

Grade 7

Reproduction



Learner Outcomes

W-7.3 Examine the human reproductive process, and recognize misunderstandings associated with sexual development

How To Use

This lesson plan contains several activities to achieve the learner outcome above. You may choose to do some or all of the activities, based on the needs of your students and the time available. Some of the activities build on the ones that come before them, but all can be used alone.

For a quick lesson, combine activities A, B and F.

Classroom Activities & Timing

See also the [Differing Abilities](#) lesson plans on Reproduction.

- A. Ground Rules (5-10 minutes)
- B. Reproductive System Diagrams (20-30 minutes)
- C. Reproduction Process (20-40 minutes)
- D. Reproductive System Infographics (20-30 minutes)
- E. Sexual Reproduction Kahoot! Quiz (15-20 minutes)
- F. Question Box (5-10 minutes)

Required Materials

HANDOUT and ANSWER KEY: Reproductive Systems

CARDS: Reproduction Process

[DIAGRAMS](#): Menstrual Cycle, Sperm Production, Fertilization, Implantation

[KAHOOT! QUIZ](#) and ANSWER KEY: Grade 7 Reproduction

HANDOUT: Infographics

All the diagrams are also available as PDFs in [Grade 7 Diagrams](#).

Background Information for Teachers

This lesson deals with the biological processes of sexual intercourse and reproduction. There are many additional ways that families are created, including in vitro fertilization, adoption, surrogacy, fostering, and using donor eggs or sperm.

Students need to be able to identify the basic components of the human reproductive systems and to describe how they function in order to discuss human sexual reproduction. This lesson provides students with an overview of human sexual anatomy and physiology, menstruation, sperm production, fertilization and implantation. This material is part of the Grade 5 learning outcomes, so for many students it will be a review rather than new information.

Inclusive Language

Language is complex, evolving and powerful. In these lessons, [inclusive language](#) is used to include all students, including those with diverse gender identities, gender expressions and sexual orientations. This includes the use of 'they' as a singular gender-neutral pronoun.

A person's sex can be assigned at birth as male or female. Some people are intersex (the reproductive, sexual or genetic biology of a person is unclear, not exclusively male or female or otherwise does not fit within traditional definitions of male or female). Assigned sex is independent of gender.

Gender identity is a person's internal sense of identity as girl/woman, boy/man, fluid among genders or no gender (regardless of what sex they were assigned at birth).

For many people, their gender is the same as the sex they were assigned at birth (cisgender). For others, their gender identity differs from the sex they were assigned at birth. They may use terms like transgender, trans, non-binary, gender fluid, gender queer, agender or others, to describe their gender identity. The umbrella term 'trans' is primarily used here, to describe people whose gender identity and sex assigned at birth differ. While this umbrella term does not fit everyone, the intention is to be inclusive as possible.

In these lessons, you will notice that body parts and processes are not labelled as male or female. While it is ok to use the terms boy/girl/male/female when talking to or about individuals, it is important not to assume that all boys or girls have certain anatomy, and to use inclusive language consistently. Learning to discuss anatomy without gendering people, parts or processes is a shift for many people. These lessons use language that can help you and your students make this shift, so that everyone, including people who are intersex and gender diverse, are included and feel seen.

Reproduction

The following are some key concepts regarding reproduction. More detailed information about the reproductive systems and sexual reproduction can be found in the [Grade 5](#) lesson plans.

Egg (ovum)

- The egg is produced and stored in the ovaries.
- An egg is released once a month after puberty begins (ovulation). Occasionally two or more eggs (ova) are released.
- The egg travels down the fallopian tube to reach the uterus.
- If the egg is not fertilized in a day or so, it dissolves in the fallopian tube.

Ovulation

- Ovulation may alternate from one ovary to the other each month, mostly from one ovary, or random from one month to the next.
- People can experience varying degrees of sensation during ovulation from nothing to pain similar to menstrual cramps.

Menstruation

- Menstruation is the part of the menstrual cycle where the uterine lining is shed through the vagina.
- The uterus prepares for a fetus each month, in case fertilization occurs.
- Hormones from ovaries send a message to the uterus to grow a thick, soft lining of tissue and blood.
- If the egg is not fertilized in the fallopian tube, the lining is not needed to nourish the baby, so the uterus will shed the lining.
- It takes 2-7 days to shed the lining. Five days is the average.
- A cycle of 28 days is most common; however, it can vary from 24-38 days. Some people have regular cycles, and some do not. It is common for periods to be irregular in the first few years.
- Menstruation is a normal part of puberty. It is not dirty or bad.
- Menstruation is not a sickness. People can participate in their regular daily activities during their period.

