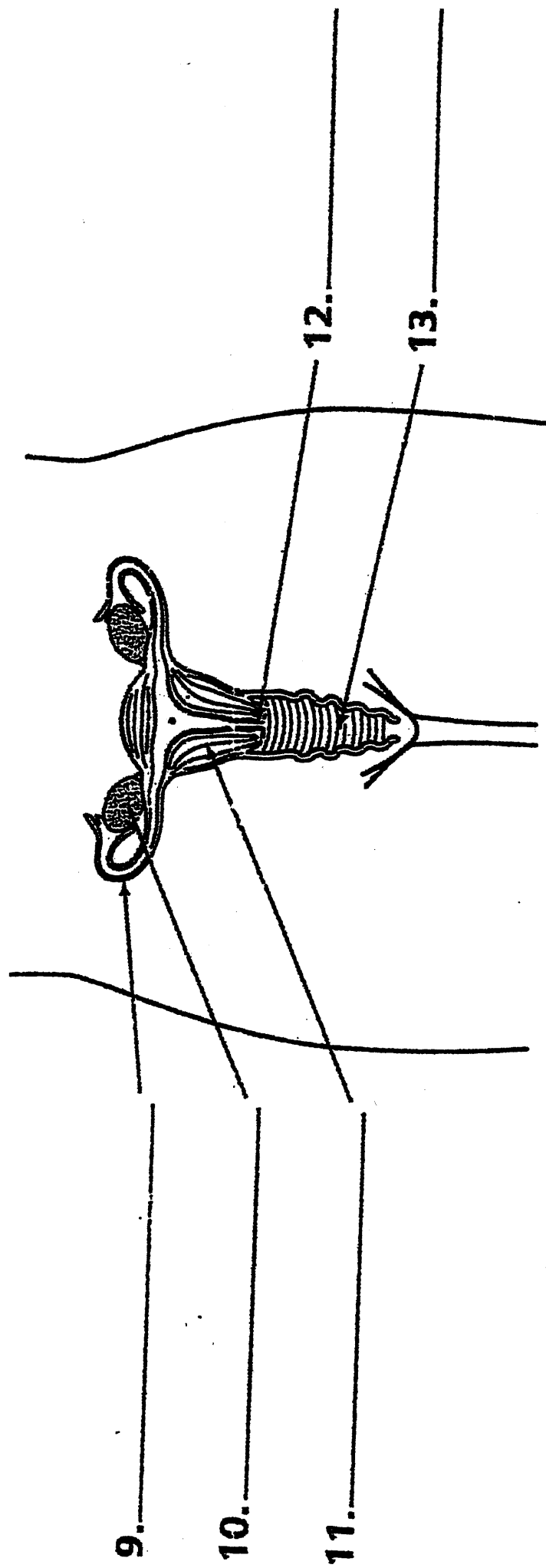
Lesson 2: Development Before Birth

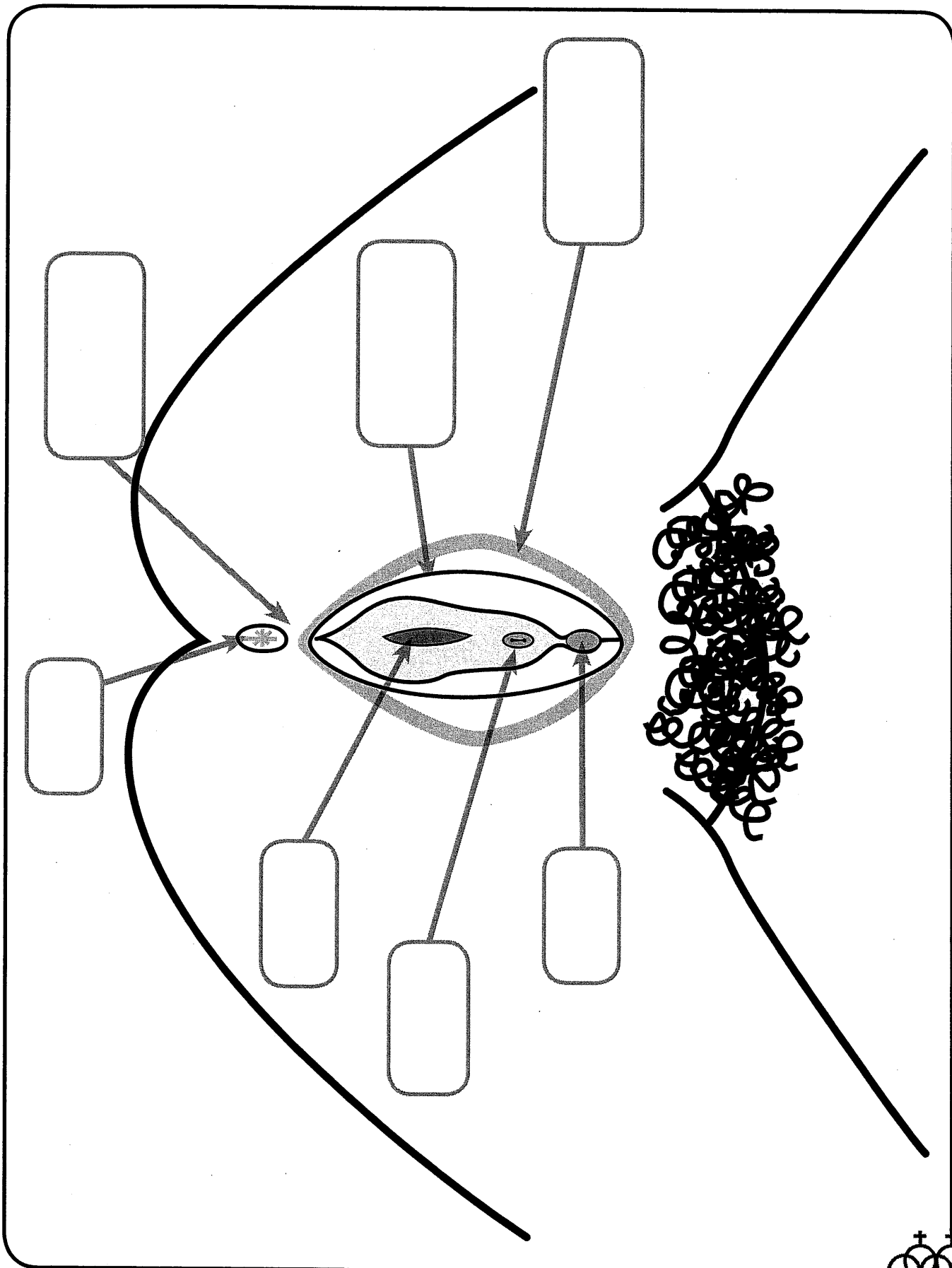
- A. _____ development, from embryo to birth, takes about nine months.
1. Cell _____ begins 24 hours after fertilization.
 2. After about seven days, an embryo of about 100 cells implants into the _____.
 3. After three weeks, cells form _____ layers, which develop into different body structures.
 4. _____, the development of a baby within the uterus, is divided into **trimesters**.
 - a. By the end of the first _____ (eight weeks), an embryo has all the structures of an adult.
 - b. During the second and third trimesters, the embryo is called a _____.
 - c. The pregnant female can feel the fetus's movements during the _____ trimester.
 - d. The fetus grows rapidly, _____ in size, in the third trimester.
 5. Babies born _____ have not completed fetal development.
 - a. They often must be cared for at the hospital until _____ and other organs fully develop.
 - b. They might have _____ birth weights, learning difficulties, or physical challenges.
 6. A developing fetus receives _____ and nutrients and gets rid of _____ materials through its mother.
 - a. The exchange of materials occurs through the disc-shaped _____, a tissue that has a large number of blood vessels from both fetus and mother.
 - b. The _____ contains two arteries and one vein that connect the fetus to the placenta.
