

Reproductive System

Grades 9 and 10, Lesson #3

Time Needed

One class period

Student Learning Objectives

To be able to...

1. Locate and spell at least 75% of the parts of the male and female reproductive systems, given drawings without labels.
2. Recall and pronounce the names of at least 75% of the parts of the male and female reproductive systems, given descriptions of their functions.

Agenda

1. Discuss the purpose of the lesson.
2. Use the blackboard or Transparencies 1-6 to describe the male and female reproductive systems (including the size, shape, location, and function of each part).
3. Hand out Reproductive System Worksheets, filling them out as a whole class.
4. Hand out the Reproductive System Reference Sheet, having volunteers read it aloud if time allows.
5. Assign homework.

Materials Needed

Photocopies

One transparent copy of:

Reproductive System, Transparencies 1-6

One per student of:

Reproductive System, Worksheets 1 and 2

Reproductive System, Reference Sheet

Individual Homework Exercise: The Reproductive System

Activities

1. Identify the lesson as, primarily, a review of information many students learned in earlier grades. Explain, too, that being well-grounded in knowledge about the reproductive system will help them make sense of discussions later in the unit about birth control, diseases, etc.
2. Use the blackboard (drawing the reproductive systems) and/or Reproductive System Transparencies 1-6 to describe the functions and the sizes/locations/shapes of each part. This should take 20-30 minutes. These lecture notes will help:

PART	“JOBS”/ FUNCTION(S)	APPROXIMATE ADULT SIZE/LOCATION/SHAPE
Navel	allows passage of oxygen and nourishment, before birth ... then it stops working	on the abdomen, it isn't part of the reproductive system
Abdomen (also called the belly)	contains most of our internal organs	the part of the body between the rib cage and the pelvis
Buttocks	provides cushion for tail bone; contains muscles for movement	isn't part of the reproductive system
Pelvis (the “pelvic region” the lower abdomen)	supports and protects the internal reproductive organs	Bowl-shaped bone structure
Penis (made up of shaft, glans, and sometimes foreskin)	allows passage of urine; allows passage of semen; provides sensation (has many nerve endings)	3-5 inches, when not erect 5-7 inches, when erect
Foreskin	protects the glans of the penis; provides sensation; males who have been circumcised don't have one	like a sleeve, covers most of the glans of the penis when it isn't erect
Scrotum	holds testes; controls temperature; provides sensation	muscular sac which is shorter when cold, longer when warm
Testes (singular=testis...also called testicles)	produce sperm; produce sex hormones (androgens, testosterone)	(two) comparable to small plums, each is made of over a mile of tightly coiled tubes, they're parts of both reproductive and endocrine systems

PART	“JOBS”/ FUNCTION(S)	APPROXIMATE ADULT SIZE/LOCATION/SHAPE
Epididymis (plural=epididymes)	allow maturation of sperm	(two)more tubes, they form a cap on the back and top of the testes, each leading from one of the testicles
Cilia (singular=cilium)	sweep an ovum down the fallopian tube; sweep sperm cells through the epididymis	(many) hair-like structures which line the fallopian tubes and the epididymes (also line lungs)
Spermatic cords	suspend the testis; supply blood to the testis; provide sensation; carry sperm from the testis	(two) each one is a multi-stranded cable, consisting of 2 arteries, 3 groups of veins, some nerve branches, and one vas deferens
Vas deferens (plural=vasa deferentia also called sperm ducts)	provides storage for sperm; allow passage of sperm	(two) each is as big around as sewing thread (inside diameter at the end nearest the epididymis) they lead into the abdomen, where (behind the bladder) they widen into storage sacs
Bladder	provides storage for urine	comparable to an orange; it isn't part of the reproductive system
Seminal vesicles	contribute fructose (sugar) to semen for nourishing the sperm	(two) 2 inch sacs, each opens into a vas deferens
Semen	helps sperm live longer and travel better	(about a teaspoonful per ejaculation)
Prostate gland	contributes fluid to semen for sperm's mobility (their ability to travel)	comparable to a grape, it lies below the bladder
Cowper's glands (also called bulbourethral glands)	produce fluid that cleanses the urethra of acid (from urine) to protect the sperm	(two) comparable to pearls, they're below the prostate on either side of the urethra (opening into it)

PART	“JOBS”/ FUNCTION(S)	APPROXIMATE ADULT SIZE/LOCATION/SHAPE
Urethra	allows passage of urine in males; allows passage of semen	in female, it’s the front of three openings and isn’t part of the reproductive system in male, it’s the tube inside the penis
Anus	allows passage of bowel movement (feces); provides sensation (has many nerve endings)	the opening from the rectum and lower intestines, it isn’t part of the reproductive system in female, it’s the third of three openings
Uterus (made up of muscular walls, a lining called the endometrium, and a cervix. The uterus is also called womb)	houses and protects embryo/fetus/baby; allows nutrient and waste exchange with placenta; nourishes an embryo, before a placenta grows	comparable to upside-down pear, when not pregnant, but very stretchy
Cervix	produces fluids to help sperm travel; produces a mucous plug to keep germs out during pregnancy	the neck of the uterus, it’s opening into the vagina looks like a tiny pink donut, feels like tip of the nose
Vagina (also called birth canal ...partly covered at birth, in most cases by a hymen)	allows passage of shed endometrium during menstruation; allows passage of sperm; allows passage of baby; produces fluids to cleanse and lubricate itself and to help sperm travel; provides sensation (has many nerve endings)	a collapsed tube, like a not- blown-up balloon, 2-4 inches long when not sexually aroused and not giving birth, but very stretchy is the middle of female’s three openings
Hymen	none that we know of for sure, but it may decrease the risk of infection; may be stretched during sexual intercourse or by using a tampon or through physical activities such as sports or riding a bike	membrane partly covering vaginal opening

PART	“JOBS”/ FUNCTION(S)	APPROXIMATE ADULT SIZE/LOCATION/SHAPE
Ova (singular= ovum...also called egg cell)	carry strings of genes called chromosomes to provide plans for next generation	(usually one per cycle) about the size of the period at the end of a sentence (.)
Ovaries (singular=ovary)	provide storage for ova; allow maturation of ova; produce sex hormones (estrogen, progesterone, androgens)	(two) comparable to small plums, they're parts of both reproductive and endocrine systems; they are attached by ligaments, to each side of the uterus
Fallopian tubes	allow passage of ova; allow passage of sperm	(two) 4 inches long, trumpet- shaped, not much larger than ovum at uterine end. . . with finger-like fimbriae at loose end, and lined with hair-like cilia
Fimbria (plural= fimbriae)	find an ovum and bring it into a fallopian tube	(many) fringe-like or finger-like outer ends of the fallopian tube
Vulva (made up of labia majora, labia minora, and clitoris)	protects openings of urethra and vagina, as eyelids protect eyes; provides sensation (has many nerve endings)	labia are folds of skin; outer labia (labia majora) has pubic hair
Clitoris (made up of shaft, glans and hood)	provides sensation (has many nerve endings)	shaft about 1 inch long, glans comparable to a pearl at front of vulva, where the labia meet
Clitoral hood	protects the glans of the clitoris; provides sensation (has many nerve endings)	like a cap, mostly covers the clitoris, when it isn't erect

- Hand out Reproductive System Worksheets 1 and 2. Fill them out aloud together, encouraging as much participation by the students as possible.
- Hand out the Reproductive System Reference Sheet. If time allows, have volunteers take turns reading it aloud. If not, simply explain that people should read it as part of their homework.

