Reproductive Systems

Reproductive Systems

2 LESSON

PURPOSE

Understanding scientific names and functions of the reproductive systems sets a foundation of knowledge for learning about future sexual health topics. This lesson focuses on sexual and reproductive anatomy and clarifies information, debunks myths, and empowers young people to understand and care for their bodies. For most body systems, people have the same basic parts and functions, while the reproductive system has unique body parts. Throughout this curriculum, educators are encouraged to use inclusive language, acknowledging that a person's body parts may or may not reflect how a person identifies as male (person with a penis), female (person with vulva), or another identity along the gender spectrum. Refer to the introduction for resource links to better understand these variations and for using inclusive language. Having all students learn about the reproductive systems together is important for understanding and respecting the range of identities and variations that exists in human bodies. Throughout this lesson, emphasize that not all bodies look like the diagrams in this lesson and that all bodies are unique.

STUDENT LEARNING OBJECTIVES

After completing the Reproductive Systems lesson, students will:

1. Identify the internal and external parts and functions of the human reproductive systems and their similarities and differences.
2. Describe how puberty starts the process for the human body to potentially reproduce.
3. Build comfort and practice communicating about the reproductive systems.

LESSON SUMMARY

Activities		Minutes	Materials and Preparation Checklist
A	**Understanding our Bodies**	**5**	☐ Whiteboard and marker for recording the answers to the brainstorm. ☐ Slips of paper or index cards for each student for anonymous questions or exit tickets.
B	**The Reproductive Systems**	**30**	☐ **Copy Reproductive System Handouts A and B,** one set for each student. ☐ Review the Reproductive System slides found here: bit.ly/4cokD1v. If you decide to use the slides, prepare the projector. ☐ Read through the scripts for presenting the reproductive systems. ☐ Review the videos and decide if you will use them.
C	**Anatomy Match-Up Cards**	**10**	☐ **Copy Anatomy Match-Up Cards,** one set for the class or one set for each small group.
D	**Closing and Anonymous Questions**	**5**	☐ Prepare answers to any of the anonymous questions received so far.

OPTIONAL VIDEOS FOR THIS LESSON

You may wish to introduce or supplement this lesson by using one of the following videos.

Puberty and You (13:05 minutes) this Seattle Public Schools video reviews the physical, social, and emotional changes of puberty. You can skip to minute 3:05 to review the physical changes of puberty.

Pregnancy and Reproduction (2:33 minutes) This Amaze video explains the process of reproduction. It explains that typically sperm combines with an egg through vaginal sex, and also defines artificial insemination and in vitro fertilization. It clarifies that pregnancy and childbirth are just one way a family can be formed.

ACTIVITY A: UNDERSTANDING OUR BODIES

Before beginning the lesson, pass out a slip of paper or index card to each student. Remind students they can ask questions during class, however if they prefer not to ask their questions in class, they can use the paper or index card to ask an anonymous question. At the end of class, collect a card from each student.

Say,

Today we're going to learn about the human body's reproductive systems and go over the different body parts and their functions. Let's review - why do most people go through puberty?

Let students answer to see what they remember from the Changes of Puberty lesson.

Continue by saying:

Puberty starts the process for bodies to develop and change from a child to an adult, including making it possible to reproduce (make a baby) if someone chooses to in the future. In this activity, we might learn some words that you haven't heard before. We will be using scientific names for body parts. Even if you are used to hearing other names for these body parts, it's important to know the scientific terms as well.

The reproductive system is just one of many systems that make up our bodies. There are many other body systems. Can anyone name one?

Depending on what your students have covered, they may have heard of body systems such as: the **circulatory** system, the **skeletal** system, the **muscular** system, or the **digestive** system.

Say,

Can anyone name a body part that most people have in common?

Let students respond, prompting them with some obvious body parts, if needed (nose, eyes, elbow, etc.)

Most body parts people have in common, even though they often look different for each person.

Next, we are going to learn about the reproductive systems which includes some body parts that not everyone has in common.

ACTIVITY B: THE REPRODUCTIVE SYSTEMS

Through a short lecture with handouts and videos, this activity provides students with a common scientific vocabulary to identify different anatomical parts and their functions. After this activity, students will better understand their bodies, be able to communicate about their bodies to others, and know how reproduction can occur.

DIRECTIONS

1. Review and read through the educator script with handouts and optional slides. Adapt the script as needed for your classroom.

   The educator script in this activity follows the Reproductive System Handouts A & B in this lesson. Students can fill in the blanks for the different body parts as you read through the educator script. You can also show the accompanying slides by following this link: bit.ly/4cokD1v.

2. Break up the script by sharing the MYTH and FACT or FUN FACT information included.

3. After reading the educator script and completing the handouts, show the short video on the menstrual cycle linked below in the section Understanding Ovulation and Menstruation. This will provide more information on the function of the reproductive system that is not included in the educator script.