- If menstrual symptoms are severe, a person can speak with a health care provider.

Sperm

- The reproductive cells are made every day in the testicles.
- The sperm mature in the epididymis, travel up the vas deferens and mix with fluid from the seminal vesicles and prostate to form a white sticky fluid called semen.

Semen

- The combination of sperm and fluid from the seminal vesicle and prostate that is ejaculated from the penis.

Erection

- The brain sends a message to the body to increase blood flow to the penis which fills the spongy area in the penis making it hard (erect) and often stand out from the body.
- People may have erections at any age. During puberty, they may occur more often. Erections are sometimes due to a sexy thought or feeling and sometimes because of hormone changes or as a reflex reaction to certain sights, sounds, smells, thoughts or touch.
- Erections are a normal process of growing up.
- Erections can go away by themselves or after ejaculation.

Ejaculation

- Ejaculation is the release of semen and sperm from the penis, usually as a result of an orgasm.
- Although people may experience erections at any age, they do not ejaculate until puberty, when their bodies begin producing sperm and semen.

Nocturnal emissions

- Nocturnal emissions (wet dreams) occur when a person ejaculates in their sleep.
- This is the body's way of adapting to the start of sperm and semen production.
- Some people have wet dreams and others do not. Wet dreams usually end later in puberty once the body is used to producing sperm and semen.

A. Ground Rules

Ensure [ground rules](#) are established before beginning this lesson. For classes that have already established ground rules, quickly reviewing them can help ensure a successful lesson.

B. Reproductive System Diagrams

To help students understand body and genital diversity, note that not everyone's genitals look the same, or like what is shown in diagrams and pictures. Variation in size and shape is normal.

Students identify the basic parts of the human reproductive systems and describe how they function.

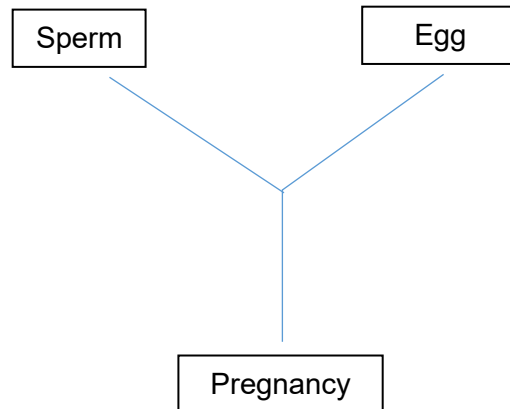
1. Show students the **Reproductive Systems** diagrams, which show the location of the reproductive systems in the body and help students to understand the more abstract internal diagrams that come after.
2. Distribute the **Reproductive Systems** handout.
3. Ask students to label each diagram according to the instructions. You may choose to do this activity together with the students, by projecting the diagram and labelling it while student volunteers read from the handout.
4. If you didn't do the activity together, ask students to correct their diagrams using the answer key.

C. Reproduction Process

To do this activity individually, print the cards 9-to-a-page, and give each student their own set of cards. Ask them to draw the Y on a blank page and place or glue each card in the correct order.

Students demonstrate a basic understanding of the process of reproduction. This is a review of grade 5 Human Sexuality.

1. Print the **Reproduction Process** onto paper or cardstock. Consider laminating the cards for reuse.
2. Make a large 'Y' shape on the wall or floor using masking/painters tape, about 2-3 m tall. Label one part of the top of the Y 'Egg', and the other 'Sperm', and label the bottom of the Y 'Pregnancy', as shown below.
3. Give all the other cards to the students in random order.
4. Have the students with cards arrange the events in the proper order along each of the lines of the Y.
5. Ask the students who did not have cards to rearrange the order if they think any cards are misplaced.
6. Go through the cards together, and make corrections according to the answer key provided.
7. Use the **Menstrual Cycle**, **Sperm Production**, **Fertilization** and **Implantation** diagrams as needed to review the concepts.



