



Learner Outcomes

W-6.3 Identify and describe the stages and factors that can affect human development from conception through birth

How To Use

This lesson plan is a review of the anatomy, physiology and sexual reproduction studied in Grade 5. 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, D and E.

If you choose not to do all the activities, use your professional judgement to assess which outcomes you have covered and which may need additional activities.

Additional learning activities for this topic can be found in the [Grade 5 lessons](#) Female Reproductive System, Male Reproductive System, and Reproduction.

Classroom Activities & Timing

- A. Ground Rules (5-10 minutes)
- B. Vocabulary Review (5-10 minutes)
- C. Anatomy Bingo (15-20 minutes)
- D. Reproduction Process (20-25 minutes)
- E. Question Box (5-10 minutes)

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

Required Materials

HANDOUT: Vocabulary Review

Grade 6 Reproduction Review

HANDOUT: Anatomy Bingo

CARDS: Reproduction Process

DIAGRAMS: Male Reproductive System, Female Reproductive System, Menstrual Cycle, Sperm Production, Fertilization, Implantation

All the student handouts are also available in the [Grade 6 Workbook](#).

All the diagrams are also available as slides in [Grade 6 Diagrams](#).

Background Information for Teachers

Inclusive Language

Language is complex, evolving, and powerful. In these lessons, [gender-neutral language](#) is used to be inclusive of all students, including those with diverse gender identities and sexual orientations. This includes the use of ‘they’ as a singular gender-neutral pronoun. The lesson plans use the terms ‘male’ and ‘female’ when referring to biological sex (sex assigned at birth), such as when discussing reproductive anatomy. A person’s reproductive system can be male, female or intersex (not clearly defined as either male or female).

People are assigned a sex at birth based on their reproductive anatomy. Sex assigned at birth is independent of gender identity. Gender identity is a person’s internal sense of identity as female, male, both or neither, regardless of their biological sex assigned at birth.

For many people, their gender matches the sex they were assigned at birth (cisgender). Others may identify as being transgender or gender diverse if their gender identity does not match the sex they were assigned at birth. A person’s gender identity can be girl, woman, boy, man, transgender, gender fluid, gender queer, agender or others. The intention in this material is to use language that reflects these many possibilities.

Female Reproductive System

Egg (ovum)

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

Ovulation

- Once ovaries start producing hormones, messages are sent to the pituitary gland in the brain, which sends a message to the ovaries to release one egg, once a month from one ovary.

More detailed information about the female and male reproductive systems and reproduction can be found in the [Grade 5 lesson plans](#).

Grade 6 Reproduction Review

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

Menstruation

- Menstruation is the part of the menstrual cycle where the uterine lining is shed through the vagina.
- The uterus prepares for growth of a baby 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, the lining is not needed to nourish the baby, so the uterus will shed the lining.
- It takes 2 to 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. Participation in regular daily activities such as physical education class, active play and extra-curricular activities and sports like gymnastics or soccer is encouraged.
- If menstrual symptoms are severe, a person can speak with a health care provider.

Male Reproductive System

Sperm

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

Semen

- Semen is the combination of sperm and fluid from the seminal vesicles and prostate that is ejaculated from the penis.

Erection

- The brain can send a message to the penis causing it to become larger, longer and firmer. It will 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 sexual 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.

Grade 6 Reproduction Review

- 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. Vocabulary Review

A review of the vocabulary of reproduction from the grade 5 curriculum.

1. Divide students into small groups.
2. Give each student the Vocabulary Review handout and have them work together as a group to complete each section.
3. Review the vocabulary using the **Male Reproductive System** and **Female Reproductive System** diagrams. Display the diagrams and review the labels as needed.

Answers:

Fill in the blanks

1. testicles
2. eggs
3. ejaculation
4. ovulation
5. semen, seminal vesicles
6. fallopian tube
7. uterus
8. vulva
9. urethra
10. vas deferens

Matching

- Anus 4
Bladder 7
Cervix 1
Clitoris 3
Erection 9
Foreskin 2
Hymen 6
Menstrual cycle 8
Nocturnal emissions 5

C. Anatomy Bingo

A review of the vocabulary of reproduction from the grade 5 curriculum.