4. Finish the activity with debrief questions and summarizing points.

Say,

We have talked about the changes that happen during puberty. Now we're going to talk about what's happening with the reproductive body parts during puberty. In some ways, the reproductive systems are similar, and in other ways they are different. There are some body parts that most boys have and some parts that most girls have.

For everyone, puberty begins in the brain when the pituitary gland releases hormones. This can start as early as 9 or as late as 16. The timing depends on each person's unique body. It is common to want to compare ourselves to other people, but your body will start these changes when it is right for you.

You have two handouts that show the two different reproductive systems. As I read through the descriptions, fill in the blanks for the different parts of the reproductive systems. You will see that there are some parts that are external (which means on the outside of the body) and are called genitals or private parts.

Other parts of the reproductive system are internal (which means on the inside of the body). There are also some body parts on your handouts that are not part of the reproductive systems, like the anus and bladder. These parts are there to help us identify where in the body the reproductive anatomy is located.

The diagrams show a typical view of the reproductive systems, though like other body parts, they can look different depending on the person's unique body.

EDUCATOR SCRIPT: REPRODUCTIVE SYSTEM – HANDOUT A

Start by saying,

Let's first look at Handout A with the parts most male bodies have.

Make sure students are looking at **Handout A** to follow along.

Say,

First find the pituitary gland on your handout. Give students a minute to find the pituitary gland.

Puberty starts in the pituitary gland, where signals are sent to the two testicles to start making testosterone, the hormone that makes sperm. Testosterone causes changes in the body like the voice getting deeper, shoulders and muscles growing, hair growing in the arm pits and near the genitals (private parts), and the penis getting larger.

(External Parts)

Let's start with the reproductive body parts that are found on the outside of most male bodies.

1. **Testicles.** #1 on the diagram
   - **Most male bodies have two testicles which make hormones and reproductive cells called sperm. Sperm is important because it is needed to make a baby.**
2. **Scrotum.** #2 on the diagram
   - **The testicles are kept safe inside a sac called the scrotum.**
   - **The scrotum is on the outside of the body below the penis.**

MYTH or FACT?
The scrotum can move closer or further away from the body to help keep sperm at the proper temperature.

FACT! The scrotum has the very important job of keeping sperm at just the right temperature. So if someone jumps into cold water, scrotum will bring the testicles up close to the body, but if it is a hot day they will let the testicles hang lower away from the body.

3. **Penis.** #3 on the diagram
   - **The penis is the soft spongy tube where both urine and sperm exit the body.**

MYTH or FACT?
All penises look the same.

MYTH! Just like people's faces all look different so do people's genitals or private parts. Penises may also look different because of a procedure called circumcision. This is when the foreskin, which is a thin sleeve of skin at the tip of the penis, is removed at birth, usually by a doctor. Circumcision is a decision made by the family for personal, religious or, cultural reasons.

(Internal Parts)

4. **Urethra.** #3 on the diagram

   - **Inside the penis is a tube called the urethra that travels from the bladder to the outside of the body through the penis.**
   - **Both urine (pee) and sperm leave the body through the urethra, but not at the same time.**

Now let's go back to the scrotum and testicles on your handout to understand where sperm comes from and how it travels through the body.

5. **Vas Deferens.** #5 on the diagram
   - Connected to each testicle are tiny tubes called the vas deferens.
   - Sperm travel from the testicles through these tubes, to the urethra and then outside of the body through the penis.

Stop to make sure that students have identified all of the body parts in Handout A correctly. Ask if students have any questions at this point.

EDUCATOR SCRIPT: REPRODUCTIVE SYSTEM – HANDOUT B

Have students turn to the handout labeled Handout B. Continue by saying:

Now we will look at the diagram of the reproductive system that most female bodies have.

Let's start again with the pituitary gland which sends signals to the two ovaries to begin making the hormones estrogen and progesterone. These hormones start off the changes of puberty in most female bodies, like breasts developing, growing hair under armpits and near the genitals (private parts), and the start of menstruation (having periods).

Stop here to make sure everyone is focused on the correct diagram.

(Internal Parts)

1. **Ovaries.** #1 on the diagram
   - **Most female bodies have two ovaries that make hormones and reproductive cells called eggs.**
   - **Both egg and sperm are reproductive cells, and both are needed to start the process of reproduction (making a baby).**

MYTH or FACT?
Ovaries will release eggs for someone's entire life.

MYTH! The ovaries take turns releasing an egg each month starting in puberty but will stop when the person is about 40 to 50 years old.

2. **Fallopian Tubes.** #2 on the diagram
   - **There are two fallopian tubes – one attached to each ovary.**
   - **When an egg leaves the ovary, it travels through the fallopian tubes to the uterus.**

FUN FACT! The fallopian tubes are similar to the vas deferens – both are tubes that reproductive cells travel through!