Homework

Make sure students realize that this particular homework is due **tomorrow**.

Answers to the Individual Homework Exercise are as follows:

BOX ONE: MALE

- | | |
|-----------------------|------------------------|
| 1. Cowper's gland (2) | 6. scrotum (1) |
| 2. epididymis (2) | 7. seminal vesicle (2) |
| 3. foreskin (1) * | 8. spermatic cord (2) |
| 4. penis (1) | 9. testicle (2) |
| 5. prostate gland (1) | 10. vas deferens (2) |

BOX TWO: FEMALE

- | | |
|------------------------|----------------|
| 1. cervix (1) | 6. hymen (1) * |
| 2. clitoral hood (1) * | 7. ovary (2) |
| 3. clitoris (1) * | 8. uterus (1) |
| 4. fallopian tube (2) | 9. vagina (1) |
| 5. fimbria (M) | 10. vulva (1) |

BOX THREE: PARTS THAT PEOPLE OF ANY SEX HAVE

- | | |
|-----------------|----------------|
| 1. abdomen (1) | 5. cilia (M) |
| 2. anus (1) | 6. navel (1) |
| 3. bladder (1) | 7. pelvis (1) |
| 4. buttocks (1) | 8. urethra (1) |

Each correct answer is worth 2 points, if spelled correctly (only 1 point, if misspelled). Each answer in parentheses is worth another point. Thus, the total possible so far is 84 (28 X 3).

FILL IN THE BLANKS:

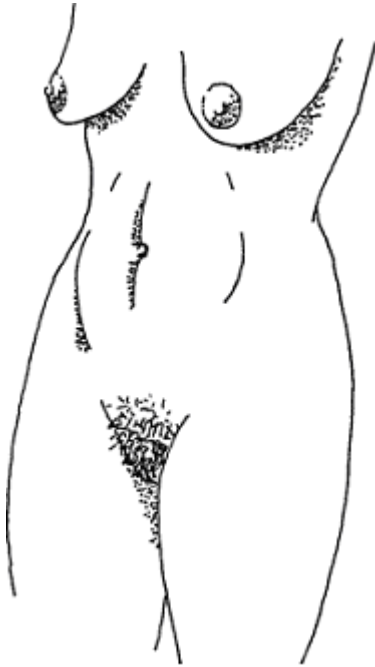
- | | |
|----------|-----------------------|
| A) ovum | E) ejaculation |
| B) ova | F) menstruation |
| C) sperm | G) nocturnal emission |
| D) semen | |

Each correct word is worth 2 points ("nocturnal emission" counts as two separate words, each worth 2 points) *if spelled correctly* (1 point, if misspelled). Thus, the total possible for the fill-in-the-blanks section is 16 (8 X 2).

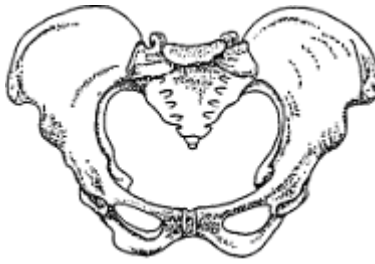
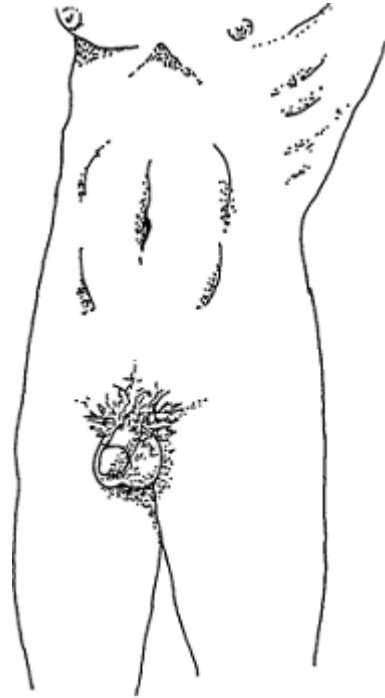
So the exercise is worth 100 points, altogether.

* Give the student 5 **bonus** points if they thought to mention that some people do **not** have the asterisked (*) parts. For example, if a female has experienced ritual genital mutilation, she may no longer have a clitoris or clitoral hood. If a male has been circumcised, he will no longer have a foreskin. If a female has had vaginal intercourse, masturbated with a finger or sex toy, used tampons, or ridden a bike or a horse, she may have less hymen or none at all. Thus, the *most* accurate answer for clitoris would be (0-1), for foreskin (0-1) and for hymen (0-1).

Reproductive System Transparency 1

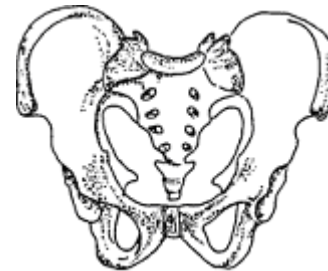


NAVEL
ABDOMEN



FEMALE

PELVIS

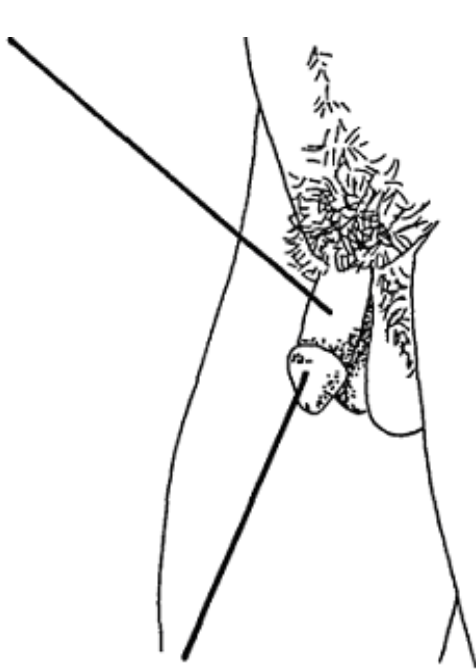


MALE

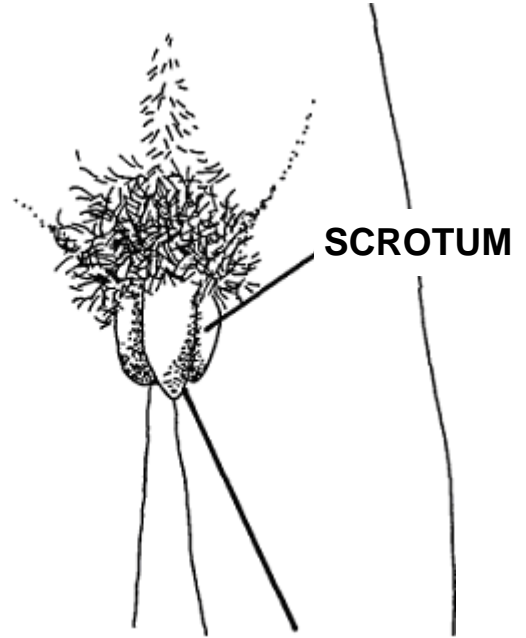
NOTE: The illustrations on these transparencies do not represent all people's bodies, including people who haven't reached puberty, heavier people, and some people who are trans and/or intersex.