 - c. Substances _____ and leave the fetus through the umbilical cord.
 - d. After birth, the umbilical cord is _____.
- B. Everything that happens in a pregnant women's body affects _____ health.

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1. _____ care includes information on nutrition, viral infections, and substances that could harm the developing fetus.
2. Vitamins, minerals, proteins, fats, and carbohydrates all pass through a pregnant woman to her _____.
 - a. Fruits, vegetables, and _____ grains are all important in a pregnant woman's diet.
 - b. A pregnant woman should add about 300 _____ a day to her diet.
 - c. _____ is needed for proper spinal cord formation, and can be taken in **supplements**.
 - d. A pregnant woman should avoid consuming too much _____, which raises blood pressure and heart rate.
3. Pregnant women should avoid exposure to harmful substances in the environment, including pesticides and _____.
4. _____ can pass from a pregnant woman to her fetus.
 - a. Some viruses, such as _____, do not seriously harm adults but can cause birth defects.
 - b. _____-infected pregnant women must take special precautions.
5. Pregnant women should consult a doctor before taking any _____.
 - a. Nicotine can increase the risk of _____ birth.
 - b. Alcohol use increases the risk of _____.
 - c. Illegal _____ use increases the chance of premature birth and other dangers to the fetus.









Understanding the Monthly Menstrual Cycle