Answers

Egg

1. Lining of uterus thickens with blood
2. Ovulation occurs (egg released from ovary)
3. Egg enters fallopian tube

Sperm

1. Sperm is made in the testicles
2. Sperm exit the testicles and travel up the vas deferens
3. Sperm cells mix with semen

Pregnancy

1. Erect penis is inserted into the vagina during sex
2. Sperm cells leave the penis (ejaculation) and enter the vagina
3. Sperm travel through the cervix, uterus, and into fallopian tubes
4. One sperm cell attaches to an egg and forms one cell (fertilization)
5. Cell starts to divide
6. Cells (zygote) travel through fallopian tube to uterus
7. Zygote attaches to wall of uterus (implantation)

Debrief this activity using the following questions.:

What else do you know about menstruation?

- Menstruation usually begins sometime between ages 8 and 16.
- Usually, one egg is released each menstrual cycle. If more than one egg is released, and if they are fertilized, it means there may be a multiple pregnancy (twins, triplets, etc.). If two eggs are released and a sperm fertilizes each one, the result is fraternal twins. Identical twins happen when a fertilized egg (zygote) splits into two in the first few days after fertilization.
- Eggs can live 12-24 hours from the time of ovulation.

- People can use tampons, pads, period underwear or menstrual cups to deal with menstrual flow. People can still shower or bathe during their period.
- Some people get cramps before or during menstruation. Exercise, a warm bath, gentle massage, a hot compress, or over the counter medications such as ibuprofen may help with menstrual cramps and discomfort. Do not take any medication without asking a parent or guardian first. If you take pain medications, be sure not to take more than the recommended amount. Getting enough sleep, eating a balanced diet according to *Canada's Food Guide*, reducing caffeine intake and quitting smoking may also help relieve or prevent cramps.
- Severe cramping or very heavy or long periods can be a sign of a problem, so it is important to talk to a health care provider
- The menstrual cycle lasts about 28 days; however, it can vary from 24-38 days. It is common for periods to be irregular in the first few years. The first day of bleeding is considered the first day of the menstrual cycle.

What else do you know about sperm production?

- Sperm production begins in puberty. Ejaculation can occur once sperm production begins. People assigned male at birth usually start puberty sometime between ages 9-14. Some people don't ejaculate until later in puberty.
- Nocturnal emissions (wet dreams) are ejaculations that occur while sleeping. It is normal to experience these or not to experience these.
- As many as 200-500 million sperm can be released during each ejaculation.
- Sperm can live inside the uterus and fallopian tubes for 3-5 days from the time of ejaculation.

Will a pregnancy occur every time sexual intercourse occurs?

- No. Pregnancy only happens if a sperm fertilizes an egg and if the fertilized egg implants in the uterine wall.
- People often do not know when they are ovulating, and some people ovulate more than once in a cycle.
- A person can get pregnant from sex that happens up to a week before they ovulate.

People can reproduce, or make babies, once they start periods and ejaculation. But most people wait until they are much older. Why?

- Discuss issues surrounding the need to be emotionally, educationally or financially ready to parent.
- Babies born to teen mothers are more likely to have health problems.

D. Sexual Reproduction Kahoot! Quiz

This quiz can be a great review, wrap-up of the unit, or a fun energizer in between other activities. For more information on using Kahoot!, visit kahoot.com

1. Open the Kahoot! Quiz: [Grade 7 Reproduction](#)

As a class, answer the quiz questions and discuss the answers together. You can play the quiz in individual or team mode.

E. Question Box

Answer any questions from the [question box](#) in the previous lesson. Have students submit any new questions and address them next class.

Addressing the questions at the next class allows you time to review the questions and prepare responses.

Self-Reflection

During the lesson, were:

- ground rules being followed?
- good practices established regarding group work and discussion?

What will you change for future classes with this group?

What will you change for future use of this lesson?

Student Assessment

During the lesson, did students:

Knowledge:

- identify the basic parts of the human reproductive systems?
- describe the process of sperm production?
- describe the process of menstruation?
- describe how pregnancy can occur?
- identify misunderstandings associated with sexual development?

Skills:

- participate in class discussion and exhibit appropriate listening and speaking skills?

Attitudes:

- accept that menstruation and sperm production are positive, healthy aspects of puberty?