1. Give each student the **Anatomy Bingo** handout. There are two versions of the Bingo Card: one that is entirely blank and one that has some of the words filled in. Use the partially filled in card as an example, or for students who may require more assistance.
2. Instruct students to write in one word from the word bank in each box of the Anatomy Bingo handout until every box contains a word. (There are more words than boxes.) Encourage them to choose words randomly. They can use each word only once.
3. Once students have filled in their bingo cards with anatomy vocabulary, read definitions for each word randomly, and ask students to find the corresponding word on their bingo card. Each time you read a definition for a word they have written down, have them cross out the word on their bingo card, and check it off for your own reference.
4. Round One lasts until a player has one line across, down or diagonally. The first player to reach this stage can call out 'Bingo!'
5. Round Two lasts until a player has all boxes around the edge of the bingo handout filled in. The first player to reach this stage can call out 'Bingo!'
6. Round Three lasts until a player has all squares filled in. The first player to reach this stage can call out 'Bingo!'
7. Validate the winner in each round by having the winning student read the words he or she has crossed out to ensure the definitions for those words have been read.
8. Review the vocabulary using the **Male Reproductive System** and **Female Reproductive System** diagrams. Display the diagrams and review the labels as needed.

Word	Definition
Anus	The opening at the end of the digestive tract where feces leaves the body
Bladder	A sac that holds the urine produced in the kidney
Cervix	A passage between the uterus and the vagina
Clitoris	Female sex organ that becomes larger and firmer during sexual arousal

Grade 6 Reproduction Review

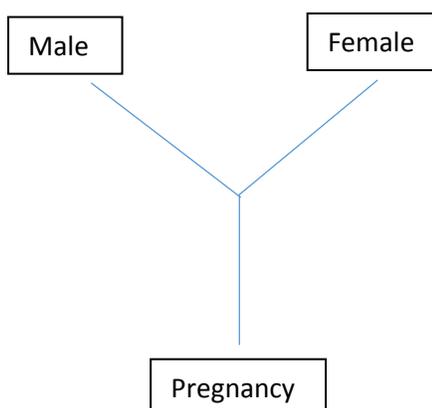
Egg	Female reproductive cell, also called an ovum
Ejaculation	Discharge or release of semen from the penis
Erection	When the penis becomes larger, longer and firmer because of sexual arousal
Fallopian tubes	Tubes connecting the ovaries to the uterus through which the egg travels after ovulation
Foreskin	Skin that covers the glans (the tip of the penis)
Hymen	A membrane partially covering the opening to the vagina
Ovaries	Female egg-producing glands
Ovulation	Process of releasing an egg from the ovary
Penis	Male external sex organ from which semen and urine are released
Scrotum	External sac containing testicles
Semen	A thick fluid containing sperm
Seminal vesicles	Where semen is produced and stored
Sperm	Male reproductive cell
Testicles	Sperm producing glands
Urethra	Urine passes through here to leave the body. In males, semen also passes through here.
Uterus	Where a developing baby grows and develops inside of the mother
Vagina	The passageway leading from the uterus to outside the body
Vas deferens	Narrow tubes that carry sperm from the testicles to the penis
Vulva	Outer, folded skin at the entrance to the vagina. It includes the labia major and minor.

D. Reproduction Process

Students demonstrate a basic understanding of the male and female reproductive physiology.

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.