Reproductive System Transparency 2

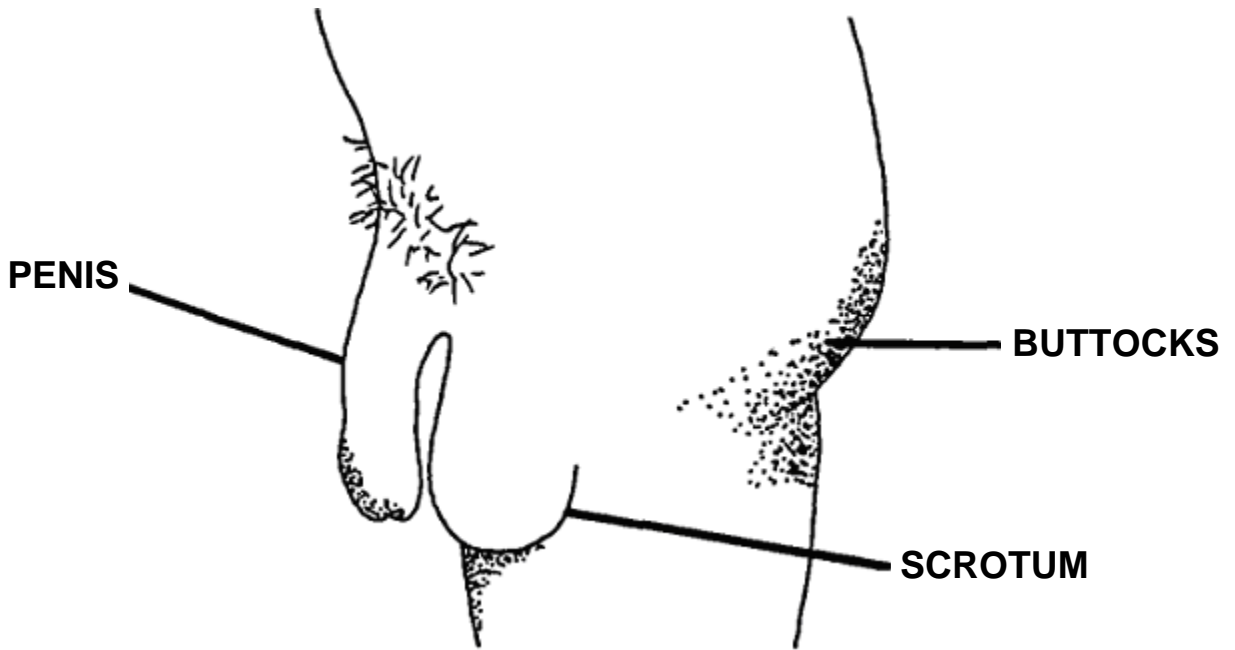
SHAFT OF PENIS



GLANS OF PENIS



SCROTUM

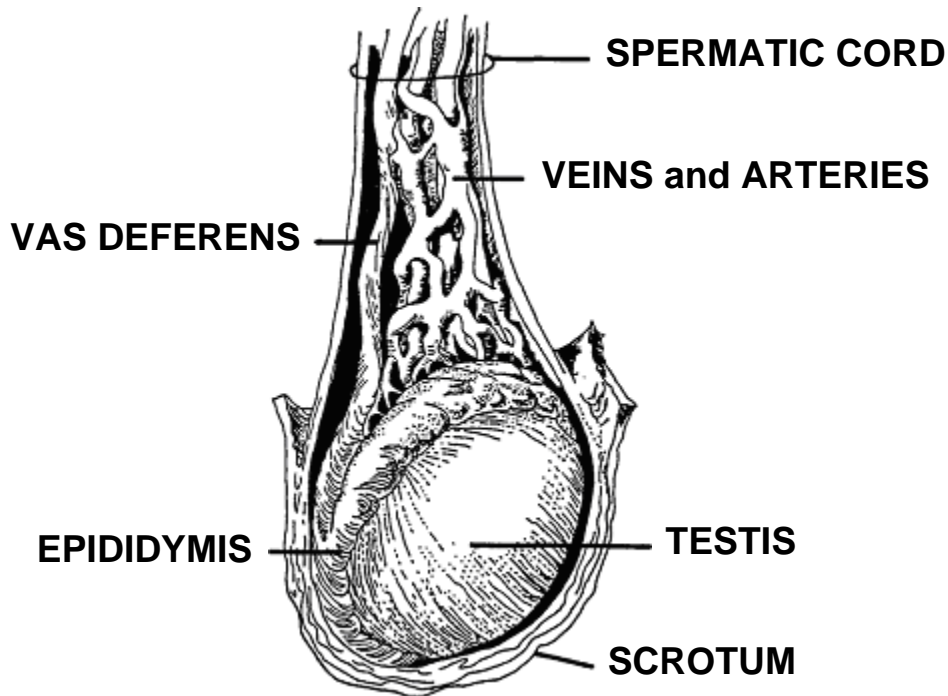
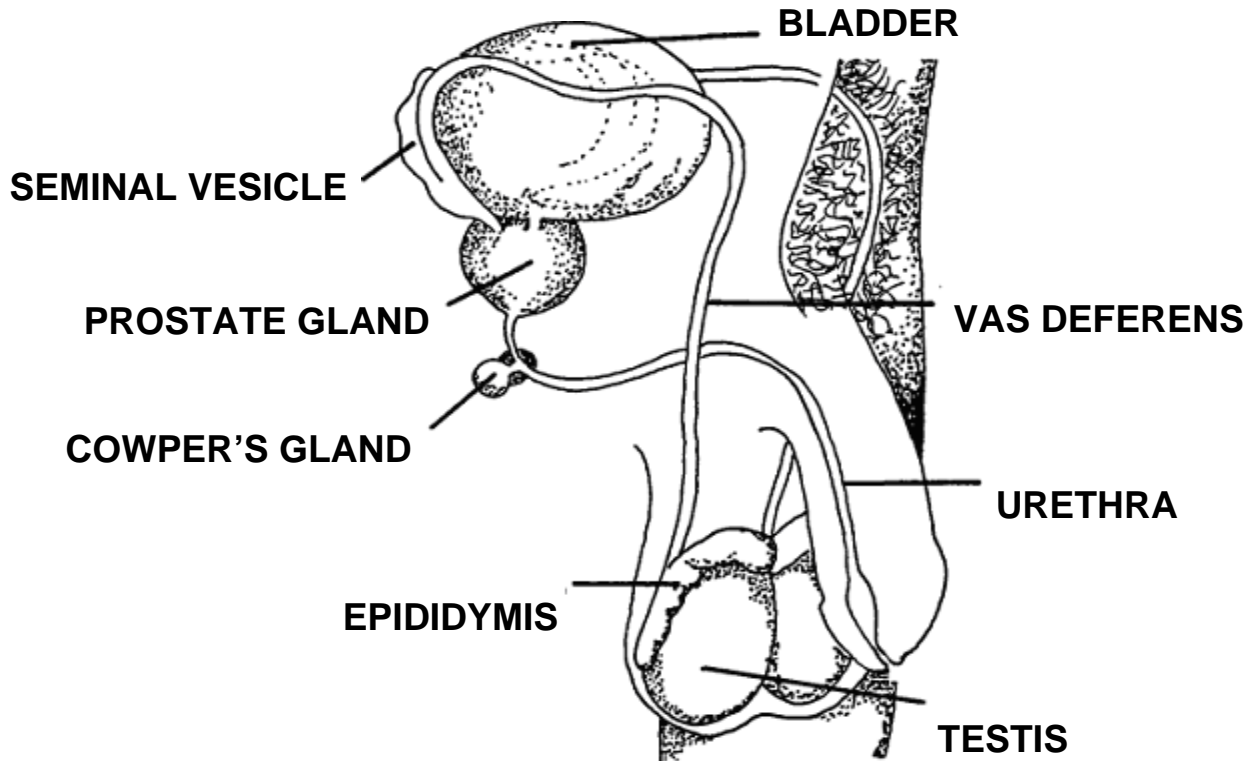


