

Lesson 8:

Reproduction, Pregnancy & Birth



Learner Outcomes

Students will:

- Identify reproductive systems and describe their functions
- Describe human development from conception to birth

These outcomes are related to Alberta curriculum sexuality outcomes and **require parental notification.**

This lesson is related to the PE&W Learning Outcomes

Grade 5: Students connect puberty to the capacity for human reproduction.

Grade 6: Students investigate human reproduction from fertilization to birth.

and is related to the Health and Life Skills Learning Outcome

Grade 7: Examine the human reproductive process, and recognize misunderstandings associated with sexual development.

How To Use

Teachers and staff know their students best: before teaching this lesson, consider the individual goals of each student. The overall aim is for students to be healthy and safe while having the best personal and social experiences possible. Avoid assuming that a student doesn't need or want this information.

All the Differing Abilities (DA) lesson plans can be adapted to the needs of individual students and groups. The lessons are scripted, meaning there are answers and explanations for every question asked. The questions, answers and discussion points are prepared for you using plain and simple language at a level best suited to students with DA.

Text in italics is the script designed to be read directly to students. Possible answers to questions, activity instructions and other teacher information, are not in italics.

Classroom Activities

- A. Group Agreements and Check-in
- B. Introduction to Reproduction
- C. Reproductive Systems: Internal Body Parts
- D. How are Babies Made?
- E. Pregnancy and Birth
- F. Question Box
- G. Closure

Required Materials

[DA Diagrams](#): Reproductive System, Fertilization, Implantation

Reproductive System Labels

[How Do You Get Pregnant? video](#)

Pregnancy and Birth Matching Cards

Background Information for Teachers

Language and terms

Talking about anatomy, physiology, and sexual development in terms of people, parts and processes is more accurate than talking about it in terms of assigned sex (female and male) or gender identity (girl and boy). For example, not everyone who gets periods is a girl, so saying “when someone gets their period” is more accurate than saying “when a girl gets her period.” This also helps make sure that everyone is included in the discussion, including trans, nonbinary and intersex youth.

However, some students may find this language confusing and will benefit from using gendered terms more frequently e.g., “when a girl gets her period, she may choose to use period underwear”. It’s important for students to be clear about what may happen to them and saying people who get periods may be too abstract, resulting in confusion. Terms can be used together when explaining concepts e.g., “when someone is first starting to get their period, it may be irregular. Not all girls have a regular period at first.”

Students may have questions about their sexual orientation, gender identity and expression (SOGIE). Teachers play an important role in helping

students feel seen and affirmed when they come to school so that they feel good about their gender expression and identities. These lessons use inclusive language and acknowledge different identities and relationships to acknowledge all students as they develop their sexuality. Learn more about [gender identity and expression](#).

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

The process of sexual reproduction begins in the individual bodies with ovulation and sperm production and ejaculation. More details on these processes can be found in the [Grade 5 Lesson Plans](#).

Internal reproductive organs

Ovaries

- The egg-producing glands.
- These glands contain all the eggs (ova) from birth, and start releasing them after puberty begins.

Fallopian Tubes

- These are narrow tubes that connect the ovaries to the uterus.
- The egg travels through one of the tubes after ovulation.
- Fertilization occurs in the fallopian tubes.

Uterus

- The place where a baby can grow.
- It is very low in the pelvis (nowhere near the stomach).
- It is about the size of a fist.
- The uterus (not the stomach) enlarges during pregnancy as the baby grows.
- During the menstrual cycle, the uterus grows a lining of blood that would nourish a growing fetus if fertilization and implantation occur. This lining sheds approximately once a month if fertilization and implantation do not occur.

Cervix

- The bottom of the uterus that opens into the vagina.

Vagina

- The passageway leading from the uterus to the outside of the body.
- Blood from the uterus passes through the vagina during menstruation.
- The baby passes from the uterus through the vagina during vaginal childbirth.
- The vagina is not where urine comes out. The urethra (the opening just above the vagina) is where urine leaves the body.

- Most people are born with a piece of tissue surrounding the vaginal opening. This is called the hymen – it may not be noticeable. Some people are born with an incomplete or flexible hymen. The hymen often wears away or becomes flexible during childhood.
- Once puberty begins, a person with a vagina may notice some discharge from the vagina on their underwear or toilet paper. It varies from whitish and pasty to clear and slippery. This means the body is starting to mature and periods will be starting. It is normal and keeps the vagina clean and healthy. If the discharge smells bad or the area is itchy, it could be a sign of infection and require medical treatment.