3. **Uterus.** #3 on the diagram
   - **The uterus is a muscular organ where a developing baby can grow.**
4. **Vagina.** #4 on the diagram
   - **The vagina is a muscular tube connecting the uterus to the outside of the body.**

(External Parts)

Say,

Next, we will identify the external parts of the reproductive system found in most females. These external parts are called the genitals or private parts, and together are called the vulva.

5. **Labia.** #5 on the diagram
    - **To protect the opening of the vagina, there are folds of skin called the labia.**
6. **Clitoris.** #6 on the diagram
    - **At the top of the vulva is the clitoris which has many nerve endings and can be sensitive to touch.**
7. **Urethra.** #7 on the diagram
    - **Under the clitoris is the urethral opening. The urethra is a tube that is attached to the bladder where pee (urine) can leave the body.**
8. **Vaginal Opening.** #8 on the diagram
    - **Below the urethra is the vaginal opening.**
    - **The vaginal opening is where the menstrual flow, or a period, leaves the body and where many babies come out when they are born.**

Stop to make sure that students have identified all of the body parts in Handout B correctly. Ask if students have any questions at this point.

UNDERSTANDING REPRODUCTION

If you plan to discuss reproduction, you can use the following paragraph to explain how sexual intercourse is related to reproduction.

Say,

One job of the reproductive system is to allow people to reproduce, which means to make a baby. Reproduction happens when an egg is fertilized by a sperm, attaches to a uterus, and then develops for about 9 months into a baby. The sperm can fertilize the egg through one type of sex (vaginal intercourse) or with the help of other people, like a doctor. In future health classes you will learn more about sex and reproduction.

SUMMARIZE

Wrap up the descriptions of the reproductive systems with the following messages.

- The reproductive systems make hormones that start the process for people to grow into adults, and make reproductive cells that can potentially join to make a baby.
- You will learn more about reproduction in future science and health classes.
- Everyone's body is unique. Now you have the names of the reproductive body parts and are more familiar with your own body and how it works.
- Knowing your body can also help you ask questions or talk to a doctor or nurse if you have any concerns.

UNDERSTANDING OVULATION AND MENSTRUATION

Say,

Now that we've learned about the reproductive systems, we are going to learn what the menstrual cycle is and how it is related to reproduction.

Menstruation, or having a period, is part of the menstrual cycle for people who have a uterus. Just like the other physical changes of puberty, different people start menstruating at different times. Once someone starts menstruating it means it is possible for them to get pregnant and have a baby.

Even though not everyone has periods, we will spend some time talking about this since many people are interested in learning more or may have heard myths about periods. It's important that everyone—whether you will have periods or not—has correct information.

DIRECTIONS

1. Choose a short video to describe the stages of the menstrual cycle. Here are two options.
    - The Menstrual Cycle (2:06 minutes) This video from Kids Health describes the menstrual cycle phases and what happens at each stage. This video does refer to girls and women who have menstrual cycles.
    - Flowing With Confidence. (1:53 minutes) This Amaze video defines menstruation, goes over feelings people may have about their period, and describes various menstrual products.

2. Students may want more information about periods and menstruation. You can access print resources in this Google Folder. The school nurse may want to have these handouts available in their office for students curious about or experiencing menstruation.

3. After going over ovulation and menstruation, check if students have questions.

DEBRIEF

After viewing the video, debrief with the following questions.

- **Why is it helpful to know about the reproductive systems and the menstrual cycle?**

  Possible answers:

  - *These changes might be scary or uncomfortable if we don't know why or what to expect.*
  - *Knowing what to expect may make it easier to prepare for the changes.*
  - *So we have the correct words to use and to be able to ask questions.*
  - *So we can understand what we're all going through during puberty.*

- **How might someone feel if their body is developing sooner or later than their friends?**

  Possible answers:

  - *Awkward or confused if their body isn't changing at the same time as others.*
  - *Concerned with how their body is changing (or not changing).*

- **What can a young person do if they are worried or confused about the changes they are experiencing?**

  Possible answers:

  - *Ask a trusted adult like a parent or guardian, the school nurse, a doctor, etc.*
  - *Get information from the library or a trusted website like Amaze.org or KidsHealth.org.*

SUMMARIZE

Provide the following messages to summarize this lesson.

- If you have questions about what you've learned about reproduction or the menstrual cycle, be sure to talk to someone on your trust team, like a parent or guardian, school nurse or counselor.
- Just like our bodies are different in many ways, so are periods. Not everyone experiences puberty changes or periods in the same way.
- Remember that most of your classmates are experiencing changes during this time of growing up and supporting each other is important.

ACTIVITY C: ANATOMY MATCH-UP CARDS

This activity let's students review and test the knowledge they learned in The Reproductive Systems activity. It will also provide additional facts about reproductive anatomy.

Say,

Next let's test our new knowledge with an activity!

DIRECTIONS

Read the following options and decide which directions you will give your students.