1. Print all the **Reproduction Process** cards onto separate sheets of paper.
2. Make a 'Y' shape on the wall or floor using masking tape. Label one part of the top of the Y 'Male', and the other 'Female', and label the bottom of the Y 'Pregnancy', as shown below. Make each arm of the Y about 1 m.
3. Give out the **Reproduction Process** cards that belong on the Male and Female arms (see below for answers) to six students.
4. Have the students with cards arrange the events that occur during menstruation and sperm production in the proper order along each of the top lines of the Y.
5. Instruct the students that did not have cards to rearrange the order if they think there are any cards misplaced.
6. Go through the cards together, and make corrections according to the answer key provided.
7. Now distribute the remaining cards having to do with sexual intercourse, fertilization and implantation.
8. Have students with cards arrange the events in the correct order, along the bottom line leading to 'Pregnancy'.
9. Instruct the students that did not have cards to rearrange the order if they think there are any cards misplaced.
10. Go through the cards together, and make corrections according to the answers below.
11. Use the **Menstrual Cycle, Sperm Production, Fertilization** and **Implantation** diagrams as needed to review the concepts.



Grade 6 Reproduction Review

Answers

Female

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

Male

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 vagina (sexual intercourse)
2. Sperm cells leave the penis (ejaculation) and enter 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 travel through fallopian tube to uterus
7. Cells attach to wall of uterus (implantation)

Debrief this activity using the following questions. Possible answers are included for reference.

What else do you know about menstruation?

- It usually begins between ages 9-15.
- Females need to be aware of good hygiene (showering, using and changing pads, etc.)
- The total amount of blood lost in a period is about 60-180 ml.
- Cramps can be a part of menstruation, and can be alleviated using wellness methods like exercise, gentle massage or a hot water bottle. For severe cramps, you can get over-the-counter medications or your doctor may prescribe medication.

What else do you know about sperm production?

- Sperm production and ejaculation begins in puberty, which usually begins between ages 9-14.
- The volume of semen ejaculated is usually about 2-5 ml.
- Nocturnal emissions (wet dreams) are ejaculations that occur during sleep. It is normal to experience these, or not to experience these.

What do menstruation and sperm production make possible?

- Menstruation and sperm production are indications that a person can produce a baby.
- It is important to remember that ovulation occurs before menstruation (bleeding); therefore a person can get pregnant before their first period.

Grade 6 Reproduction Review

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

- Most young people are not emotionally, educationally or financially ready to parent.
- Most young people do not want to have to take care of another person.
- Most young people want to interact with friends and continue to gradually take on responsibilities as they get older.

How many sperm are ejaculated during each ejaculation?

- As many as 200-500 million sperm can be ejaculated during each ejaculation.

How many eggs are usually released during a menstrual cycle?

- Usually one egg is released.

What can happen if more than one egg is released?

- If both eggs are fertilized, it means a female may have fraternal twins. Identical twins happen when the fertilized egg splits into two before cells begin dividing.

How long does an egg live inside a female's body after ovulation?

- 12 to 24 hours from the time of ovulation.

How long can sperm live inside a female's body once ejaculated?

- 3 to 5 days from the time of ejaculation.

Will a pregnancy occur every time sexual intercourse occurs?

- No. Although there is always a chance that pregnancy occurs, it only happens if a sperm cell fertilizes an egg and implants into the wall of the uterus.

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?

Grade 6 Reproduction Review

- 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:

- describe the reproduction process?
- identify steps of fertilization and implantation using appropriate terminology?

Skills:

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

Attitudes:

- accept that during puberty male and female reproductive systems mature to be able to reproduce?
- accept that ovulation and sperm production could result in pregnancy?

Vocabulary Review

Fill in the blanks with the correct word from the word bank.

Word Bank		
<i>eggs</i>	<i>ejaculation</i>	<i>fallopian tube</i>
<i>ovulation</i>	<i>semen</i>	<i>seminal vesicles</i>
<i>testicles</i>	<i>urethra</i>	<i>uterus</i>
<i>vas deferens</i>	<i>vulva</i>	

1. Sperm are produced in the _____, which are in the scrotum.
2. Ovaries produce _____, also called ova.
3. Release of semen from the penis is called _____.
4. Release of an egg from an ovary is called _____.
5. _____ is a thick fluid that contains sperm and is made in the _____
_____.
6. The egg gets from the ovary to the uterus by travelling down
the _____.
7. A baby grows and develops inside the _____.
8. The external genitals on a female are called the _____, and includes the
labia, clitoris and entrance to the vagina.
9. Urine leaves the body by going through the tube called a _____.
10. Sperm travel from the testicles to the penis through the tube called the
_____.