Sperm-producing Reproductive System

Figure 1 The outside view

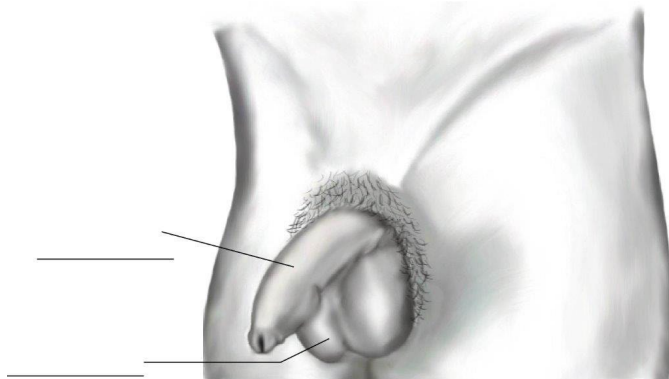
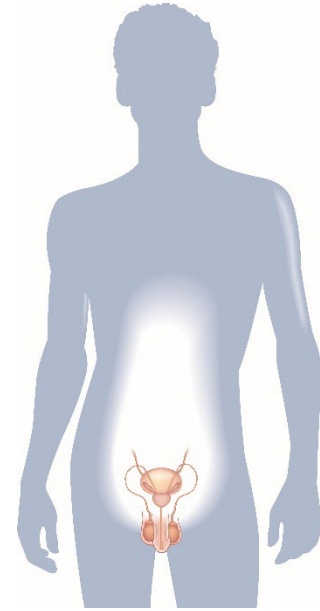


Figure 2: The inside view in the body, from the front

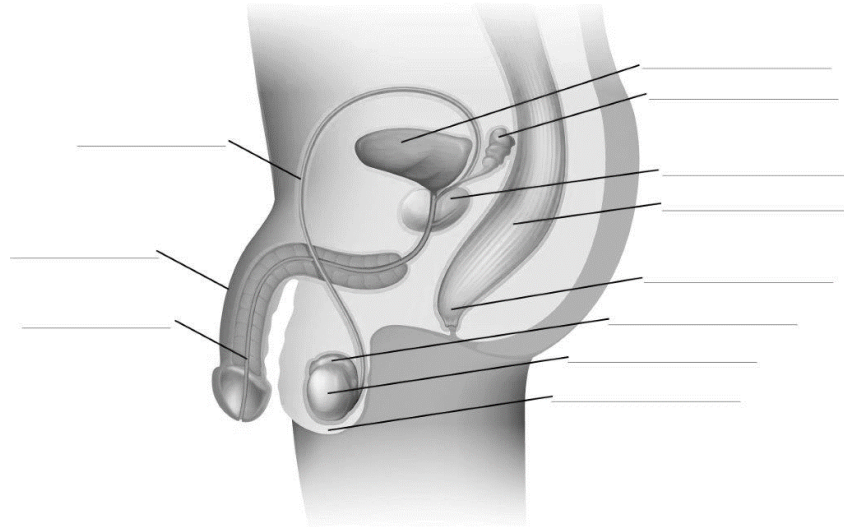


1. Label the **penis**.

- The **penis** is the external sex organ.
- Semen and urine are released from the penis.
- During sexual arousal, the spongy tissue fills with blood, and the penis hardens. This is called an erection.

2. Label the **scrotum**.

- The **scrotum** is a sac of loose skin that holds the testicles.
- The scrotum contains muscles that can move the testicles closer to or farther away from the body in response to changing temperatures.

Figure 3: The inside view, from the side

3. Label the **scrotum**, **testicles** and **epididymis** at the bottom of the diagram.
 - The scrotum contains two **testicles**.
 - Each testicle has an **epididymis**, which sits on top of each testicle.
 - Each testicle contains tiny tubes that make sperm, and the sperm move to the epididymis to finish developing.
4. Label the **vas deferens**.
 - The **vas deferens** are tubes that allow the sperm to move up to the seminal vesicle. Follow the vas deferens tube from the testicle up to the top of the diagram.
5. Label the **bladder**.
 - The large organ near the top of the diagram is the **bladder**.
 - The bladder stores urine. It is not part of the reproductive system.
6. Label the **rectum** and **anus**.
 - On the right side are the **rectum** and **anus**, parts of the digestive system. The rectum holds feces. The anus is the opening where feces comes out of the body.
7. Label the **seminal vesicles**.
 - As the vas deferens curves around the top of the bladder and back down again, it passes the **seminal vesicles**. These glands are beside the bladder on the diagram.
 - The seminal vesicles produce fluids that feeds and protects sperm.
8. Label the **prostate gland**.
 - The **prostate gland** is just below the bladder. It supplies most of the liquid that combines with the sperm to make semen.
 - When a person is sexually aroused, the fluid from the prostate gland combines with the sperm. Strong muscle contractions in and around the prostate gland contract rapidly to force the semen out of the urethra. This is called ejaculation.
9. Label the **urethra** and **penis**.
 - The tube down the length of the **penis** is called the **urethra**. The urethra is the tube for urine and semen to leave the body.
 - Urine and semen cannot be in the urethra at the same time. During an erection, a small valve at the entrance from the bladder seals the bladder so that urine cannot get into the urethra.
 - The penis has spongy tissues containing small blood vessels and nerves. During sexual arousal, the spongy tissue fills with blood, and the penis hardens. This is called an erection.