1. Cut and laminate (if possible) the Anatomy Match-Up Cards.
2. Depending on the size of your class, you can:
    - Make one set of the Anatomy Match-Up Cards and distribute them among students. Some will have anatomy terms and others will have descriptions. Ask students to get up and roam around the room, matching up the anatomy term with the respective description card. Then you may choose to have students read their term and definition pairs, and one or both of the Things to Know on their cards.
    - Alternatively, make multiple sets of the cards, and provide a full set of the Anatomy Match-Up Cards to groups of 3-5 students and have them match up the cards in small groups.
3. After matching up the anatomy terms with the descriptions, use the Anatomy Match-Up Quiz Questions to test students' knowledge. Ask the questions and then have students select the correct answers. This can be done by students stepping forward if they lined up around the room with their matching cards, or it can be done with students holding up the correct cards in their small groups.

ANATOMY MATCH-UP QUIZ QUESTIONS:

Read from the following questions and select which ones you will use to quiz your students.

1. **Which parts of the anatomy make reproductive cells?**
   Answers: Ovaries, Testicles
2. **Which parts of the anatomy do people of all genders have?**
   Answers: Pituitary Gland and Urethra
3. **Which terms are the reproductive cells?**
   Answers: Sperm and Egg

ACTIVITY D: CLOSING AND ANONYMOUS QUESTIONS

Close the lesson by saying,

- **Having the facts helps us know what to expect when going through puberty. It's important to understand what is happening to the body during puberty and why.**
- **Remember that bodies vary from person to person. We want to respect the unique differences people may have and their individual journey through puberty.**
- **We can respect our bodies by appreciating that they are unique and that growing up is an amazing process.**
- **If you have any concerns about your body, you now have the words to talk to a parent or guardian, a nurse or doctor, or another trusted adult.**

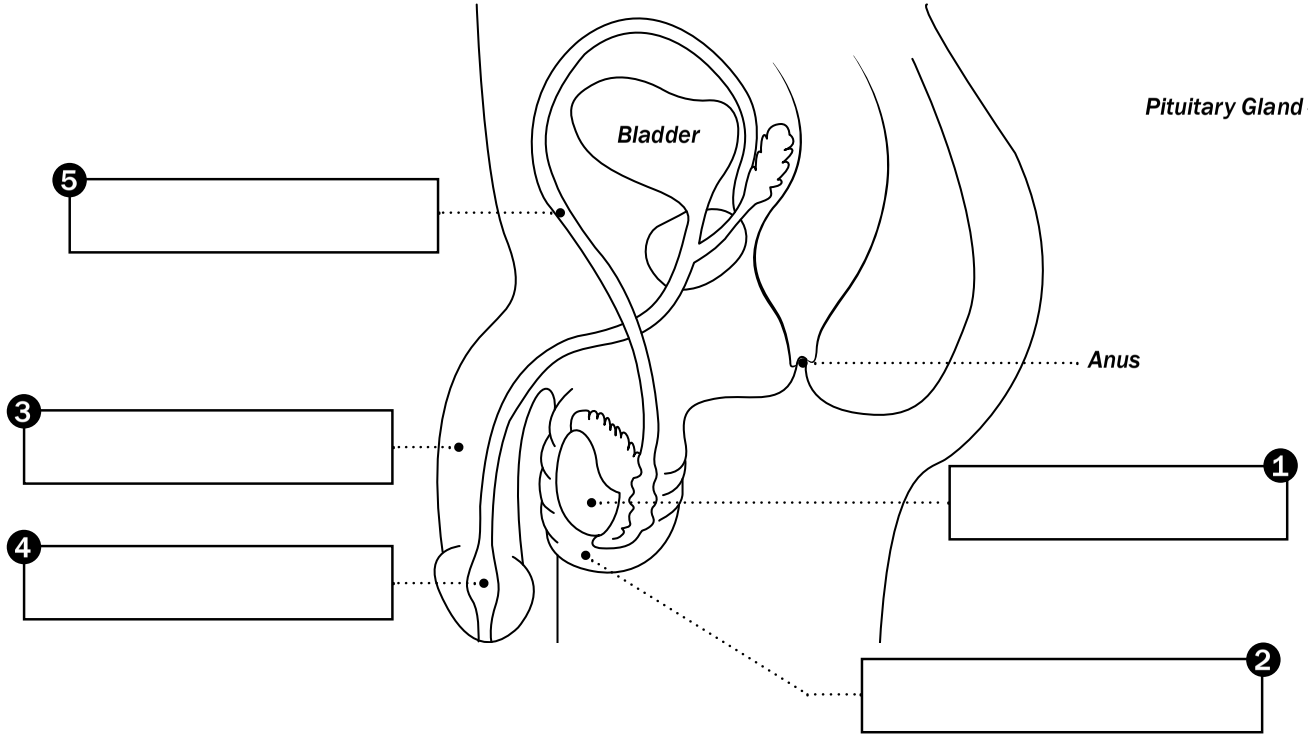
ANONYMOUS QUESTIONS

Take time to answer any questions the students may have submitted from the previous class.

