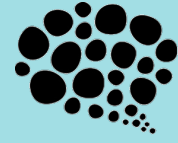


Grade 6

Growing a Baby



Learner Outcomes

Students investigate human reproduction from fertilization to birth.

The [Knowledge, Understanding, and Skills and Procedures](#) for this outcome that are covered in this lesson are listed at the end.

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 E.

Classroom Activities & Timing

- A. Ground Rules (5-10 minutes)
- B. Pregnancy and Fetal Development (15-20 minutes)
- C. Promoting Healthy Babies (30-90 minutes)
- D. Healthy Pregnancies Kahoot! Quiz (15-20 minutes)
- E. Question Box (5-10 minutes)

See also the [Differing Abilities](#) lesson plan *Reproduction, Pregnancy and Birth.*

Required Materials

CARDS: Fetal Development

HANDOUT: Promoting Healthy Fetal Development

[KAHOOT! QUIZ](#) and ANSWER KEY: Healthy Pregnancies

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, [inclusive language](#) is used to be inclusive of 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 is different 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.

Fetal Development

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.

Timeline	Changes in fetus
First Trimester (0-13 weeks)	
0-4 weeks	<ul style="list-style-type: none"> • Baby is called an embryo • About 6 mm long, or about the size of a grain of rice • Placenta, amniotic sac begin to form • Early structures of the brain begin to form
5-8 weeks	<ul style="list-style-type: none"> • Embryo is about 2.5 cm long, weighs less than a grape • Heart starts beating • Head, brain, internal organs, and teeth are beginning to develop • Arm and leg buds beginning to show • Spine starts to show, bones begin growing
9-13 weeks	<ul style="list-style-type: none"> • Baby is now called a fetus • About 7.6 cm long and weighs about as much as a tube of lipstick • Eyes, ears, nose, and mouth have formed • Hands, fingers, and toes have formed • Sex organs (penis, vagina etc.) have formed • Fetus can suck their thumb • Brain cells are growing very quickly
Second Trimester (13-26 weeks)	
13-18 weeks	<ul style="list-style-type: none"> • Fetus is about 12.5 cm long and weighs about 90 g • Hair and eyebrows are beginning to grow • Fingernails and toenails are developed • Fetus can hear sounds
19-22 weeks	<ul style="list-style-type: none"> • Fetus is growing longer quickly, is about 25 cm long by 22 weeks and weighs about 250 g • Fetus kicks, twists, and turns, is often most active when pregnant person is sitting still • Fetus can grasp and suck
23-26 weeks	<ul style="list-style-type: none"> • Weighs around 1 kg and is about 32 cm long • Fetus can hiccup • Eyelids can open and close • Fetus has fingerprints

Third Trimester (26-40 weeks)	
26-31 weeks	<ul style="list-style-type: none"> • The brain has formed billions of brain cells • Eyes have eyelashes and eyebrows • Fetus moves a lot, and other people can see/feel this movement from the outside
32-35 weeks	<ul style="list-style-type: none"> • Fetus is about 46 cm long and weighs about 2.5 kg • Fat layers building up under the skin to stay warm after birth • Some immunity to diseases given by mother's body
36-40 weeks	<ul style="list-style-type: none"> • Fetus is about 55 cm long and weighs about 2.7- 4 kg • Skin is pinker and less wrinkled • Lungs are ready to breathe air after 37 weeks • Fingernails can scratch their skin

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

When a pregnancy ends in miscarriage 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 miscarriage and others are not.

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. Like a miscarriage, a stillbirth is a very emotional time for a family. Feelings of fear, anxiety, anger, and grief are common. Some families are open about having had a stillbirth and others are not.

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. Pregnancy and Fetal Development

Students can see the changes in the fetus as it grows and develops inside the uterus, and connect the changes to each trimester of pregnancy.

1. Print the **Fetal Development** cards onto separate sheets of paper. Consider laminating the pages.
2. Explain that a pregnancy takes approximately nine months, and that it is divided into three stages, called trimesters.
 - The first trimester includes the first three months (weeks 0-13).
 - The second trimester includes months 4-6 (weeks 13-26).
 - The third trimester includes months 7-9 (weeks 26-40).
3. Give out just the images to the students and have them work together to match the image with the correct trimester heading. With a large class, you could print out multiple sets of images and give one set to each group to arrange.
4. Use the answer key below to ensure the pictures are matched correctly.
5. Hand out the description cards and ask the students to place each card in the correct trimester.
6. Use the answer key to ensure all the descriptors are matched to the correct picture and trimester.

Consider showing students an approved video of fetal development as an introduction to this activity, or as a way to confirm their answers for the activity.

