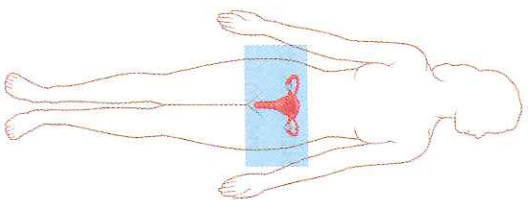
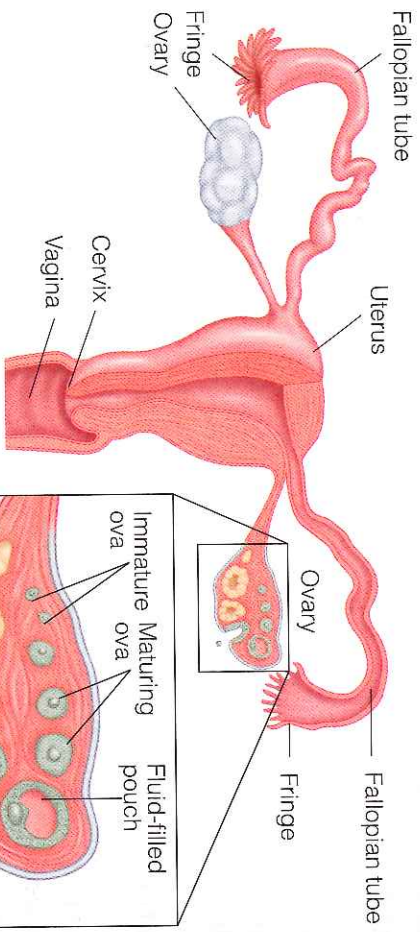


**SECTION**  
**11**

# The Female Reproductive System

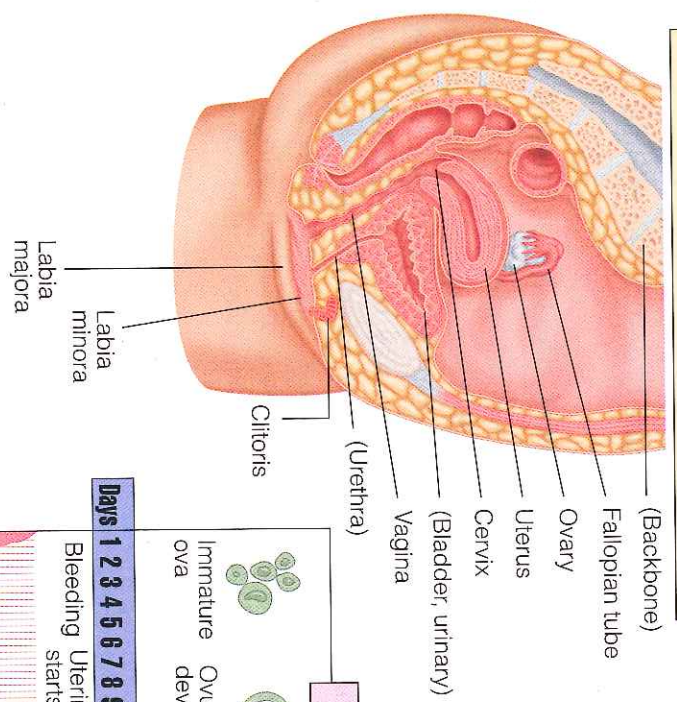


Front view of complete uterus side



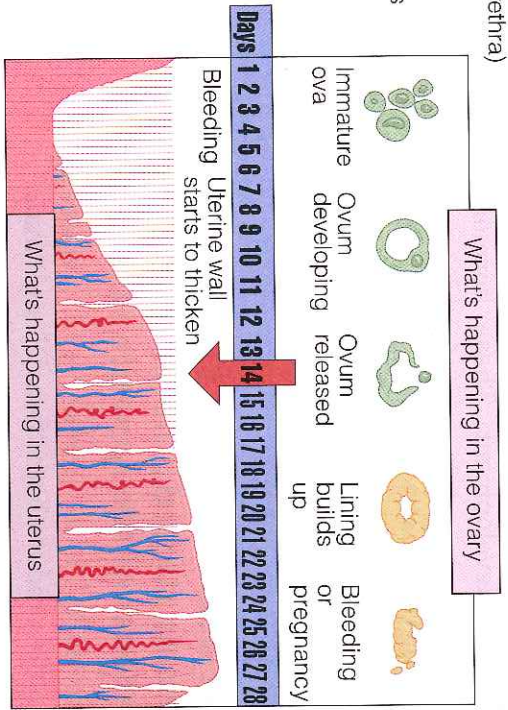
This side has been cut away to show internal structures.