Egg-producing Reproductive System

Figure 1: The outside view of the vulva

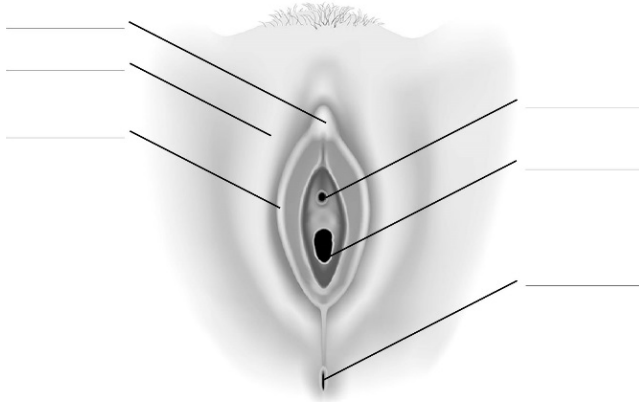
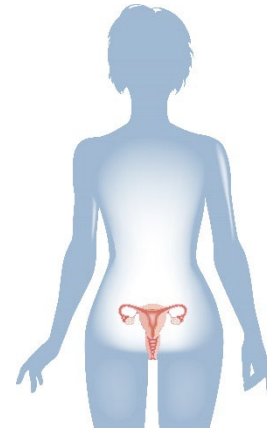
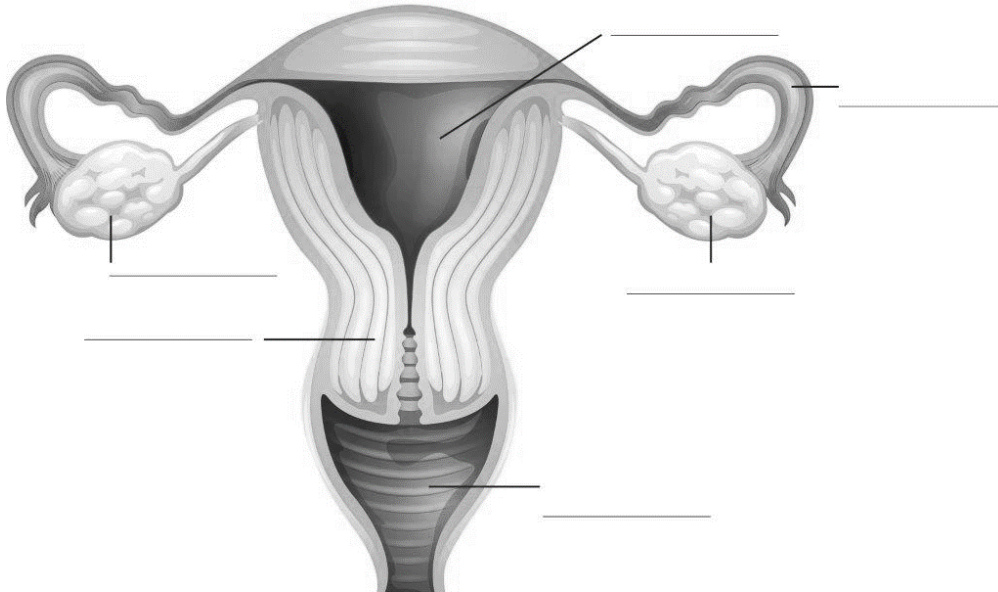


