

Reproductive System

Grades 9-12, Lesson 2

Summary

Using visuals, the teacher describes the external and internal reproductive organs, while students follow on their worksheets. The teacher also describes the main components of the sexual response system. The class concludes by identifying organs and structures with similar roles.

Student Learning Objectives

The student will be able to ...

1. Name the parts of the human reproductive system.
2. Describe the path of an egg during the menstrual cycle.
3. Describe the path of a sperm during ejaculation.
4. Recognize that there is a wide range of normal anatomy.
5. Name the 3 main components of sexual response.

Lesson Timing

Warm up	Bell work + 3 minutes
Purpose of lesson	2 minutes
Describe reproductive organs	25 minutes
Define sexual response terminology	8 minutes
Wrap up lesson	7 minutes
Assign homework	
Exit ticket	5 minutes
Total	50 minutes

FLASH Key Concepts

People's bodies can look very different from each other. These differences are normal and healthy.

The reproductive systems of males and females have many similarities.

Materials Needed

Student Materials

- *Reproductive System Worksheets*
 - *Worksheet 1*
 - *Worksheet 2*
 - *Worksheet 3*
 - *Worksheet 4*
- *Individual Homework: Anatomy*
- *Family Homework: Talking About the Reproductive System*, available in multiple languages on the FLASH website
- *Lesson 2 Exit Ticket*

Classroom Materials

- *Lesson 2 Warm Up*
- *Reproductive System Visuals*
 - *Visual 1*
 - *Visual 2*
 - *Visual 3*
 - *Visual 4*
- *Sexual Response System Visual*
 - *Visual 5*

Teacher Materials

- *Reproductive System Answer Keys*
 - *Answer Key 1*
 - *Answer Key 2*
 - *Answer Key 3*
 - *Answer Key 4*

Teacher Preparation

Prepare Visuals for document camera or projector.

Activities

1. Warm up

Display warm up as bell work.

Question: Today we are reviewing the parts of the body involved in sexual reproduction. List all the parts of the human reproductive system that you can remember.

2. Explain purpose of lesson

The purpose of the lesson is to review the human reproductive system and the sexual response system.

Today we're going to study the reproductive system and the sexual response system.

The reproductive system includes the body parts involved in starting a pregnancy. The egg and sperm can join through vaginal sex, donation of sperm, or the help of medical technology.

The sexual response system includes the body parts involved in sexual feelings. It includes the physical responses that happen during sexual activity with another person or during masturbation.

Knowledge of these systems will be useful for later lessons. It can also help people communicate with doctors about their reproductive and sexual health, now or in the future.

3. Review the external reproductive organs

Show students *Reproductive System Visual 1 and Visual 2*. Fill in the names and describe the functions of the organs of the genitals (external views) while students take notes on the *Reproductive System Worksheet 1 and Worksheet 2*.

Explain that the drawings do not represent all people's bodies.

These drawings show pictures of what many people's bodies look like, but bodies actually look very different from each other. These differences are normal and healthy. There are many reasons someone's body might look different from these drawings, for example, if someone hasn't gone through puberty yet, if they are intersex, or sometimes because of a disability. Surgery or medicine can change the way someone's body looks, and of course, the size and shape of everyone's body is different. The illustrations are meant only as a guide.

Show *Visual 1* and describe the parts.

This is a picture of the reproductive organs that are on the outside of someone's body. These parts are usually on a man's body.

1. Pubic hair

- *Pubic hair starts growing during puberty at the base of the penis.*

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2. *Penis*
 - *The penis is made of a special tissue called erectile tissue, which is why the penis is able to become erect*
3. *Shaft*
4. *Glans*
 - *The penis is made up of the shaft and the glans, and, at birth, the foreskin.*
 - *The penis has many nerve endings, which makes it very sensitive.*
 - *The part of the penis with the most nerve endings is the glans.*
5. *Foreskin*
 - *The foreskin protects the glans of the penis.*
 - *A person that has had a circumcision don't have foreskin on their penis.*
 - *The foreskin also provides sensation.*
6. *Urethra*
 - *The urethra runs inside the penis and has an opening at the end of the penis.*
 - *The opening of the urethra at the end of the penis is where semen and urine leave the body.*
 - *Only one fluid at a time can leave the body.*
7. *Scrotum*
 - *The scrotum is a muscular sac that holds the testicles.*
 - *It keeps sperm at the right temperature by bringing the testicles closer to the body when cold, and further from the body when warm.*
 - *It also provides sensation.*

Show *Visual 2* and describe the parts.