Cutaway side view through the center of the body



Cutaway of ovary's internal structure

The Menstrual Cycle





The female reproductive system produces the female reproductive cells, the ova. It also supports each fertilized ovum from the beginning of pregnancy through birth. Starting from the ovaries, the ova travel by way of the fallopian tubes to the uterus and vagina.

Each month, one of the ovaries releases an ovum. The monthly timing of this event is triggered by the rise and fall in levels of the female sex hormones. This cyclic ebb and flow is described fully in Chapter 20.

### **How do the ovaries produce ova?**

Although the ovaries release the ova, they don't really make any new ones. All of the cells that will ever become ova are present in the ovaries at birth. A baby girl holds more than half a million of these immature ova in her ovaries. By the time she reaches puberty, a little more than half of those ova remain alive in her ovaries. For the rest of her reproductive life, her body will release roughly one of these ova per month.

### **What does an ovum look like?**

An ovum is a single cell, smaller than the period at the end of this sentence. Unlike most cells, ova possess only half the normal amount of genetic material. Male sperm cells are 10 times smaller than ova, but also contain half the regular amount of genetic material. When the ovum and sperm unite, they form a single cell that possesses a complete set of genetic material.

### **Where does an ovum become fertilized?**

On being swept up by the gentle, beating fingers at the end of a fallopian tube, the ovum starts a journey. Once in the tube, the ovum may meet sperm that are swimming up from the vagina. If they do, one of these sperm may fertilize the egg. Whether this happens or not, the ovum continues through the fallopian tube to the uterus.

Unfertilized ova continue traveling through the cervix and out of the vagina. If the ovum has been fertilized, however, it begins to divide as it travels down the fallopian tube. By the time it reaches the uterus, it has formed a hollow ball of cells called a blastocyst. This ball of cells can attach itself to the lining of the uterus, beginning a pregnancy.

### **What is menstruation?**

Each month, the uterus prepares itself to support a pregnancy. It builds up a thick lining of tissue that can nourish a developing ovum that might implant there. If no ovum implants, the uterus sheds its lining by way of *menstruation*, a period of bleeding that lasts roughly three to seven days. The 28-day cycle shown on the previous page is typical. However, cycle lengths vary among individuals and even in the same female from time to time.