Ovulation

- Once ovaries start producing hormones, messages are sent to the pituitary gland in the brain, which sends a message to the ovaries to mature and release one egg, once a month from one ovary.
- Ovulation usually alternates from one ovary to the other each month.
- People can experience varying degrees of sensation during ovulation from nothing at all to pain similar to that of menstrual cramps.

Epididymis

- A long coiled tube that connects a testicle to a vas deferens.
- Where sperm matures and is stored.

Vas Deferens

- A narrow tube that carries sperm from the testicles to the urethra.

Seminal Vesicles

- Two small pouches behind the bladder that produce and store seminal fluid.
- This fluid mixes with sperm and other fluid to produce semen.

Prostate Gland

- Enlarges to block urine from leaving the bladder when sperm is ejaculated.
- Produces fluid that is part of semen. The fluid feeds and protects sperm when they are ejaculated.

Urethra

- In a penis, urine and semen both pass through this tube to the outside of the body.
 - Urine and semen cannot come out at the same time. There are two branches to the urethra, one from the bladder and the other from the vas deferens. When the penis is ready to release semen, a valve blocks off the branch to the bladder so urine cannot come out. This process is similar to the way a person is prevented from swallowing and breathing at the same time. Air goes to

the lungs and food goes to the stomach but both pass through the esophagus.

Fertilization

During vaginal sex, the penis is in the vagina. Sperm are ejaculated from the penis into the vagina and begin swimming up past the cervix, through the uterus and into the fallopian tubes. The tail of each sperm cell acts as a propeller to move the sperm forward. The first sperm will enter the fallopian tube minutes after ejaculation and can live in the fallopian tubes/uterus for up to five days. If the sperm encounters an egg in the fallopian tube, each sperm cell will attempt to penetrate the egg. Only one sperm will succeed in penetrating the egg, which is called fertilization. Once one sperm has penetrated the egg, the outer membrane of the egg changes and prevents fertilization by any other sperm.

Implantation

After the sperm cell and the egg unite, the fertilized egg is called a zygote. The zygote travels down the rest of the fallopian tube and into the uterus. It also begins dividing, so the single fertilized cell becomes two cells, the two cells become four, etc. About 5-7 days after fertilization, the zygote implants into the lining of the uterus, creating a pregnancy. The cells are now called an embryo.

If more than one egg is released at the same time, each egg can be fertilized by a different sperm. This will result in fraternal twins. If a zygote divides into two distinct entities, this will result in identical twins. Why the zygote divides into two at this stage is unknown. About 3% of births in Canada are twins, triplets, or more.

Pregnancy

A pregnancy is considered to be about 40 weeks, divided into three equal trimesters. Using this method of counting the length of a pregnancy, fertilization happens during week 2.

If the baby is born before 37 weeks of pregnancy, it is called a preterm birth.

Miscarriage

Miscarriage is the loss of a fetus before 20 weeks of pregnancy. Miscarriages are more common than most people realize. About 15-20% of pregnancies end in miscarriage, most often during the first 8 weeks of pregnancy. After the first trimester, the risk of miscarriage drops to about 3%.

Most of the time, no one knows why a miscarriage happens. Some possible reasons include:

- A problem or abnormality in the fetus
- Problems with the cervix or uterus
- Hormonal problems
- Infections
- Using tobacco products, drinking alcohol or drug use
- Abdominal trauma

Still Birth

Still birth is the death of a fetus after 20 weeks of pregnancy but before birth. This can happen during pregnancy or labour. Many times, the reason for the stillbirth is not known.

When a pregnancy ends in miscarriage or stillbirth, it can be a very emotional time for all members of the family. Feelings of fear, anxiety, anger, and grief are common. Some families are open about having had a pregnancy loss and others are not.

A. Group Agreements and Check-in

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

Start with a check-in activity as appropriate for the group. You may want to answer the question box questions from the last class as part of the check-in.

B. Introduction to Reproduction

Everyone has the right to understand their bodies and processes, including the reproductive process. Avoid assuming that youth with diverse abilities won't have children and/or parent.