PENIS

BUTTOCKS

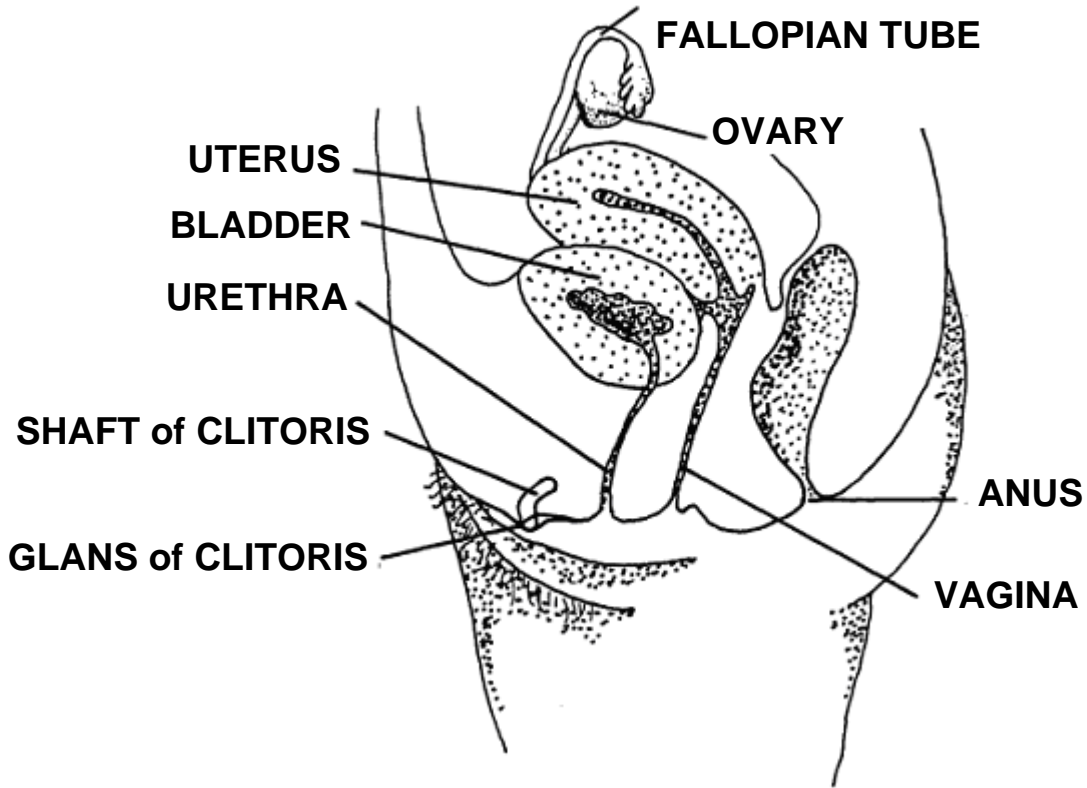
SCROTUM

Reproductive System Transparency 3



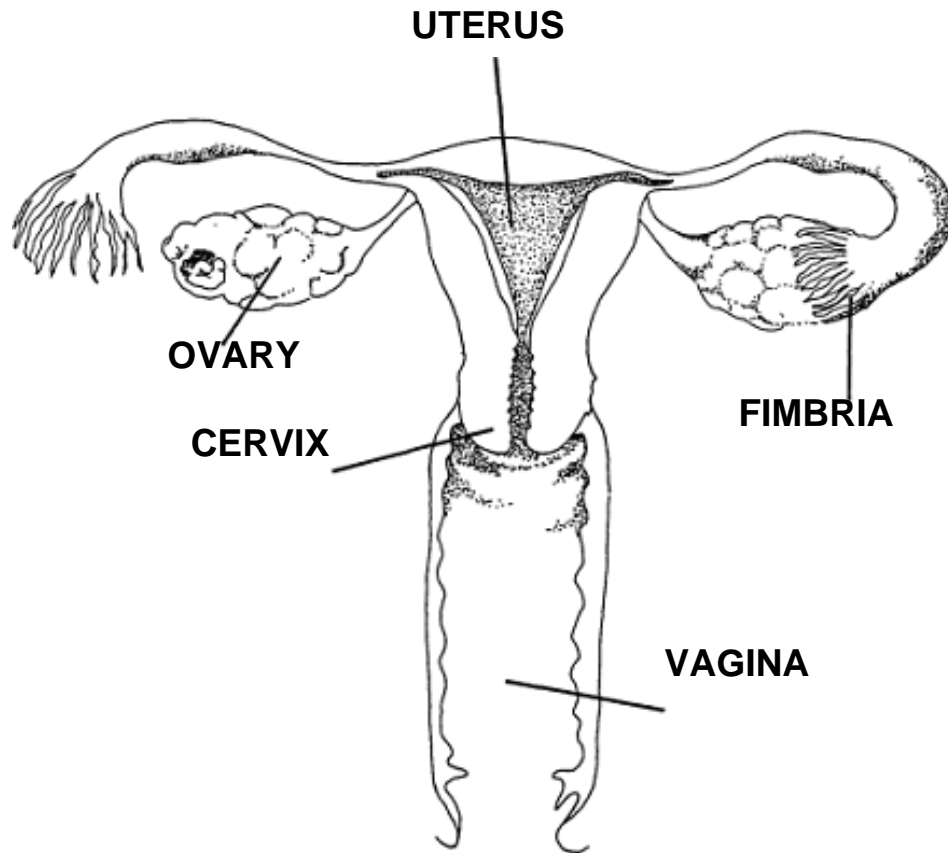
Cilia line each vas deferens.

Reproductive System Transparency 4



Cilia line each fallopian tube.

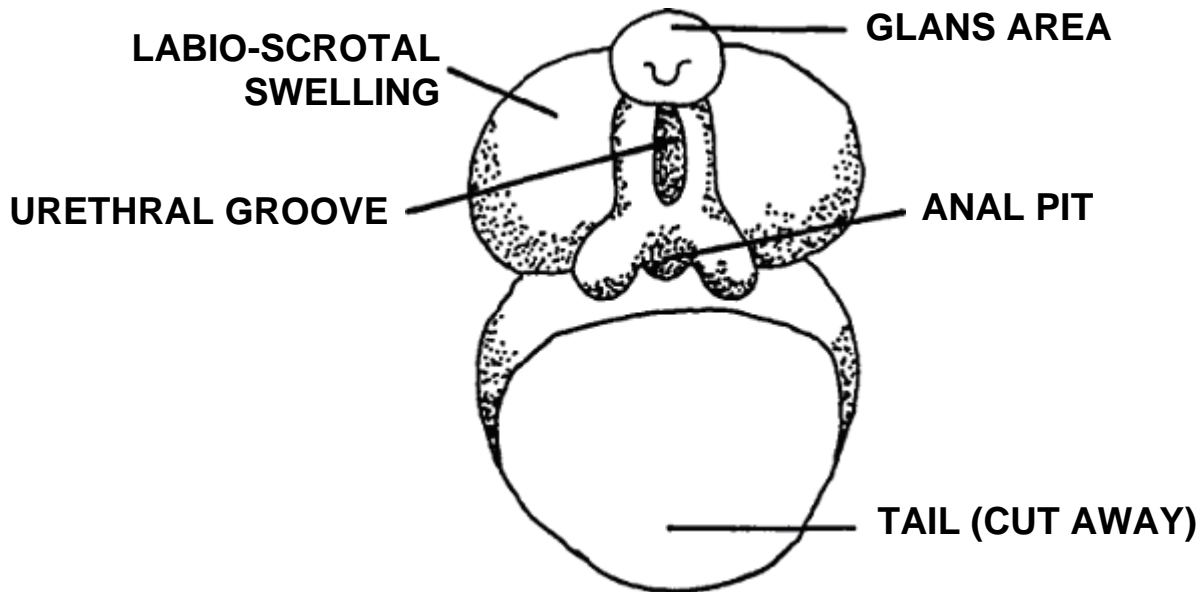
Reproductive System Transparency 5



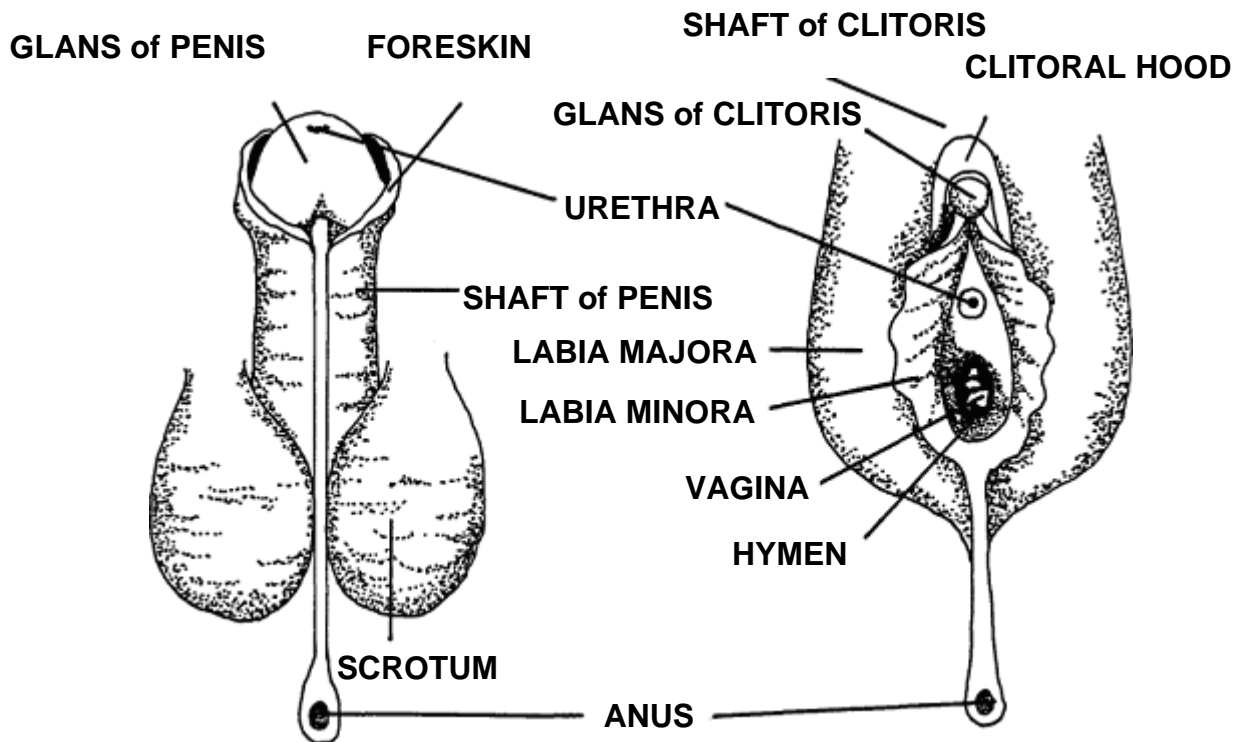
Reproductive System Transparency 6