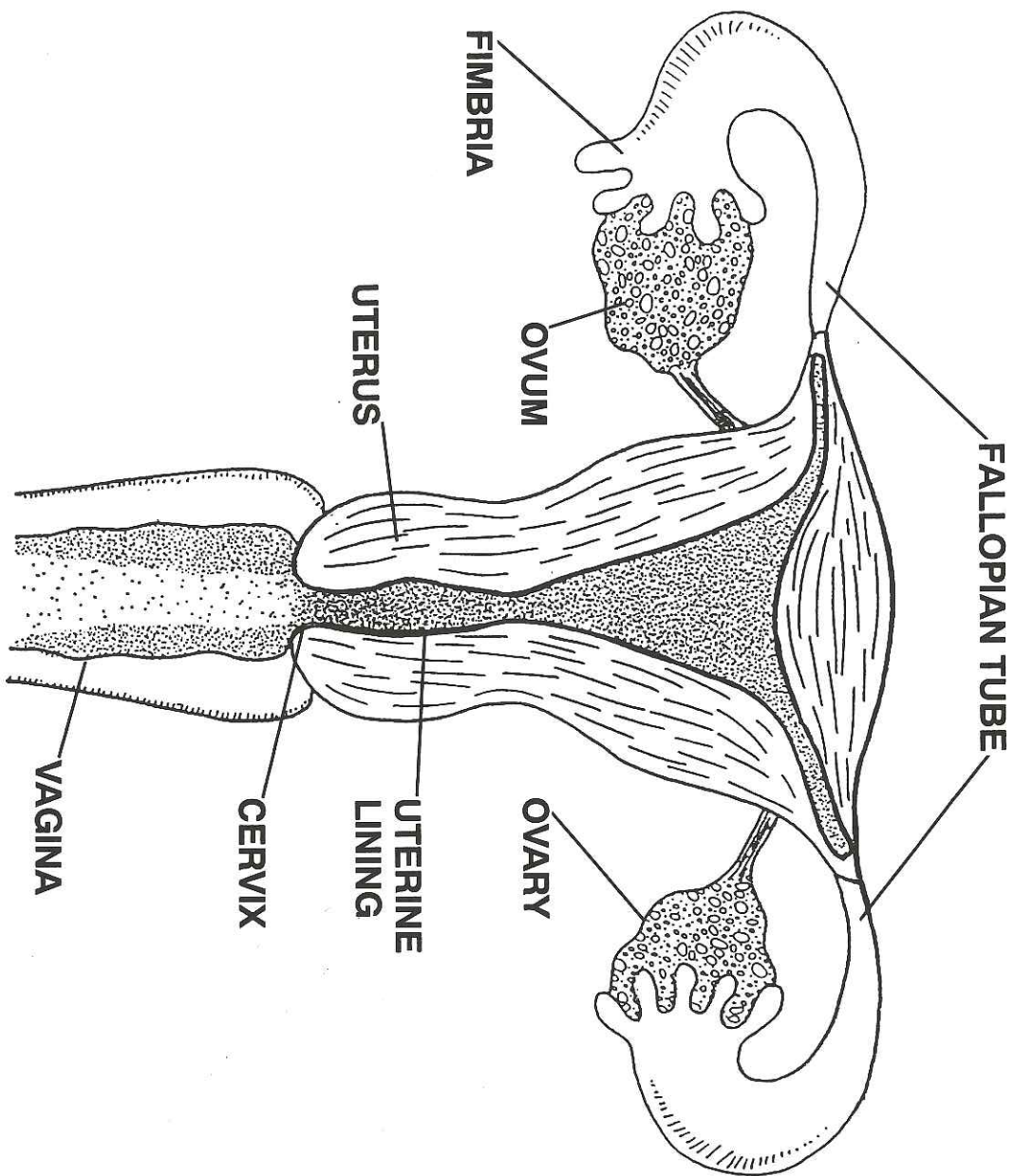
### **How does an infant fit through the vagina to be born?**

The muscular elastic walls of the vagina enable it to expand to form a passageway large enough for an infant. However, the opening to the uterus itself, called the cervix, is normally very narrow. At the time of childbirth, hormones stimulate the uterus to contract and soften the cervix to allow it to temporarily open enough for a baby's head to pass through.

### **What is a hymen?**

In many, but not all, young girls, the vaginal opening is partly or entirely covered by a thin membrane—the hymen. Later in life, this membrane may disintegrate through sexual intercourse, tampon use, or physical activity.