Answer Key

Picture	Timeline	Card
First Trimester		
 <p>2 Months</p>	First month	Baby called an embryo. Is about 6 mm long.
	Second month	Arm and leg buds are starting to show.
	Third month	Baby called a fetus. Eyes, ears, nose, and mouth are formed.
Second Trimester		
 <p>6 Months</p>	Fourth month	Fetus has fingernails and toenails. Can hear sounds.
	Fifth month	Fetus will kick, twist, and turn in uterus. Is about 25 cm long.
	Sixth month	Fetus can hiccup, and open and close eyelids. Weighs about 1 kg.
Third Trimester		
 <p>9 Months</p>	Seventh month	Has made billions of brain cells. Movements can be seen by others.
	Eighth month	Fetus is building layers of fat to stay warm after birth. About 46 cm long.
	Ninth month	Skin is pinker and less wrinkled. Weighs about 3-4 kg.

C. Promoting Healthy Babies

Students appreciate the importance of preconception and prenatal health, and create a health promotion message that encourages healthy fetal development.

1. Discuss the following questions and answers as a class.

Before and during pregnancy, what can help a person be as healthy as possible?

- Regular check-ups with a health care provider
- A healthy diet that follows *Canada's Food Guide*
- Balance of rest and exercise
- Being a healthy weight
- Using healthy coping strategies to deal with stress
- Taking daily multivitamin/prenatal vitamins with folic acid (pregnant person only)

Why does a healthy lifestyle before pregnancy impact a future baby?

- Teratogens are harmful substances that can cause birth defects.
- In the first few weeks of pregnancy, the developing embryo is very vulnerable to teratogens.
- A healthy lifestyle will lower the likelihood of teratogens being present during the early weeks of pregnancy, before most people even know they are pregnant.

Before pregnancy, what are some things that can affect the health of a future baby by affecting the development of eggs and/or sperm?

- Tobacco use and exposure to second hand smoke
- Alcohol use
- Use of cannabis or other drugs
- Excessive heat (sperm only)
- Some sexually transmitted infections

During pregnancy, what are some things that can negatively affect the development of the baby in the uterus?

- Smoking/vaping (first or second hand smoke) or tobacco use
- Alcohol
- Cannabis or other drug use
- Poor nutrition
- Lack of folic acid
- Excessive stress
- Environmental conditions (e.g., air pollution, chemicals)

During pregnancy, what can a partner do to provide the fetus with the best possible conditions for healthy fetal development?

- Avoid smoking/vaping around a pregnant person, to avoid second-hand smoke impacting the baby

All cultures practice rituals and have traditions during pregnancy. There are many such practices, rituals, beliefs, and offerings that are meant to protect the pregnant person and/or the fetus from a variety of influences. You may wish to consult with a cultural community liaison to learn more about such practices in cultures around the world.

- Cook and eat healthy meals together
- Enjoy moderate exercise together
- Share the household tasks
- Clean out the litter box for any cats in the home. Pregnant people should not be exposed to cat feces because of the risk of toxoplasmosis.
- Attend visits to health care providers, prenatal classes, and other appointments

What can other people do to provide the fetus with the best possible conditions for healthy fetal development?

- Avoid smoking/vaping around a pregnant person, to avoid second-hand smoke impacting the baby
- Help with housework, childcare, yard work and other family obligations to give the pregnant person more time to rest when desired
- Clean out the litter box for any cats in the home. Pregnant people should not be exposed to cat feces because of the risk of toxoplasmosis.

Is a pregnant person sick?

- No, a pregnant person isn't sick. Pregnancy is a normal human process.
- Having a healthy lifestyle during pregnancy can help the baby be as healthy as possible when they are born.

How does a person find out they are pregnant?

- The person can buy a pregnancy test and take it at home. The person pees on the pregnancy test stick. The hormones that are part of pregnancy make the test show "positive". If the person is not pregnant, they will not have the pregnancy hormones and the test will show "negative".
- Some people visit their doctor, midwife, or other health care provider to confirm the test.

Who else can help provide good information and support healthy decisions?

- Midwife, doctor, or nurse practitioner
- Public health nurse
- Childbirth educator

Does your culture/family of origin/religion have any traditions or beliefs about things that help ensure a healthy baby?

- Traditions may involve the time during pregnancy, the postpartum period (days and weeks immediately after birth) or during breastfeeding
- E.g. certain foods that are eaten or avoided, activities that are encouraged or discouraged, special gifts given to the pregnant person or family

2. Decide whether the projects will be completed in groups or individually.
3. Give each student the **Promoting Healthy Fetal Development** instructions. Students must create promotional material that addresses healthy fetal development, using the guidelines.
4. When complete, display the promotional material in the classroom or around the school.

D. Healthy Pregnancies Kahoot! Quiz

These quizzes 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 6 Healthy Pregnancies](#) to play with the students.
2. As a class, answer the questions and discuss the answers together. You can play 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?

Learning Outcomes

This lesson addresses the following Grade 6 [Physical Education and Wellness curriculum](#) outcomes:

Knowledge

- Pregnancy can be confirmed by a test.
- The length of a pregnancy is approximately 40 weeks and is divided into three stages called trimesters.
- A child born before 37 weeks of pregnancy is called a pre-term birth.
- Fetal development during pregnancy can be adversely affected by
 - poor nutrition
 - smoking
 - alcohol use
 - drug use
- Supportive health practices during pregnancy include
 - eating nutritious foods
 - engaging in physical activity
 - getting adequate sleep and rest
 - attending early and consistent medical visits
- Reproductive health information can be provided by credible sources, such as
 - parents and caregivers
 - health professionals
 - teachers
 - spiritual leaders
 - Knowledge Keepers
 - Elders
- There are diverse traditional, cultural, and religious beliefs regarding reproductive health.

Understanding

- Pregnancy is a natural human process.
- Fetal development occurs in stages throughout a pregnancy.
- Supportive health practices can enhance reproductive health, a healthy pregnancy, and safe childbirth.
- Credible sources can provide accurate information on reproductive health and support healthy reproductive decisions.
- Traditional, cultural, and religious beliefs can affect understandings of human reproduction.

Skills and Procedures

- Examine fetal development in each of the three trimesters.
- Examine factors that can adversely affect fetal development.
- Identify health practices that support a healthy pregnancy.
- Identify credible sources of reproductive health information.
- Consider ways that human reproduction can be influenced by traditional, cultural, and religious beliefs.

Promoting Healthy Fetal Development

Produce an advertisement promoting healthy fetal development.

1. Choose ONE of the following to create:
 - Poster
 - Infographic
 - Series of 3 Instagram ads
 - Video/TikTok
 - Comic strip
 - Podcast
2. Choose ONE of the following audiences:
 - A pregnant person
 - A partner of a pregnant person
 - A family member of a pregnant person
 - A grade 6 student
3. Choose ONE OR TWO of the following topics:
 - Things to avoid when pregnant
 - What a pregnant person can do to promote healthy fetal development
 - What a father/partner of a pregnant person can do to help
 - What a family member of a pregnant person can do to help
 - What a student can do to help
4. Brainstorm your ideas and plan the layout/design/script for your project.
5. Develop a finished product.



ANSWER KEY: Grade 6 Healthy Pregnancies Quiz

Correct answers are in bold text.

- In the first trimester of pregnancy:
 - **the fertilized egg attaches to the lining of the uterus**
 - **the embryo has eyes, ears and heart starts beating**
 - the embryo can walk and talk
 - the mother can feel the embryo moving
- In the second trimester of pregnancy:
 - the parents can hear the baby's voice
 - the fetus is ready to be born
 - **the fetus kicks, twists, and turns often**
 - the fetus leans to walk and talk
- In the third trimester of pregnancy:
 - the fetus is smaller than a golf ball
 - **the fetus' kicks can be seen by others**
 - the fetus is always bald
 - the fetus learns to talk
- When pregnant, the pregnant parent can help the fetus be as healthy as possible by:
 - **avoiding tobacco products**
 - eating chocolate at every meal
 - losing weight
 - **avoiding alcohol**
- Going to the doctor or midwife for regular checkups during pregnancy is important.
 - **True**
 - False
- Avoiding drugs during pregnancy helps the baby be born healthy.
 - **True**
 - False
- A person who thinks they are pregnant:
 - Has to go to the hospital right away
 - **Can take a test at home to confirm the pregnancy**
 - Will find out when the baby is born if they are right



First

Trimester



Second

Trimester



Third

Trimester









**Baby called an
embryo. Is about
6 mm long.**



**Arm and leg
buds starting to
show.**



**Baby called a
fetus. Eyes, ears,
nose, and mouth
are formed.**



**Fetus has
fingernails
and toenails.
Can hear sounds.**



**Fetus will kick,
twist, and turn
in the uterus.
Is about 25 cm
long.**



**Fetus can
hiccup, and open
and close
eyelids. Weighs
about 1 kg.**



**Has made
billions of brain
cells. Movements
can be seen by
others.**



**Fetus is building
layers of fat to
stay warm after
birth. About
46 cm long.**



**Skin is pinker
and less
wrinkled.**

**Weights about
3-4 kg.**

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