PRENATAL DEVELOPMENT OF THE GENITALS

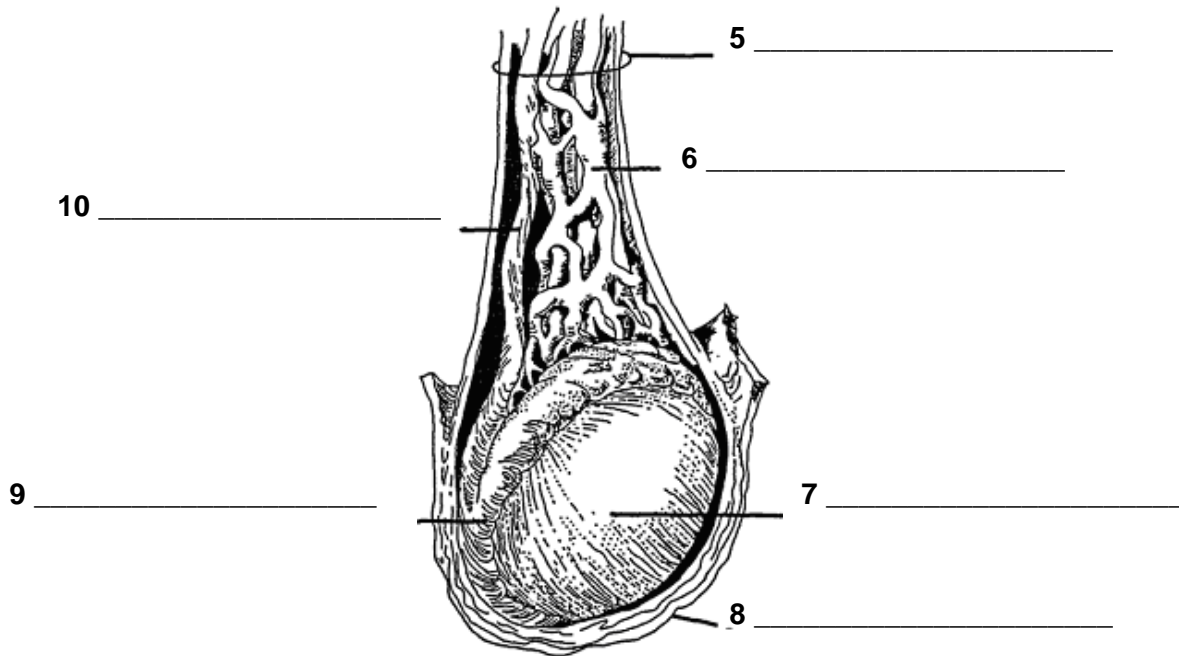
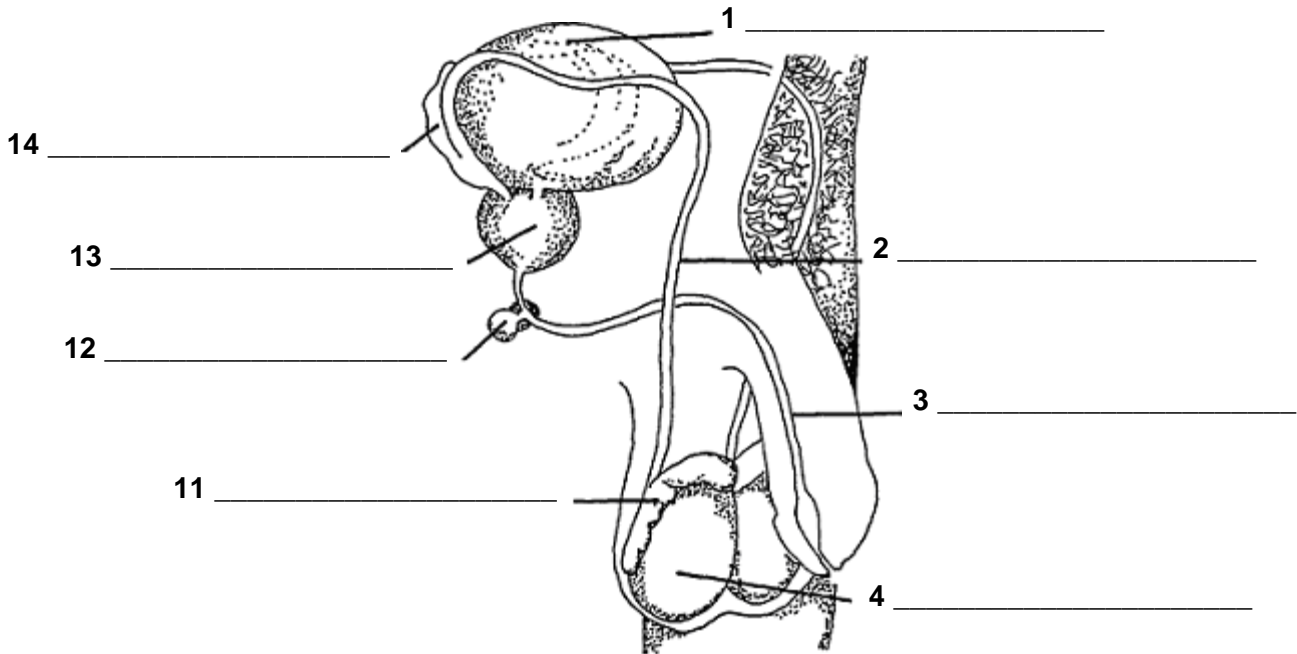
TWO OR THREE MONTHS' GESTATION



