

PURPOSE

To help students understand the anatomy of the reproductive system and how a healthy reproductive system functions.

LEARNING OBJECTIVES

By the end of the lesson students will be able to:

1. Know the anatomical parts of the female reproductive system.
2. Understand how all of the parts of the reproductive system work together.
3. Recall that hormones are important to a healthy functioning reproductive system.

MATERIALS & RESOURCES

- **Lesson 2 teenFEMM** powerpoint
- **Entry Ticket Activity: Two Truths and a Lie + Teacher's Answer Key**
- **Worksheet: Anatomy Coloring Worksheet**
- **Worksheet: Female Reproductive Anatomy Quiz + Teacher's Answer Key**

VOCABULARY

- **Hormones:** Chemical signals that travel in the bloodstream, directing the activity of every system in the body.
- **Human Reproductive System:** The group of organs in the lower belly/pelvis that work together in women to mature an egg (female cell of reproduction) and develop a growing baby; the male organs produce sperm (male cell of reproduction).
- **Human Reproduction:** The process by which a man and a woman, together, create a new human life.
- **Ovary:** Two small organs on either side of the uterus that contain a woman's eggs. The ovary is responsible for developing and releasing an egg, approximately once every month.

- **Ovulation:** The release of an egg from the ovary.
- **Fallopian Tube:** Two tubes, connected to either side of the uterus, where the egg travels after ovulation.
- **Uterus:** The uterus (also called the ‘womb’), is where all of us begin to grow. It’s a hollow organ that expands during pregnancy as the baby grows.
- **Cervix:** A narrow canal at the base of the uterus, that opens into the vagina.
- **Vagina:** The canal that connects the uterus to the outside of the body. It’s the entrance to the reproductive organs and exit for the delivery of a baby.
- **Urethra:** The tube that carries urine from the bladder to the outside of the body.
- **Anus:** The opening for waste matter from the digestive system to exit the body.

PREPARATION

- ☐ Print the **Entry Ticket Activity** and cut out the nine cards.
- ☐ Print the **Female Reproductive Anatomy Quiz** for each student.
- ☐ Print the **Anatomy Coloring Worksheet** for each student. Students will require coloring supplies.

PROCEDURE

Step 1 (5 minutes): Entry Ticket Activity - Two Truths and a Lie

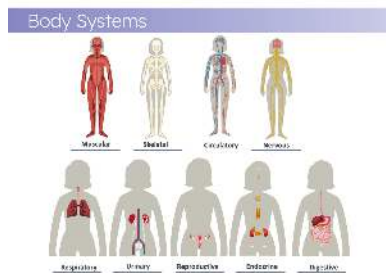


Hand out the 9 Entry Ticket Activity cards to different students. Have students read the statements on their card aloud, while the rest of the students guess: 1) **which body system the card refers to** and 2) **which two statements are true and which statement is the lie**. Review answers as you go, using the **Teacher's Answer Key** provided in the materials.

Step 2 (10 minutes): Review Nine Body Systems, Hormones and Puberty

The body is made up of several **systems**, all working together to make sure the body functions well.

Do you remember the names of the different body systems we learned about last class? Ask students if they can name the 9 body systems covered in the previous lesson. (On the slide, click the blank line under each image for the answer to appear.)

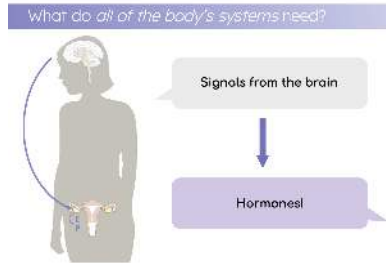


Who can describe the job of these three systems:

1. **Respiratory system:** provides breath to keep us alive.
2. **Digestive system:** processes the food we eat and helps us to absorb nutrients so our body can grow. The digestive system expels waste through the anus.
3. **Circulatory system:** sends oxygen from the lungs, and nutrients from food, to all parts of the body.

Ask: What do all **body systems** need in order to do their own **particular jobs** well, and to **work together** properly?

(Click on the slide to reveal answers).



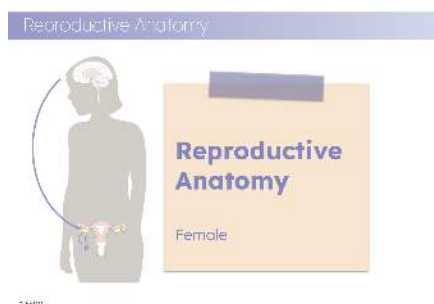
1. They need clear **signals** from the brain. What are these signals called?
2. Hormones!