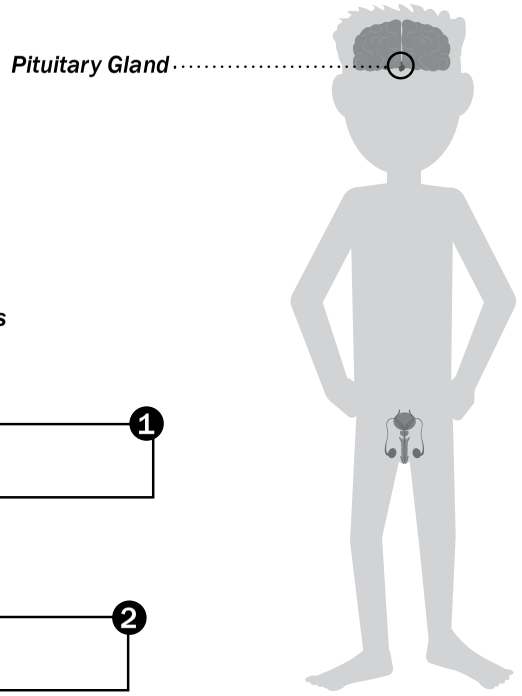
DIRECTIONS

1. If needed, pass out slips of paper or index cards to each student.
2. Ask students to respond to the following questions. You can also write these on the board.
    - **What was one thing you learned about the reproductive systems today?**
    - **What is a question you have about reproductive anatomy?**
3. Collect a card from each student. Sort through the cards to see what students learned and to find answers to their questions. Be sure to respond to all questions in a future class.

Handout A: Reproductive Anatomy. *Fill in the missing terms.*



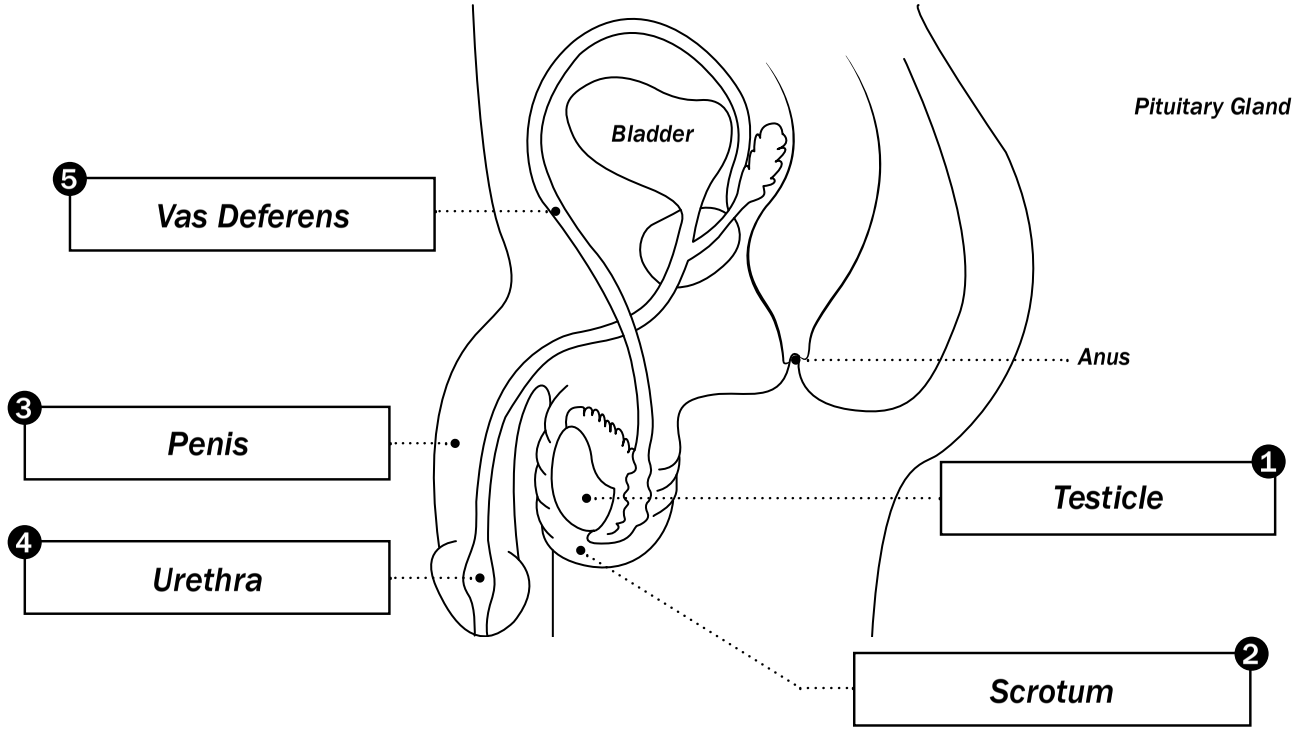
Side View, Internal and External Anatomy