Figure 2: The inside view from the front



- Label the **clitoris** at the top of the diagram.
 - The **clitoris** is a sensitive bump located where the folds meet at the top front part of the vulva.
 - The clitoris is the sex organ that becomes larger and firmer during sexual arousal.
- Label the **labia majora** and **labia minora**.
 - The outer fold is called the **labia majora**. This outer fold is usually larger than the inner fold.
 - The inner **fold** is called the **labia minora**.
 - Both of **these** folds help protect the vagina and urethra.
- Label the **urethra opening**.
 - The **urethra** is a small tube that carries urine from the bladder out of the body. It is not part of the reproductive system.
 - The opening for the urethra is below the clitoris and above the vagina.
- Label the **vaginal opening**.
 - The **vaginal opening** leads to the vagina.
- Label the **anus**.
 - At the bottom of the diagram is the **anus**, where feces leaves the body

Figure 3: The inside view from the front6. Label each **ovary**.

- There is one **ovary** on each side of the uterus. An ovary is about the size of an almond.
- There are up to 400,000 eggs in the ovaries when a person hits puberty, but only about 500 will ever be released.
- The ovary releases one egg every month or so. This is called ovulation.

7. Label the **fallopian tube**.

- Follow the tubes from the ovary toward the middle of the diagram. These are the **fallopian tubes**.
- The fallopian tube receives the egg released from the ovary. If there is sperm in the fallopian tube, one sperm may fertilize the egg. The fertilized egg then travels through the fallopian tube to the uterus.
- If a sperm does not fertilize the egg, the egg will dissolve in the fallopian tube.

8. Label the **uterus**.

- The **uterus** is about the size of a fist.
- The uterus stretches to hold the fetus during pregnancy. It is very strong, muscular and stretchable.

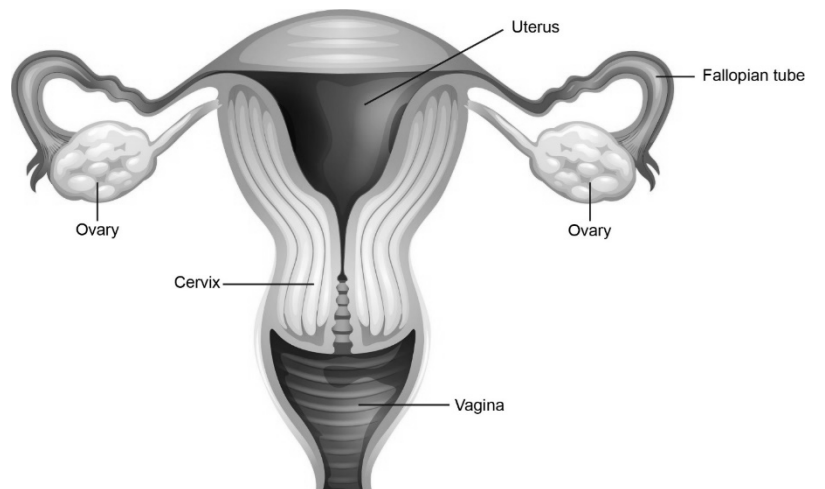
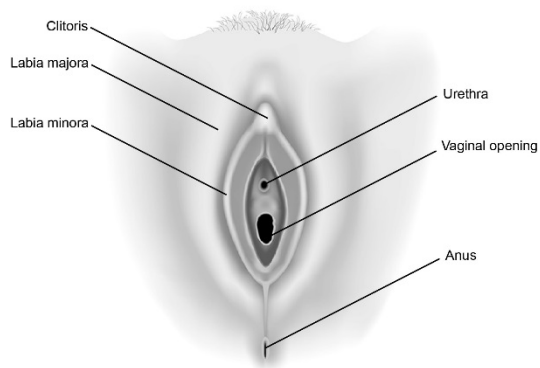
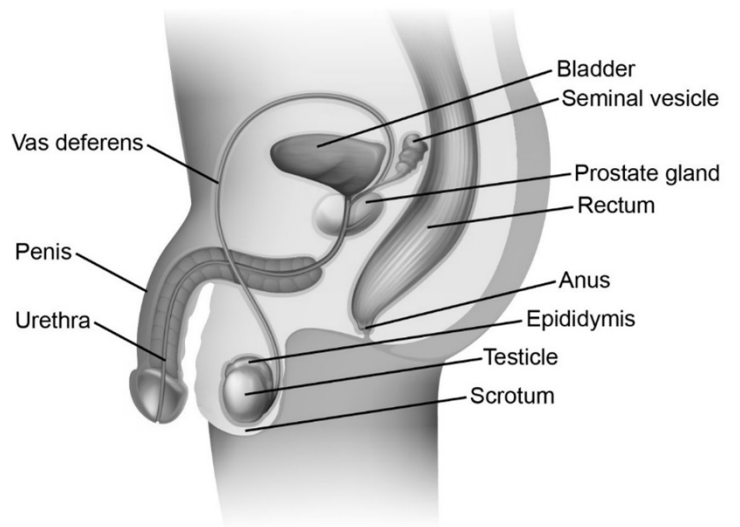
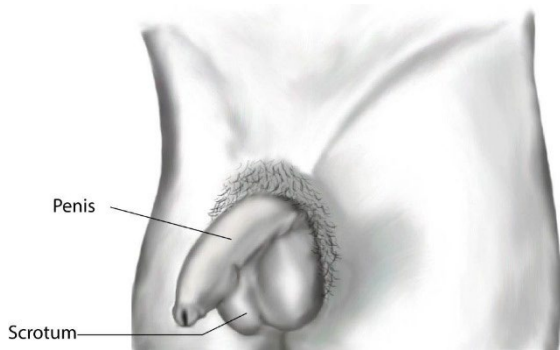
9. Label the **cervix**.