The **endocrine system** is responsible for releasing hormones into your bloodstream so they can travel to the different systems in your body. The endocrine system is intricate, managing when and how much of each hormone to release. The endocrine system works together with the nervous system to control almost all of your body's processes.

As you grow and mature, your brain sends hormonal signals to the different systems and parts of the body to direct all of the changes your body needs to undergo in puberty. It is very normal for girls your age to be feeling a lot of feelings and experience more intense emotions as a result of the many hormonal changes your body is going through in puberty. It's important to remember that puberty is a normal, healthy and hugely important stage of development for you as your brain and body are doing amazing things!

Step 3 (15 minutes): Female Reproductive Anatomy + Coloring Worksheet

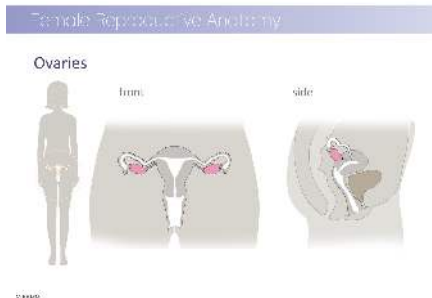
Let's take a look at the different parts of the reproductive system, so that we can learn about the fascinating link between the brain, hormones and overall health.



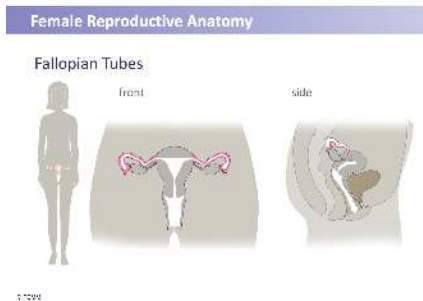
Hand out the **Anatomy Coloring Worksheet** to students. Review the parts of the female reproductive system aloud with the class, while students color in the parts of the reproductive system on their **Anatomy Coloring Worksheet**.



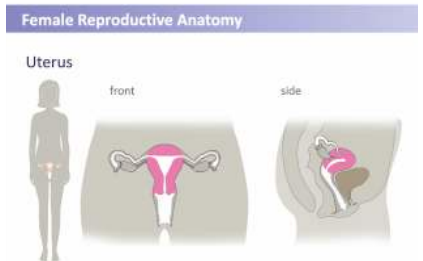
In this first slide, you can see where the **reproductive organs** are located in the body, around the pelvis area.



The **ovaries** are two small organs that sit on either side of the uterus and they are about the size of almonds. They are highlighted in pink on the slide. The ovaries take turns; each month *one* is responsible for developing and releasing an **egg**. The egg is the female cell of reproduction. The woman's ovaries store her eggs from birth. As of puberty, each month, inside an ovary, an egg matures to the size of a pinhead and is eventually released from the ovary in a hormonal health process called **ovulation**. Ovulation is very important for a woman's health as it indicates that all of the female hormones are working together and functioning properly. We will learn more about this in the next lessons.



The **fallopian tubes** are the long thin tubes that are connected to either side of the ovary, providing a way for the egg to travel from the ovary into the uterus. They are about the width of a spaghetti noodle.

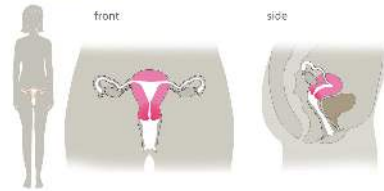


In the front view on the slide, you see the **uterus** in the center. Without the uterus, none of us would be here! The uterus is a hollow, pear shaped organ where a baby grows and develops. Get this: the uterus is the strongest muscle per square inch in the human body, with the propulsion force/size ratio of a crossbow!

The lining of the uterus is called the **endometrium**. This mucus membrane lining responds to your hormones each month to thicken in preparation for a possible future pregnancy. When a woman becomes pregnant, the baby attaches to this lining to receive the nourishment it needs to grow. The endometrium (the lining of the uterus) breaks down at the end of each cycle and sheds, in a woman's period or menstruation.

Female Reproductive Anatomy

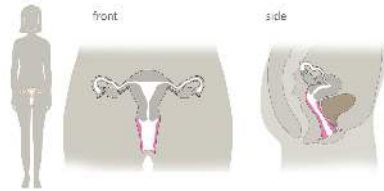
Uterus & Cervix



The **cervix** is the canal or opening at the base of the uterus that connects to the vagina.