FULLY DEVELOPED

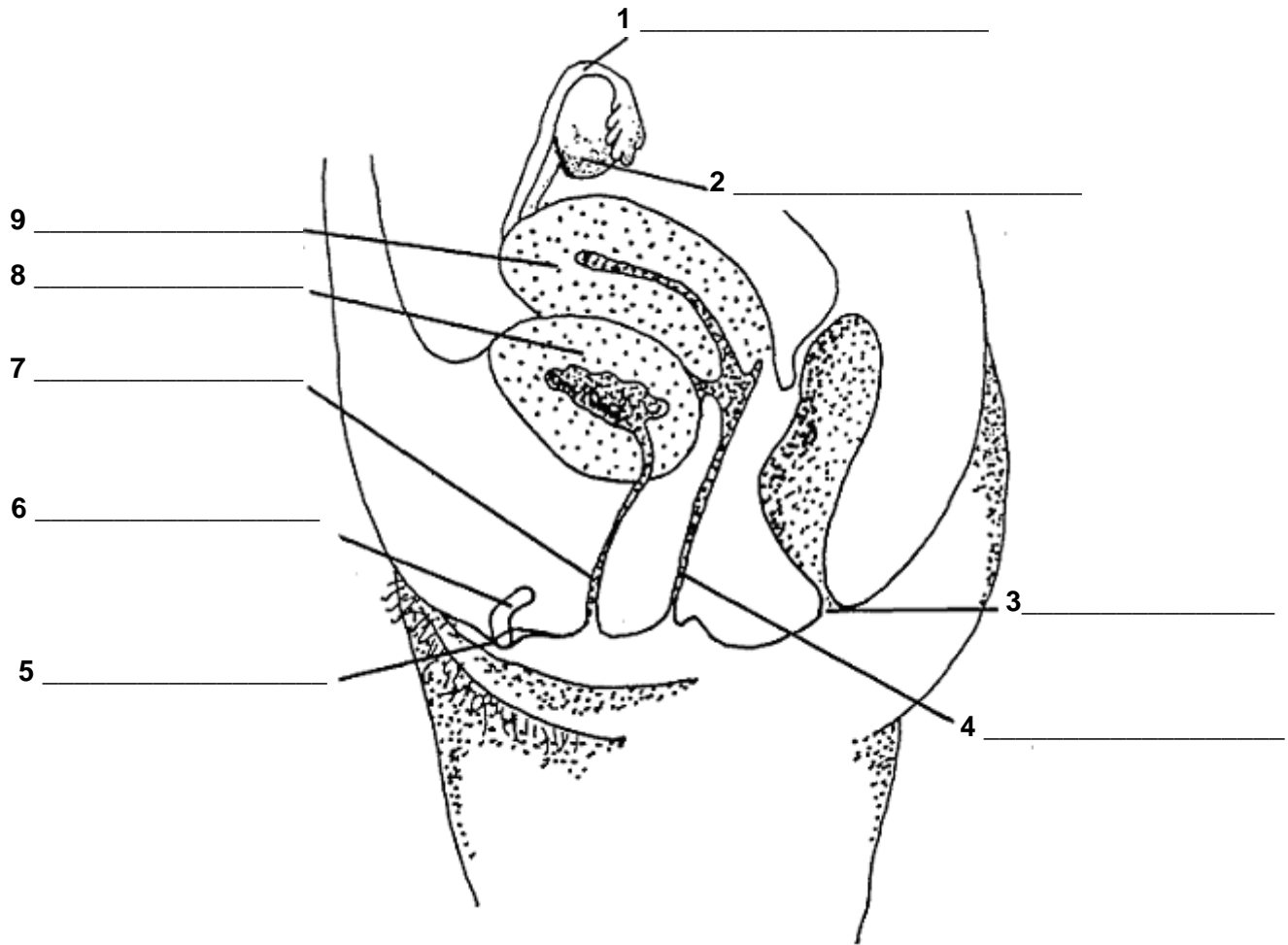


Reproductive System Worksheet 1

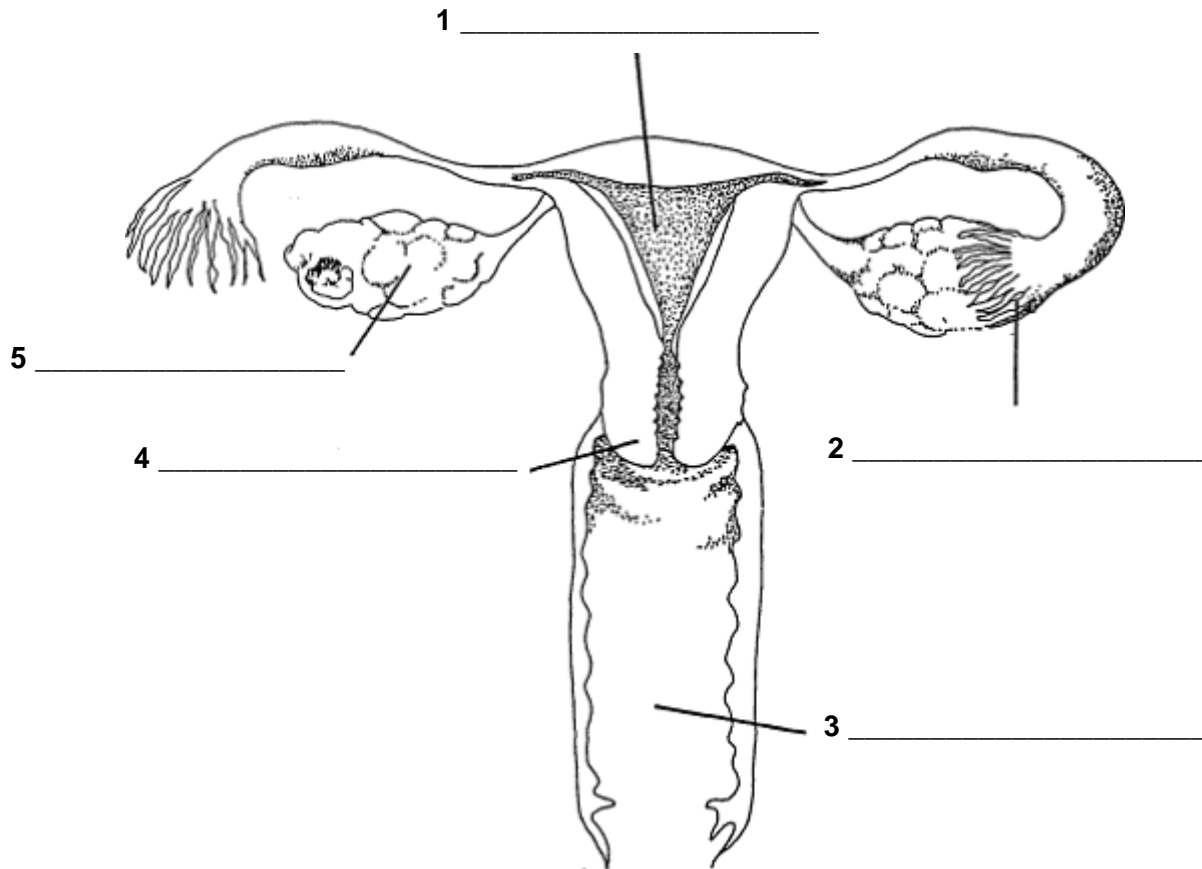


CILIA LINE EACH VAS DEFERENS

NOTE: The illustrations on these worksheets do not represent all people's bodies, including people who haven't reached puberty, heavier people, and some people who are trans and/or intersex.

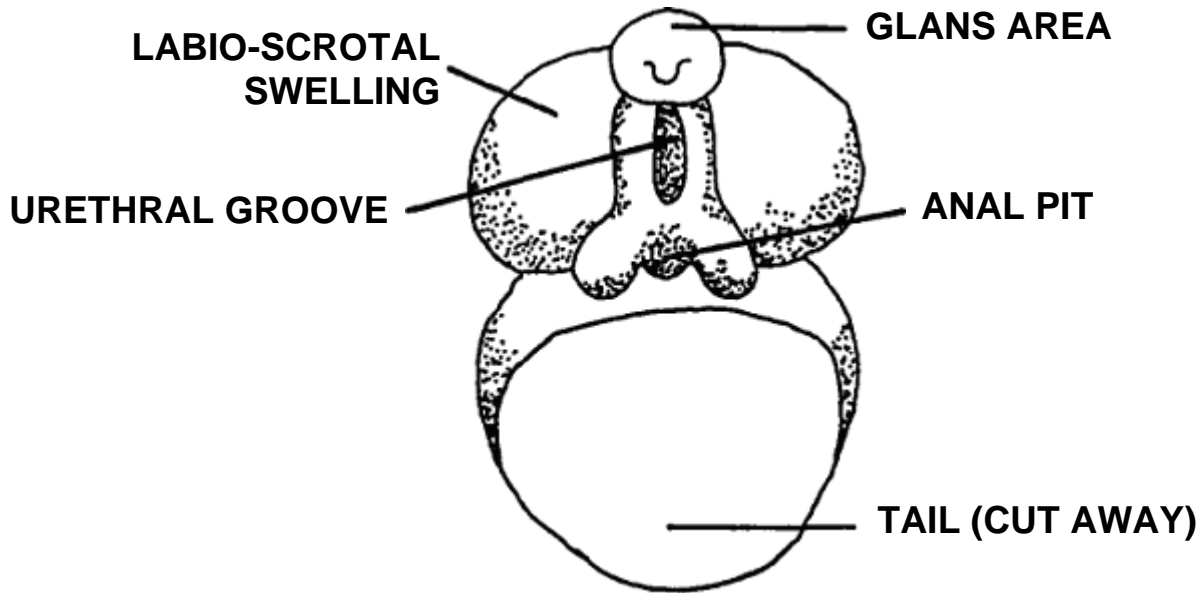


Reproductive System Worksheet 2

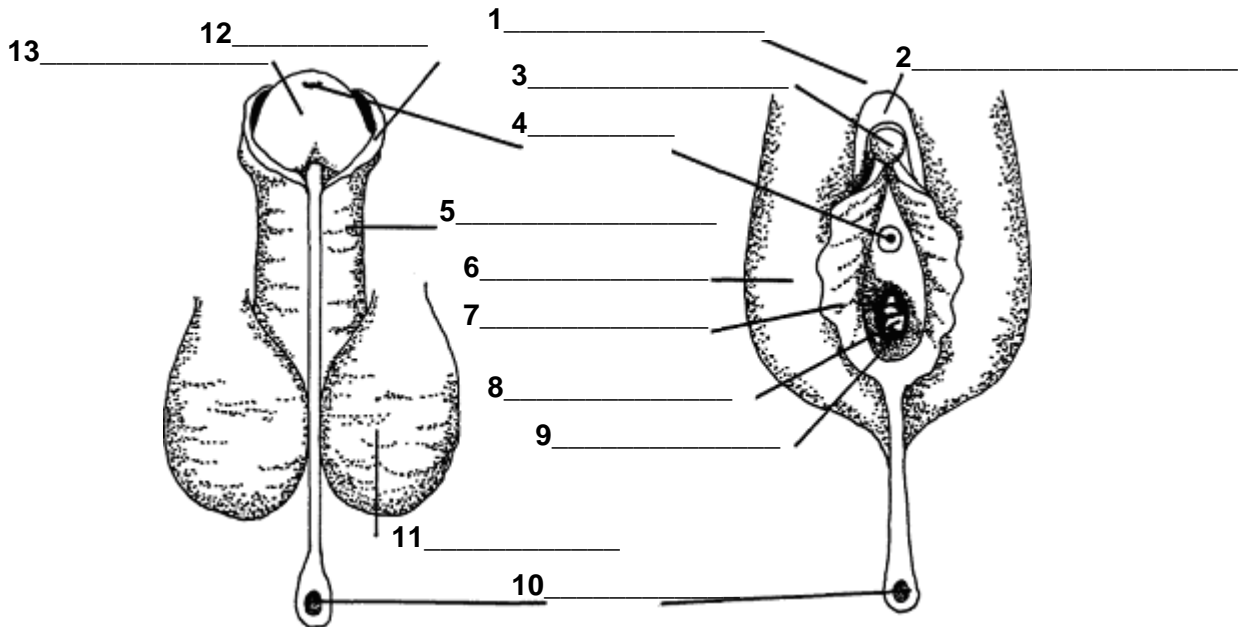


Reproductive System Worksheet 3

PRENATAL DEVELOPMENT OF THE GENITALS TWO OR THREE MONTHS' GESTATION



FULLY DEVELOPED



* This does not represent all bodies, including trans and/or intersex folks.

Reproductive System Reference Sheet: Glossary

ABSTINENCE

Choosing not to do something. In this context, it means choosing not to have sexual intercourse. Most people abstain from intercourse at some times during their lives.

DISCHARGE

Fluid. Urine and semen are kinds of discharge, but the word is usually used to describe either the normal wetness of the vagina or the abnormal wetness that may come from an infection in the penis or the vagina.

EJACULATION

The release of semen from the penis.

ERECTION

The penis or clitoris filling with blood and becoming larger and harder.

FECES

Solid waste that is made in the intestines (the bowels). It is sometimes called a bowel movement or “poop”. It is released through the anus when we go to the bathroom.

GENITALS

The parts of the reproductive system located on the outside of a person’s body. The female genitals may also be called the vulva.

MASTURBATION

A person massaging their own genitals or other parts of the body for pleasure or comfort. Most people masturbate at some times during their lives; some choose not to. It is safe; it can’t cause pregnancy, spread disease, or lead to a broken heart. Each culture, religion, and family has its own beliefs about whether or when it is OK to masturbate.

MENSTRUATION

The lining of the uterus (the endometrium) emptying out. It is sometimes called “having a period.”

NOCTURNAL EMISSION

Ejaculation of semen during sleep. It is sometimes called “having a wet dream,” although it doesn’t mean the person was necessarily dreaming.

ORGASM

Very pleasurable sensation. It is a series of muscular contractions of the reproductive organs, followed by muscular relaxation and a sense of relief. Masturbation and sexual intercourse often lead to orgasm. In males ejaculation usually happens at the same time.

OVULATION

The release of an ovum from the ovary.

OVUM

The cell from a woman (called, in English, an “egg”) which carries strings of genes (called chromosomes) to provide the plans for the next generation. The plural of ovum is ova.

REPRODUCTION

Making more of something. In this context, it means humans making babies ... more humans.

SEMEN

The fluid which helps sperm live longer and travel more easily.

SEX

“Sex” can mean the biological differences in people’s brains and bodies that make them male or female. It can also mean a wide range of activities, including oral, anal or vaginal intercourse; putting fingers, hands or sex toys into the vagina or the anus; masturbating; and rubbing bodies together, with or without clothes on.

SEXUAL INTERCOURSE

Some specific kinds of sex. It is called “vaginal intercourse” when a penis is inside the vagina. Most pregnancies begin this way. It is called “oral intercourse” when the mouth touches the genitals. It is called “anal intercourse” when a penis is inside the anus. Each culture, religion, and family has its own beliefs about when sexual intercourse is OK and about which kinds are OK.

SEXUALITY

The part of all human beings which has to do with being male or female, being able to trust and love, needing and enjoying touch and closeness, liking and respecting ourselves and others, and reproducing (making babies).

SMEGMA

The paste-like discharge that collects between the glans of the penis and the foreskin, or between the glans of the clitoris and the clitoral hood. It provides lubrication, but it can collect bacteria and have a strong odor if it isn’t washed away regularly.

SPERMATAZOOM

The cell from a man (usually called “sperm,” for short) which carries strings of genes (called “chromosomes”) to provide the plans for the next generation. The plural of spermatazoon is spermatazoa.

URINE

Liquid waste, sometimes called “pee,” that is made in the kidneys and stored in the bladder. It is released through the urethra, when we go to the bathroom. Urine is not the same as semen.

Individual Homework Exercise: The Reproductive System

NAME _____ NOTE: DUE **TOMORROW!**

DIRECTIONS:

1. Put each part in the proper box. Box One is for parts that only males have. Box Two is for parts that only females have. Box Three is for parts that all people have. have.
2. Then, in the parentheses, write "1" if each person has one of that part. Write "2" if a person has two of them. Write "M" if a person has many of them.

YOU WILL USE ALL OF THE FOLLOWING TERMS:

- | | | | |
|---------------|----------------|-----------------|----------------|
| abdomen | clitoris | navel | spermatic cord |
| anus | Cowper's gland | ovary | testicle |
| bladder | epididymis | pelvis | urethra |
| buttocks | fallopian tube | penis | uterus |
| cervix | fimbria | prostate gland | vagina |
| cilium | foreskin | scrotum | vas deferens |
| clitoral hood | hymen | seminal vesicle | vulva |

BOX ONE: MALE PARTS

1. _____ ()

2. _____ ()

3. _____ ()

4. _____ ()

5. _____ ()

6. _____ ()

7. _____ ()

8. _____ ()

9. _____ ()

10. _____ ()

BOX TWO: FEMALE PARTS

1. _____ ()
2. _____ ()
3. _____ ()
4. _____ ()
5. _____ ()
6. _____ ()
7. _____ ()
8. _____ ()
9. _____ ()
10. _____ ()

BOX THREE: PARTS THAT PEOPLE OF ANY SEX HAVE

1. _____ ()
2. _____ ()
3. _____ ()
4. _____ ()
5. _____ ()
6. _____ ()
7. _____ ()
8. _____ ()
9. _____ ()
10. _____ ()

MORE DIRECTIONS: Answer the questions below. (The answers are **not** on the list above. You will find them, though, on the Reproductive System Reference Sheet.) Spelling counts.

- A. What is the Latin word for an egg cell? _____
- B. What is the plural for that? _____
- C. What is the common word for spermatazoa? _____
- D. What fluid carries and nourishes them? _____
- E. When this fluid comes out of the penis, what is that called? _____
- F. What is the medical word for "period"? _____
- G. What is the medical term for "wet dream"? _____