This is a picture of the reproductive organs that are on the outside of someone's body. These parts are usually on a woman's body.

1. *Vulva*
 - *Vulva is the word for the parts of the reproductive system on the outside of most women's bodies. The outside parts of everyone's reproductive system are called genitals.*
2. *Pubic hair*
 - *Pubic hair starts growing during puberty on the vulva, but not near the opening of the vagina or on the clitoris.*
3. *Clitoris*
 - *The clitoris has many nerve endings, which makes it very sensitive.*
 - *The part of the clitoris that shows on the outside of the body is called the glans.*
 - *The clitoris is made of erectile tissue, like the penis, and also becomes erect.*
4. *Urethra*
 - *The urethra is how urine leaves the body.*
 - *The opening of the urethra is between the clitoris and vagina.*

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5. *Vagina*

- *The vagina is a muscular, stretchy organ on the inside of the body.*
- *It provides a passageway into the body for sperm, and out of the body for vaginal fluids, menstrual fluids and a baby during childbirth.*
- *There is often tissue called the hymen that partly covers the opening of the vagina during childhood and early adolescence. During puberty, estrogen makes the hymen very stretchy. It does not get in the way of tampons or vaginal sex. A person cannot tell if someone has used tampons or had intercourse by looking at the hymen.*

6. *Labia*

- *The labia are two folds of skin around the openings of the urethra and vagina. The top of the labia meet at the clitoris.*
- *The outer labia have pubic hair.*
- *The labia also provide sensation.*

4. Review the internal reproductive organs

Show students *Reproductive System Visual 3 and Visual 4*. Describe the names and functions of the organs in the reproductive systems (internal views) while students take notes on the *Reproductive System Worksheet 3 and Worksheet 4*.

Show *Visual 3* and describe the parts.

First describe the body parts that are not part of the reproductive system. They are already labeled.

This is a side view drawing of the reproductive system, showing the parts that men usually have in their body.

The anus and bladder are not part of the reproductive system, but they are located nearby. They are already labeled on the worksheet.

- *The anus is where bowel movements pass out of the body.*
- *It also provides sensation.*
- *The bladder is where urine is stored.*

Then describe the reproductive organs in the order that they are involved with ejaculation.

1. *Testicles*

2. *Scrotum*

- *There are two testicles located inside the scrotum.*
- *During puberty, the testicles start producing sperm, which are also called sperm cells.*
- *During puberty, the testicles also start producing the hormone testosterone. The process of sperm leaving the body is called ejaculation.*

3. *Epididymis*

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- *The epididymis is located toward the back of each testicle.*
 - *Sperm mature here before leaving the body.*
4. *Vas deferens*
 - *When sperm leave the epididymis, they travel through long tubes called the vas deferens.*
 - *In the vas deferens, the sperm pass by different glands that add liquids.*
 - *The combination of sperm and liquids is called semen.*
 5. *Seminal vesicles (two)*
 6. *Prostate gland (one)*
 7. *Cowper's glands (two)*
 - *Liquid from the seminal vesicles and prostate gland become part of the semen.*
 - *Liquid from the Cowper's glands is also called pre-ejaculate because it leaves the body before the other fluids. It protects sperm from the acid in urine.*
 8. *Urethra*
 9. *Penis*
 - *During ejaculation, the urethra is the tube that carries semen out of the body through the penis.*
 - *The urethra also carries urine out of the body, but it cannot carry both urine and semen at the same time.*

Show *Visual 4* and describe the parts.

First describe the body parts that are not part of the reproductive system. They are already labeled.

This is a side view drawing of the reproductive system, showing the parts that women usually have in their body.

The anus, bladder and urethra are not part of the reproductive system, but they are located nearby. They are already labeled on the worksheet.

- *The anus is where bowel movements pass out of the body.*
- *It also provides sensation.*
- *The bladder is where urine is stored.*
- *The urethra is the tube that carries urine out of the body.*

Then describe the reproductive organs in the order that they are involved with ovulation and menstruation. Remind the class that ovulation is the process of the egg leaving the ovary, and menstruation is the process of blood and tissue leaving the body, usually about once a month.