- The **cervix** is the bottom of the uterus. The cervix has a very small opening to allow sperm to travel from the vagina into the uterus.

10. Label the **vagina**.

- At the very bottom of the diagram is the **vagina**.
- The vagina is a soft, muscular elastic tube. During sexual arousal, the walls of the vagina make a fluid that makes sex more comfortable.
- Menstrual flow leaves the uterus and passes out of the body through the vagina.

Answer Key



ANSWER KEY: Grade 7 Reproduction Quiz

Correct answers are in bold text.

1. This is a diagram of:

- **the egg-producing reproductive system**
- the sperm-producing reproductive system
- the nervous system
- the brain

2. This reproductive system includes:

- the penis, scrotum and ovaries
- the scrotum, stomach and seminal vesicles
- the vas deferens, vagina, and vagus nerves
- **the testis, scrotum and urethra**

3. Sperm are made in the:

- the vas deferens
- **the testicles**
- the stomach
- the prostate gland

4. The structure where the fetus grows is called the:

- **uterus**
- ovary
- vagina
- tummy

5. The parts of the vulva include:

- the anus, clitoris and cervix
- the vagina, ovary and fallopian tubes
- the penis, testicles and scrotum
- **the clitoris, labia minora, and labia majora**

6. The structure that produces and stores eggs is the:

- **ovary**
- fallopian tube
- uterus
- bladder

7. Sperm travels from the:

- prostate gland through vas deferens and out the rectum
- urethra past the penis and out the bladder
- **testis through the vas deferens and out the urethra**
- seminal vesicle through the vas deferens and out the urethra

8. The sperm usually meets the egg in the:

- dance hall
- **fallopian tube**
- vagina
- uterus

9. After the sperm meets the egg:

- the uterus sheds its lining
- the successful sperm dies
- the ovary releases 7 more eggs
- **the fertilized egg implants in the wall of the uterus**

10. If an egg is released but not fertilized by a sperm:

- **the lining of the uterus is shed, which is called a period**
- the egg waits in the uterus until the next month
- the sperm waits in the uterus until the next month
- the egg implants in the wall of the uterus

Egg



**Lining of uterus
thickens with
blood**



Ovulation occurs

(egg released from ovary)



**Egg enters
fallopian tube**



Sperm



**Sperm is made in
the testicles**



**Sperm exit the
testicles and travel
up the vas deferens**



**Sperm cells mix
with semen**



Pregnancy



**Erect penis
is inserted into
vagina during sex**



**Sperm cells leave
the penis (ejaculation)
and enter vagina**



**Sperm travel
through the cervix,
uterus, and into
fallopian tubes**



**One sperm cell
attaches to an egg
and forms one cell
(fertilization)**



**Cell starts to
divide**



**Cells (zygote) travel
through fallopian
tube to uterus**



**Zygote attaches
to wall of uterus
(implantation)**