1. *Today, we are talking about how babies are made, how they grow and how they are born. We were all babies, but none of us remember what it was like in the uterus or to be born. Some of you might be able to ask your parents about your birth. You might ask questions like how long did it take? How much did you weigh when you were born? Did you have any hair on your head? Do you have photos of when you were a newborn baby?*

2. *Our bodies get ready to make a baby when we go through puberty. We learned about puberty before. What is puberty?*
When people grow from child into adult.
3. *As youth go through puberty, their bodies are preparing to one day have a baby. This is called reproduction. Does everyone have babies? Does everyone become a parent when they grow up?*
 - No, some people won't have children.
 - Some people will not have biological children but become parents when they foster or adopt children.
 - Some people help other people with their children.

C. Reproductive Systems: Internal Body Parts

Please see the Background Information for Teachers section about using inclusive language and gendered terms to best meet student needs.

Students may blush, giggle or find other ways to express their discomfort as they start to use these words. This decreases with comfort, which comes from repetition and repeated exposure.

Consider reviewing the genitals (external body parts) from [Lesson 1: Understanding My Body](#) before starting this activity.

All diagrams can be found in [DA Diagrams](#).

1. Print and cut out the **Reproductive System Labels** found at the end of this lesson plan. Consider laminating them for durability.
2. Display the **Reproductive System Diagrams** on the board. Start with the diagram that shows the location of the internal organs in the whole body. Then show the diagrams with blanks to be filled in. As you go through each body part of both systems, have students put the labels on the diagrams in the correct location.
3. *To learn about how babies are made, we need to know about our body parts and what they do. When we learned about private body parts and puberty, we learned about the outside parts, called genitals. Today, we are learning about the inside parts that are used to make babies. We'll use the science or doctor words for body parts. The words might be new, so they may seem strange at first.*
4. *Here is a picture of a girl. Here are cards that have some of the names of her body parts. Remember, most of these parts are inside the body. They can't be seen with our eyes, just like we can't see our brain or heart. They're parts that are used to make babies.*

5. Put each label in the correct location on the diagram as you name each one.
6. Repeat the script for the diagram of the sperm producing reproductive system.

When discussing the reproductive systems, it is helpful to work from the outside of the body when using the definitions below:

Girls/Egg Producing Reproductive System

Vagina: This is the passageway that goes from the uterus to the outside of the body. This lets menstrual blood go out of the body and is usually how babies come out of the body, too. The opening of the vagina is the only part you see – the rest of it is inside. The **vulva** is what you call the outside area around the vagina.

Cervix: This is the opening to the uterus and is at the top of the vagina. The cervix is usually tightly closed. It opens a tiny bit during a period (menstruation) so blood can come out through the vagina. The cervix opens 10 centimetres during labour so the baby can be born.

Uterus: This is where a baby grows. By the end of puberty, the uterus is about the size of a small fist. The uterus has very strong and stretchy muscles that help push out a baby and can cause period cramps.

Fallopian tubes: When the ovary lets out an egg, it goes into the fallopian tube. There is usually one tube on each side of the uterus.

Ovaries: Ovaries store eggs. When a girl is born, they have all the eggs they will ever have in their ovaries. There are usually two ovaries each about the size of an almond.

Eggs (ova): Eggs are very small and can't be seen with our eyes. Starting in puberty, every month the ovaries let out one (or more) eggs. This is called ovulation. Each egg contains half of what will make a baby.

Boys/Sperm Producing Reproductive System

Penis: This is outside the body and is the way that urine (pee) and semen (containing the sperm) leave the body.

Testicles: Testicles are glands held in the sac of skin called the **scrotum**. They're on the outside of the body to be kept cool. Testicles make sperm cells once puberty starts.

Urethra: This tube takes sperm and urine (pee) out of the body.

Epididymis: This tubing is attached to the back of the testicles and stores sperm after it's made.

Vas deferens: These tubes carry sperm from the testicles to the urethra.

Sperm: Millions of sperm are made in the testicles. They're released in a fluid called semen. They are very small and can only be seen under a microscope. Each sperm contains half of what will make a baby.

D. How are Babies Made?

All diagrams can be found in [DA Diagrams](#).

1. *Now, we are going to talk about how these body parts work together to make a baby.*
2. Display the **Fertilization** diagram on the board.
3. *Babies are usually started through sex. Sex is sometimes called sexual intercourse. This is when people get very close, and the penis goes into the vagina, and the people move as the penis goes in and out of the vagina.*
4. *Semen comes out of the penis – this is called ejaculation.*
5. *Sperm swim through the vagina, cervix, and uterus, into the fallopian tube.*
6. *If the ovary has released an egg (ovulated), the sperm and egg meet. This is called fertilization.*
7. *Now, instead of being 2 cells (each having half of what it takes to make a baby), the sperm and egg become one cell, called the fertilized egg. This one cell has everything the baby needs to grow. This one cell now has all the information about that baby – like their eye colour, and how tall they will be.*
8. Display the **Implantation** diagram on the board.
9. *The fertilized egg travels down the fallopian tube and grows into more and more cells.*
 - *If two sperm fertilize two eggs, it makes fraternal twins. This means that all the information in the fertilized eggs are different. The babies will be siblings but not identical. The babies may be the same sex or different sexes.*
 - *If one fertilized egg splits, it makes identical twins. This means that the information in the fertilized eggs are the same as each other. The babies will be the same sex.*
10. *The fertilized egg settles into the uterus. This is called implantation.*
 - *Does anyone know someone who is pregnant right now? How do you think they know they are pregnant?*

- Miss a period, did a pregnancy test at home or at the doctor's office, as the baby grows in the uterus, their abdomen grows and gets hard, feel a baby kick
- *How do they feel?* Tired, morning sickness, excited, loving
11. Show the **How Do You Get Pregnant?** video.
<https://youtu.be/n04NPtZl4QQ> Consider playing it at a slower speed.
 12. *The baby grows in the uterus for about 40 weeks. The baby is attached to the uterus by an umbilical cord. This is how the baby gets food from the mother. If a baby is born earlier than 37 weeks, it is premature and may need extra care.*
Be clear that the baby is growing in the uterus, not the stomach where food goes.
 13. *Sometimes, a baby gets sick, is born too early and dies. This is called a miscarriage. Sometimes, the baby dies inside the uterus when it's close to being born, and this is called a stillbirth. This can be a very sad time for the parents and families. It does not mean that the parents have done anything wrong and sometimes the doctors may not know why this happened. Families can get help to talk about their feelings and when to get pregnancy again. Many parents will go on to have another baby.*
 14. *When the baby is ready to come out, the uterus squeezes hard and the cervix and vagina get wider. This is called labour. Often, it takes many hours, and the mother works hard during this time, helping the baby be born.*
 15. *Sometimes, the baby can't safely come out of the uterus and the doctor does an operation/surgery called a C-section to get the baby out through the abdomen.*
 16. *Do any of you know the story of when you were born?*

E. Pregnancy and Birth

1. Print, cut and laminate the **Pregnancy and Birth Matching Cards**. Students can match the cards as you are teaching or use the cards after to check on learning.
 - Use as a whole group where you lead the activity
 - Place students in pairs with their own sets of cards
 - Place students in small groups with one set of cards to match together.

F. Question Box

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

- Some students may need assistance from staff, either during the class or in between classes, to record their questions.
 - Hand out paper to each student.
 - Students who don't have a question can write something else on the piece of paper, such as something they learned or just a comment about their day.
- When everyone writes something down, the people with questions feel safer writing them.
- Use a box or bag to collect the papers.
- Answer the questions during the **next class**. This allows you time to review the questions and prepare responses.

G. Closure

- *Today, we talked about reproduction or making a baby.*
- *What is one thing you learned? How do you feel after talking about reproduction?*
- *Who can you talk to about what you learned today?*
- *We talked about babies getting made through sex. We are going to talk more about making decisions about sex in another class.*



Reproductive Systems Labels

Uterus	Epididymis
Fallopian tube	Vas deferens
Cervix	Urethra
Vagina	Penis
Ovary	Testicle
Ovary	



Pregnancy and Birth Matching Cards

A pregnancy lasts for...	40 weeks (9 months)
The baby grows in the body in the...	the uterus
Identical twins are made when...	one sperm fertilized one egg and that cell divides into two
Fraternal twins are made when...	two sperm fertilize two eggs



The time when the baby is being born is called...	labour
Most babies are pushed out through...	the vagina
Some babies are born through an operation called...	a C-Section
A baby who is born before 37 weeks is called...	premature
A baby is attached to the uterus by the...	umbilical cord



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