Match the term to the correct definition by writing the number in the blank.

Anus _____

1. A passage between the uterus and the vagina

Bladder _____

2. Skin that covers the glans (the tip of the penis)

Cervix _____

3. Female sex organ that becomes larger and firmer during sexual arousal

Clitoris _____

4. The opening at the end of the digestive tract where feces leaves the body

Erection _____

5. The release of semen during sleep

Foreskin _____

6. A membrane partially covering the opening to the vagina

Hymen _____

7. A sac that holds the urine produced in the kidney

Menstrual cycle _____

8. The building up and shedding the uterine lining that happens about once a month

Nocturnal emissions _____

9. When the penis becomes larger, longer and firmer because of sexual arousal

Anatomy Bingo

1. Write one word from the word bank below in each box of your bingo card until every box contains a word.
2. Choose words randomly.
3. Use each word only once.
4. For each definition the teacher reads, try to think of the word the definition describes.
5. If the definition is for a word you have written down, cross out the word on your bingo card.
6. Play each round according to the chart below:

Round One

A complete line in any direction.

Round Two

All outside boxes are filled in.

Round Three

All boxes are filled in.

Word Bank

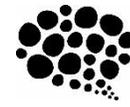
<i>anus</i>	<i>bladder</i>	<i>cervix</i>	<i>clitoris</i>
<i>egg</i>	<i>ejaculation</i>	<i>erection</i>	<i>fallopian tube</i>
<i>foreskin</i>	<i>hymen</i>	<i>menstruation</i>	<i>ovaries</i>
<i>ovulation</i>	<i>penis</i>	<i>scrotum</i>	<i>semen</i>
<i>seminal vesicles</i>	<i>sperm</i>	<i>testicles</i>	<i>urethra</i>
<i>uterus</i>	<i>vagina</i>	<i>vas deferens</i>	<i>vulva</i>

Name: _____

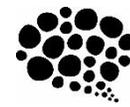
Bingo Card

Bingo Card

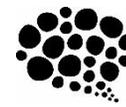
<i>cervix</i>	<i>ejaculation</i>		<i>anus</i>
		<i>vulva</i>	<i>vas deferens</i>
<i>penis</i>	<i>ovaries</i>		
<i>uterus</i>			<i>semen</i>



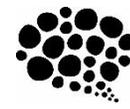
Female



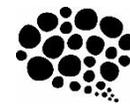
**Lining of uterus
thickens with
blood**



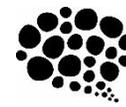
Ovulation occurs
(egg released from ovary)



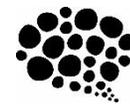
**Egg enters
fallopian tube**



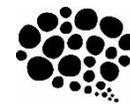
Male



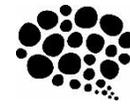
**Sperm is made in
the testicles**



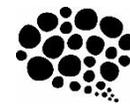
**Sperm exit the
testicles and travel
up the vas deferens**



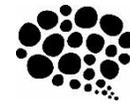
Sperm cells mix with semen



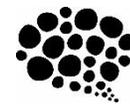
Pregnancy



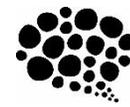
**Erect penis
is inserted
into vagina
(sexual intercourse)**



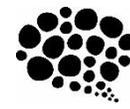
**Sperm cells leave
the penis (ejaculation)
and enter vagina**



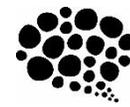
**Sperm travel
through the cervix,
uterus, and into
fallopian tubes**



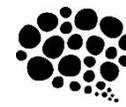
**One sperm cell
attaches to an egg
and forms one cell
(fertilization)**



Cell starts to divide



**Cells travel
through fallopian
tube to uterus**



**Cells attach to
wall of uterus
(implantation)**