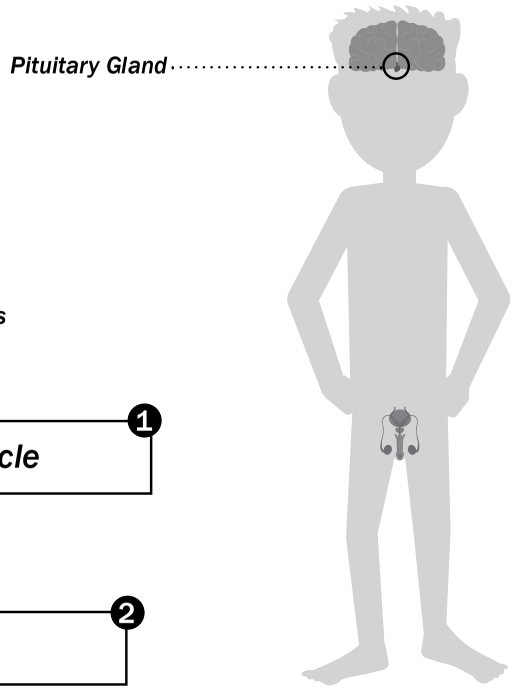
Frontal View

Word Bank	
Penis	Urethra
Scrotum	Vas Deferens
Testicle	

Handout A: Reproductive Anatomy. *(Educator Key)*



Side View, Internal and External Anatomy

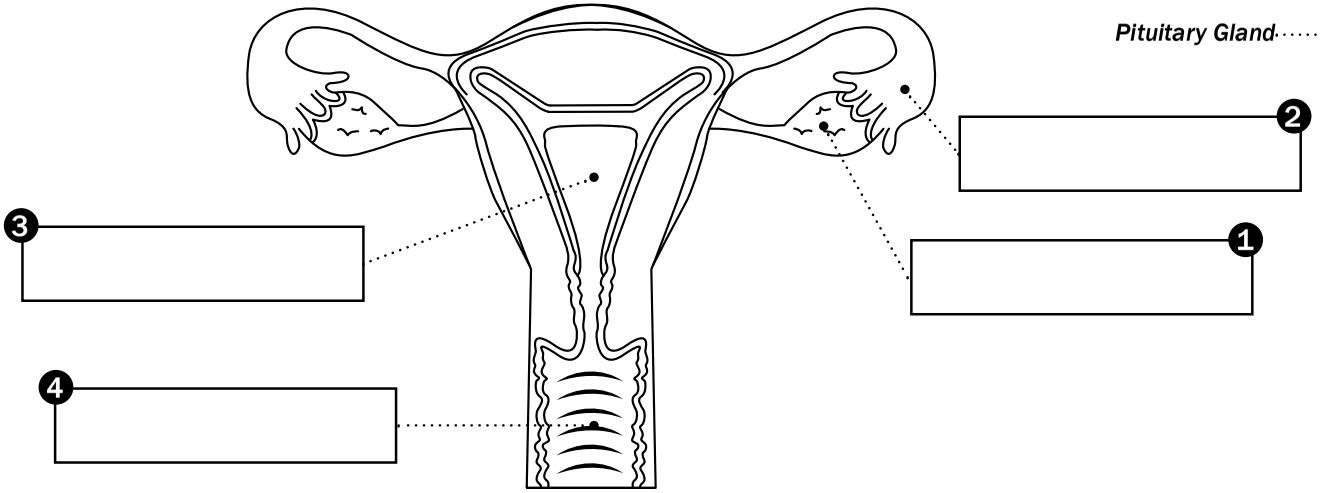


Frontal View

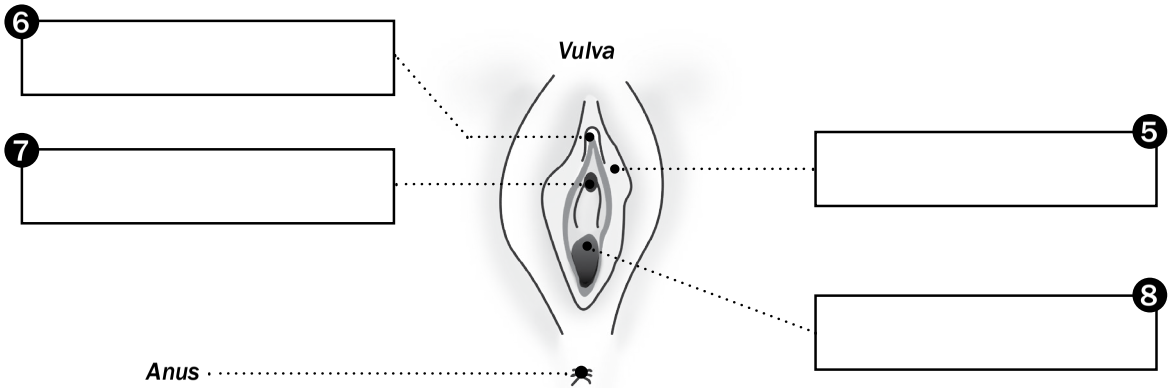
Word Bank

Penis	Urethra
Scrotum	Vas Deferens
Testicle	

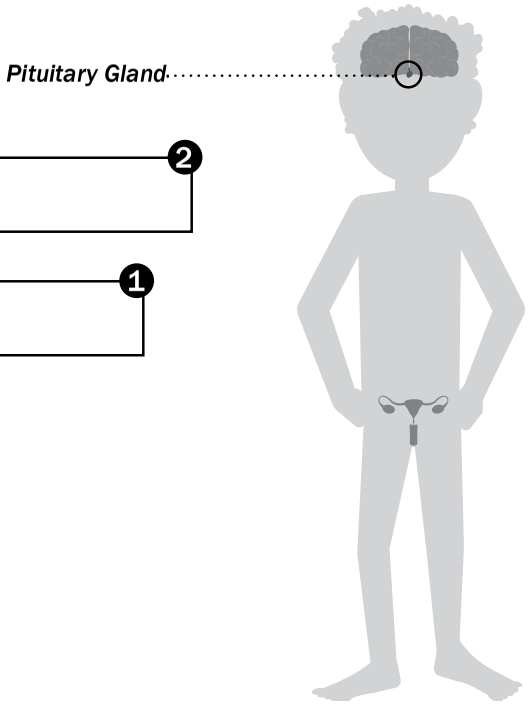
Handout B: Reproductive Anatomy. *Fill in the missing terms.*



Internal Frontal View



External Frontal View

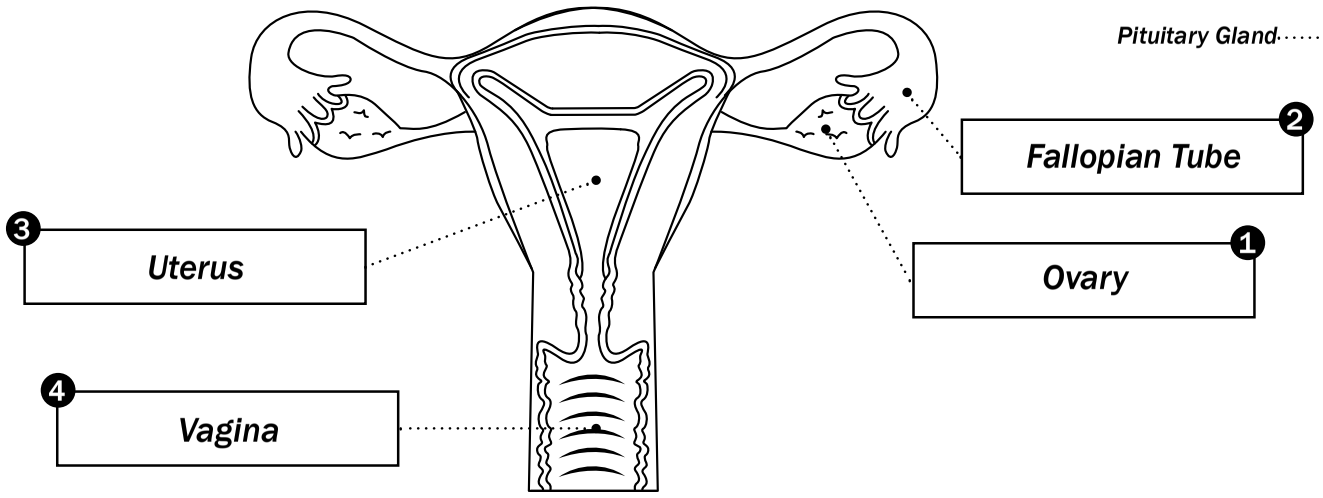


Frontal View

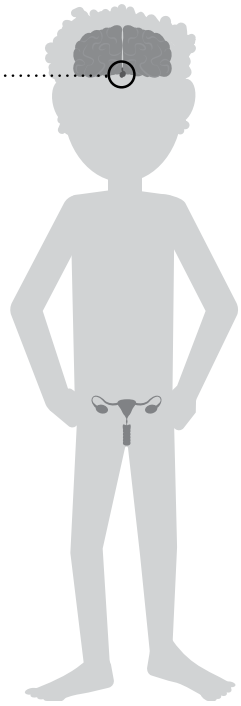
Word Bank

Clitoris	Urethra
Fallopian Tube	Uterus
Labia	Vagina
Ovary	Vaginal Opening

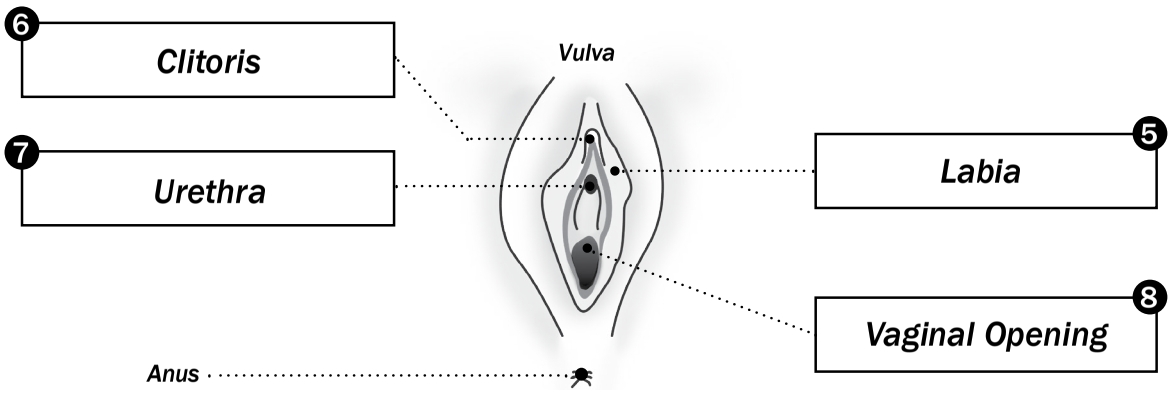
Handout B: Reproductive Anatomy. *(Educator Key)*



Internal Frontal View



Frontal View



External Frontal View

Word Bank

Clitoris	Urethra
Fallopian Tube	Uterus
Labia	Vagina
Ovary	Vaginal Opening

Pituitary Gland

What is it?

The part of the brain that releases hormones signaling puberty to begin.

Things to Know

This piece of anatomy is about the size of a pea.

It creates lots of hormones including the ones that help your bones and muscles grow.

Testicles

What is it?

The place inside the scrotum where sperm is made.

Things to Know

There are two of these and often one is slightly larger than the other.

This piece of anatomy is kept cooler than the rest of the body.

Egg

What is it?

The reproductive cells that are released from ovaries.

Things to Know

These cells are some of the largest cells in the body, about as thick as a strand of human hair.

People with ovaries are born with about 1-2 million of these reproductive cells.

Uterus

What is it?

A muscular organ where a fertilized egg can develop and possibly grow into a baby.

Things to Know

This piece of anatomy is about the size of a pear but can expand to the size of a watermelon during pregnancy.

This organ is very strong and contracts during menstruation and during labor (when a baby is born).

Penis

What is it?

The spongy external body part above the scrotum.

Things to Know

This piece of anatomy can get harder and larger (called an erection). This can happen throughout a person's life.

This anatomy is actually about twice as long as it looks, with half of it anchored inside the body.

Labia

What is it?

The folds of skin outside of the body. They protect the opening of the vagina.

Things to Know

There are actually two sets of these folds, an inner pair and an outer pair. The outer pair grows hair.

These folds are often not the same size. They can also vary in color and length depending on the person.

Vas Deferens

What is it?

Two tiny tubes connected to the testicles that carry sperm to the urethra.

Things to Know

These tubes can be 12-18 inches long.

These tubes can be blocked by a doctor, which is called a vasectomy. Some adults do this when they decide they no longer want to reproduce or make a baby.

Clitoris

What is it?

Located at the top part of the vulva. It is filled with many nerve endings.

Things to Know

This piece of anatomy is actually much larger than what can be seen from the outside. About 90% of it is actually inside the body.

This piece of anatomy can sometimes swell and become larger and more sensitive.

Ovaries

What is it?

Where microscopic eggs live.

Things to Know

While people can't see this piece of anatomy because it is inside the body, they are about the shape and size of an almond.

There are two of these. After puberty begins, they take turns releasing eggs each month.

Urethra

What is it?

The tube attached to the bladder where urine leaves the body

Things to Know

While people of all genders have this anatomy, it is about 5 times longer in people who have a penis.

One job of this anatomy is to stop germs from entering the body. One sign of an infection is feeling like it burns when you pee. You may need to see a doctor when this happens.

Scrotum

What is it?

The sac on the outside of the body that holds and protects the testicles.

Things to Know

The skin of this piece of anatomy can often look wrinkly and starts growing hair during puberty.

This piece of anatomy can also sometimes double in size and then shrink back down.

Vagina

What is it?

The tube between the uterus and the vulva where menstruation leaves the body.

Things to Know

This piece of anatomy is self-cleaning and releases a clear or whitish discharge to keep itself healthy.

Sometimes air can get trapped in this piece of anatomy and when the air comes out it can sound like a fart.

Fallopian Tubes

What is it?

Eggs travel through these tubes inside the body connecting the ovaries to the uterus.

Things to Know

It takes more than a day (about 30 hours) for an egg to travel down one of these tubes.

This is the place where a sperm and egg can meet and join together.

Sperm

What is it?

Reproductive cells that are made in the testicles.

Things to Know

These reproductive cells exit the body with fluids from other glands. This fluid is called semen and is milky white in color.

These are some of the smallest cells in the human body, and after puberty millions are made every day.