Female Reproductive Anatomy

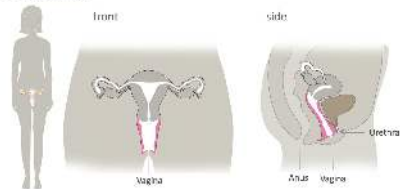
Vagina



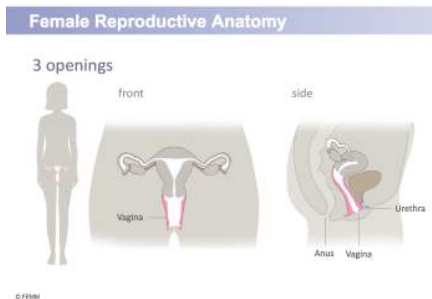
The **vagina** is the canal that connects the uterus to the outside of the body. It is the entrance to the reproductive organs and the exit for the delivery of a baby. It is also sometimes referred to as the birth canal.

Female Reproductive Anatomy

3 openings



The organ colored in brown is the **bladder**. The bladder is not part of the reproductive system, which is why you didn't color it in, but rather part of the **urinary system**. The **urethra** is the tube that carries the urine from the bladder to the outside of the body as we go to the bathroom. The urethra is easy to remember as being part of the urinary system because both deal with urine.



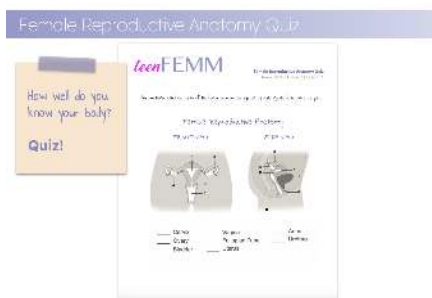
The opening behind the vagina is the **anus**. The anus is part of the **digestive system**. It is the opening for waste to exit the digestive tract.

The proximity of these three openings is significant for women as it increases the risk of bacteria transfer. When using the bathroom, it is important to always wipe from front (urethra) to back to avoid introducing bacteria from the digestive system into the vagina and/or urethra. *In the final anatomy slide, point out the 3 openings to the body in the side image:*

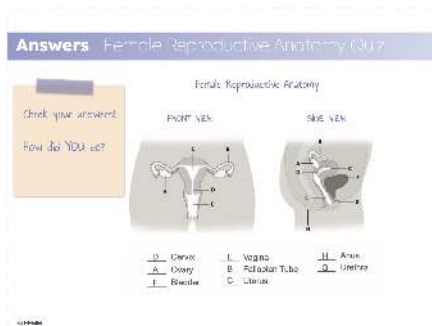
1. **vagina:** opens to the reproductive system
2. **urethra:** opens to the tube carrying urine from the bladder
3. **anus:** opens for waste to exit from the digestive system

Step 4 (5 minutes): Female Reproductive Anatomy Quiz

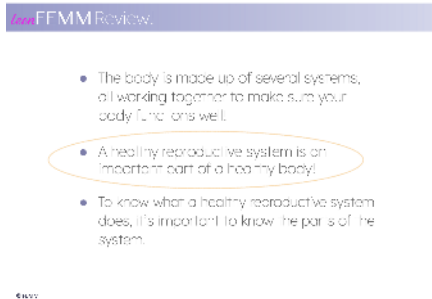
Hand out the **Female Reproductive Anatomy Quiz** to students. Give students a few minutes to identify the parts of the female reproductive system, matching the letter to the part.



After students have completed the anatomy quiz, review answers on the next slide or with the **Answer Key** provided in the materials.



CONCLUSION



Next lesson we'll talk more about the processes that occur each month in the female reproductive system, and the hormones that direct this process. We'll also talk about why these hormones are so important for your brain, your body, your mood and your overall health!

REFERENCES

Betts, J. G., Young, K. A., Wise, J. A., Johnson, E., Poe, B., Kruse, D. H., Korol, O., Johnson, J. E., Womble, M., & DeSaix, P. (2022). *Anatomy and physiology*. OpenStax. <https://openstax.org/details/books/anatomy-and-physiology>

Strauss, J. & Barbieri, R. (Eds.) (2009). *Yen and Jaffe's Reproductive Endocrinology: Physiology, Pathophysiology, and Clinical Management*. Elsevier Health Sciences.