## FEMALE REPRODUCTIVE SYSTEM DIAGRAM (SE-6)



**DIRECTIONS:** Using the words below, label the parts of the female reproductive system:

CERVIX  
FIMBRIA

UTERUS  
OVARY

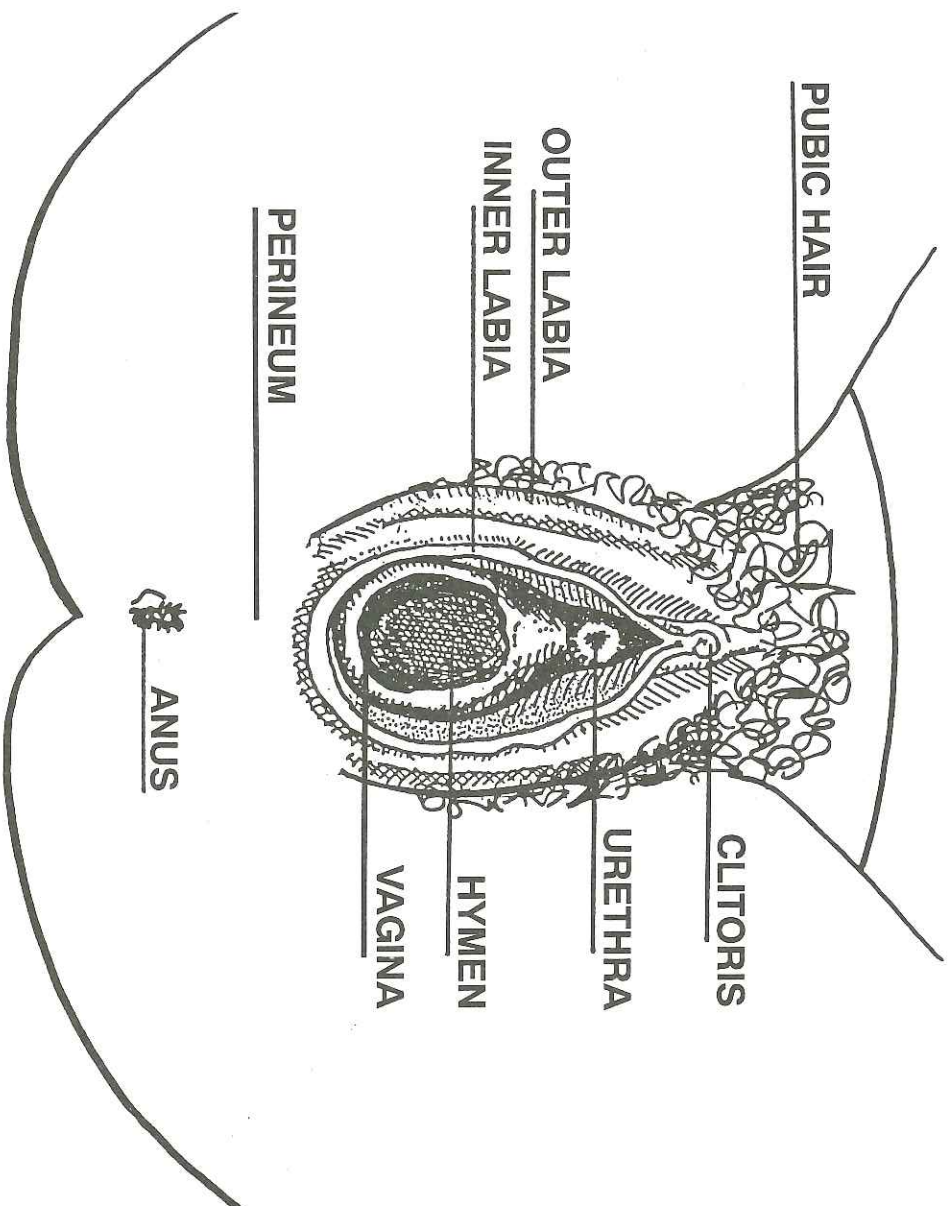
OVUM  
VAGINA

FALLOPIAN TUBE  
UTERINE LINING



# FEMALE REPRODUCTIVE SYSTEM (SE-7)

## External View



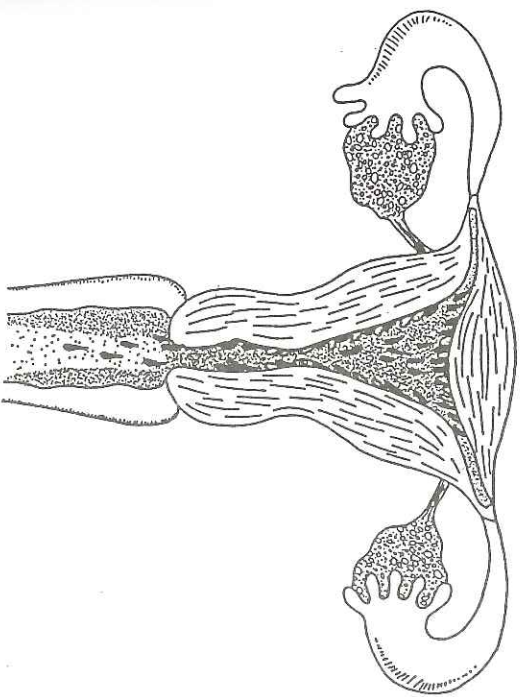
DIRECTIONS: Label the diagram using the words below:

PUBIC HAIR  
INNER LABIA  
URETHRA

CLITORIS  
OUTER LABIA  
HYMEN

VAGINA  
ANUS  
PERINEUM

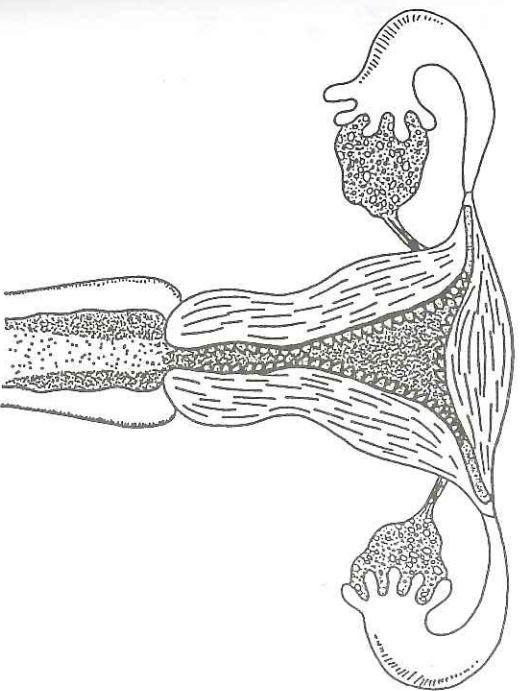
## THE MENSTRUAL CYCLE (SE-8)



### DURING MENSTRUATION

Days 1-5:

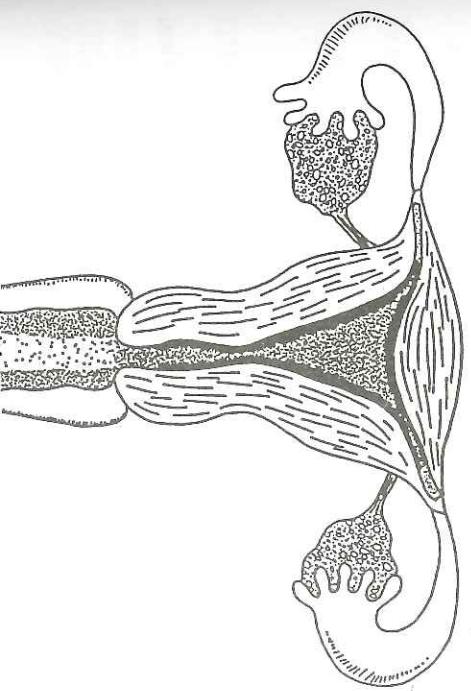
Menstruation occurs and the lining of the uterus, with a small amount of blood, leaves the body. At this time another egg is maturing in the ovary.



### AFTER MENSTRUATION:

Days 6-15:

The lining of the uterus repairs itself and once again prepares for a fertilized egg. Around days 13 to 15 an egg is released from an ovary. This is called OVULATION.



### BEFORE MENSTRUATION:

Days 16-28:

If the egg is fertilized by the male sperm cell, it embeds itself in the wall of the uterus. If the egg is not fertilized, the blood vessels in the wall of the uterus shrink and break down. Then menstruation begins again.

Name \_\_\_\_\_

Date \_\_\_\_\_

## THE FEMALE REPRODUCTIVE SYSTEM (SE-9)

**DIRECTIONS:** Using the sixteen words provided, fill in the blanks to make this explanation of the female reproductive system correct. Each word will be used only once.

cervix  
clitoris  
egg cells  
estrogen  
Fallopian tubes  
hymen  
labia  
menstruation

ovaries  
ovulation  
ovum  
progesterone  
puberty  
sperm cell  
uterus  
vagina

© 1993 by The Center for Applied Research in Education

First, \_\_\_\_\_ are produced in two almond-shaped organs known as the \_\_\_\_\_. During the process of \_\_\_\_\_, a mature egg ( \_\_\_\_\_ ) is released and enters one of two \_\_\_\_\_. For a few days the egg cell travels towards the pear-shaped \_\_\_\_\_. The lining of this organ thickens in preparation for a fertilized egg. If the egg is not fertilized by the male \_\_\_\_\_, it will leave the body together with the lining of the uterus and a small amount of blood. This is called \_\_\_\_\_.

The lower portion of the uterus is called the \_\_\_\_\_ and is a common site of cancer in women. The female organ of intercourse is the \_\_\_\_\_. A circular fold of skin is usually present at the entrance to this organ and is called the \_\_\_\_\_. Outside of this organ are folds of skin covered with pubic hair known as the \_\_\_\_\_. Between these skin folds is a small, round, sensitive area of skin called the \_\_\_\_\_. The development of the reproductive system is triggered by the hormones \_\_\_\_\_ and \_\_\_\_\_, which cause many physical changes in a girl. This period of change is called \_\_\_\_\_.