1. *Ovary*
 - *There are two ovaries in the reproductive system.*
 - *The ovaries are where eggs are produced and mature. The egg is also called the ovum or the egg cell. Egg cells are already in the ovaries when a person is first born.*
 - *During puberty, the ovaries begin producing the hormone estrogen.*

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- *Ovulation is the process of a mature egg leaving the ovary.*
2. *Fimbria*
 3. *Fallopian tubes*
 - *The fimbria are the fringe-like ends of the fallopian tube.*
 - *When the mature egg leaves the ovary, the fimbria guide it into the fallopian tube.*
 - *The egg then travels through the fallopian tube to the uterus.*
 4. *Uterus*
 - *The uterus is made of muscular walls.*
 - *Fertilization is when the egg cell and sperm cell join. Pregnancy will begin when the joined cells attach to the lining of the uterus, which has built up a rich lining of tissue and blood. If the pregnancy continues, it will grow in the uterus for the next 9 months.*
 - *If an egg cell and sperm cell do not join, the lining of the uterus will dribble out of the body over the next few days. This is called menstruation or a period.*
 - *It happens about once a month, starting in puberty and ending during menopause.*
 5. *Cervix*
 - *The cervix is the bottom section of the uterus.*
 - *It produces fluid that has a different consistency and color at different times of the menstrual cycle. For example, cervical fluid is wetter and more stretchy during ovulation.*
 6. *Vagina*
 - *The small opening of the cervix is at the back of the vagina.*
 - *During menstruation, the menstrual fluid leaves the uterus by flowing through the cervix and vagina, and out of the body.*
 - *During childbirth, the baby also travels from the uterus, through the cervix and vagina, and out of the body.*
 7. *Glans of clitoris*
 8. *Shaft of clitoris*
 - *The clitoris provides sensation. It has two parts: the shaft and glans.*
 - *The shaft is inside the body. The glans is outside, making it part of the genitals.*
 - *The glans of the clitoris is in front of the openings of the urethra and vagina.*

5. Define sexual response system terms.

Show the *Visual 5: Human Sexual Response* and briefly explain the 3 components: desire, arousal, release.

Now we're going to talk about human sexual response. Genitals are only one part of the sexual response system. It also includes emotions, the brain, hormones, the senses and the entire body.

Three important aspects of sexual response are desire, arousal and release.

Desire *is the feeling of wanting to be sexually close to someone.*

- *A person who feels desire may or may not decide to be involved in sexual activity.*

Arousal is the experience of being sexually excited.

- Arousal can result from a person's thoughts and attractions, as well as from sexual activity with another person or during masturbation. People may have very different emotions during arousal depending on the circumstances.
- For most women, arousal often includes the clitoris becoming erect, the vagina getting wetter, and the labia swelling.
- For most men, arousal often includes the penis becoming erect, the scrotum moving closer to the body, and a small amount of fluid being released from the penis.
- For all, arousal often includes heartbeat and breathing getting faster, nipples getting erect, and skin becoming more sensitive.

Release is a reduction of sexual tension that can happen gradually over time, or more immediately during an orgasm.

- An orgasm is a release of sexual tension that results in muscle contractions in the pelvic area and a physical feeling of sexual pleasure. For most men, orgasm also includes ejaculation.
- Like arousal, orgasm is a physical response that sometimes happens during sexual activity with another person or during masturbation. People may have very different emotions during orgasm depending on the circumstances.

6. Conclude the lesson

Wrap up by asking questions about the common body parts between most male and female reproductive systems and sexual responses:

- What do the ovaries and testicles have in common?
Answer: Produce sex cells (sperm and egg); produce hormones (estrogen and testosterone).
- What do the sperm and egg have in common?
Answer: They are both sex cells and are both needed to for people to reproduce.
- What do the fallopian tubes and vas deferens have in common?
Answer: They are the pathways for the egg and for the sperm.
- What do the penis and clitoris have in common?
Answer: They both have a shaft and glans, become erect, and are the most sensitive part of the genitals.

7. Assign homework

Allow students to choose between the individual or family homework and explain the assignments as needed.

Individual Homework: Anatomy

Family Homework: Talking about the Reproductive System, available in multiple languages on the FLASH website

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8. Exit ticket

Hand out the *Lesson 2 Exit Ticket*.

Directions: Draw a line connecting the body parts and processes that have similar roles in most male and female bodies.

Answer:

