

Lesson 2: The Journey of an Egg

Curriculum Expectations

D1.3 – Identify the parts of the reproductive system, and describe how the body changes during puberty.

D1.4 – Describe the processes of menstruation and spermatogenesis, and explain how these processes relate to reproduction and overall development.

[Ontario Health and Physical Education Curriculum](#)

How to Use

This lesson plan contains several activities to achieve the curriculum expectations 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, however, all can be used alone. **For a quick lesson, combine activities A, C, D and G.**



Educators may choose to use these [Google Slides](#) to complement this lesson plan. The slides provide visual aids and key points to enhance the teaching experience. They can be used as a flexible resource to engage students and facilitate discussions. Detailed information and student activities remain available in the lesson plan, which can be referenced as needed.

Classroom Activities & Timing

- A. Ground Rules (10 minutes)
- B. Anatomy Vocabulary Matching Game (15 minutes)
- C. Anatomy Diagrams – Fill in the blanks (20 minutes)
- D. The Egg's Journey (25 minutes)
- E. Class Discussion (10 minutes)

- F. Quiz: Eggs and Ovaries (15 minutes)
- G. Question Box (10 minutes)

Required Materials

- Handout and Answer Key: Reproductive System Diagrams
- Handout: The Menstrual Cycle
- Handout: The Egg's Journey
- Quiz: Eggs and Ovaries
- Cards: Anatomy Vocabulary

*All the student handouts are available at the end of this lesson, or in the [slideshow](#).

Considerations

Prior to discussing this content, we encourage you to consult your school board's expectations about notifying parents/caregivers about the topics that will be covered. School boards typically require a drafted letter to be sent in advance of the unit.



Some parents/caregivers may choose to exempt their child from instruction related to the Human Development and Sexual Health expectations ([PPM 162: Exemption from instruction related to the Human Development and Sexual Health Expectations in The Ontario Curriculum: Health and Physical Education, Grades 1-8, 2019](#)).

Background Information for Educators

Puberty brings significant changes to the reproductive system, with menstruation and spermatogenesis being key processes. Educators can help students understand these changes by providing clear, accurate information and encouraging open conversations with trusted adults. Understanding the physical and emotional shifts of puberty reduces stigma, fosters empathy, and helps students feel confident in their development.

Teaching about menstruation, sperm production, and related body changes also introduces students to the importance of self-care and healthy habits. Framing these topics as a natural part of human growth empowers students to make informed decisions and promotes acceptance of the diverse experiences that come with adolescence.

Inclusive language

Language is complex, evolving, and powerful. These lessons use [inclusive language](#) to accommodate all students, including those with diverse gender identities, expressions, and orientations. This includes using ‘they’ as a singular gender-neutral pronoun. This approach ensures the lessons are accurate and inclusive, promoting understanding and respect for all students.

In these lessons, you will notice that body parts and processes are not labelled as male or female. While it is acceptable 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 consistently use inclusive language. 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.

Cultural sensitivity

People's decisions and behaviours related to one's sexuality are influenced by their cultural beliefs, values and practices. It is important to acknowledge our own personal cultural values and beliefs while respecting that others may not share the same ones.

Instructional methods

Students engage when [instructional methods](#) emphasize active and experiential learning. Just as in other curriculum areas, using role play, small groups, class discussion and videos in sexual health education can bring the curriculum to life. It also helps students explore the content and understand how it relates to their own ideas, values and experiences.

Glossary

This [glossary](#) provides simple definitions of key terms used throughout our lessons and resources, allowing educators to have a clear understanding of concepts related to health, human development, sexuality and inclusivity.

Understanding the Basics :

The egg-producing reproductive system & related systems

External genitals

- **Vulva**
 - The vulva includes the labia majora, labia minora, clitoris, and the openings of the vagina and urethra.
 - The labia majora (outer folds) and the labia minora (inner folds) are the folds of skin surrounding the vaginal opening.
 - The vulva has two openings: the openings to the urethra and vagina. This is often surprising, even people who have this anatomy may think that the urethra and vagina share the same passageway.
- **Clitoris**
 - The clitoris is a sensitive organ located above the urethra.
 - It becomes larger and firmer when stimulated.

Internal reproductive organs

- **Ovaries**
 - These are egg-producing glands located on either side of the uterus.
 - They contain all the eggs (ova) a person will have from birth and begin releasing them during puberty.
- **Fallopian Tubes**
 - These narrow tubes connect the ovaries to the uterus.
 - After ovulation, an egg travels through one of the tubes.
 - Fertilization, if it happens, occurs in the fallopian tube.
- **Uterus**
 - The uterus, about the size of a fist, is where a baby can grow during pregnancy.
 - It is located in the pelvis, close to the bladder.
 - Each month, during the menstrual cycle, the uterus builds a lining of blood to nourish a fertilized egg. If fertilization does not occur, this lining is shed as menstruation.
- **Cervix**
 - The cervix is the lower part of the uterus that opens into the vagina.
- **Vagina**
 - The vagina is the passageway connecting the uterus to the outside of the body.
 - Functions of the vagina include:
 - Menstruation: Blood flows through it from the uterus during periods.
 - Childbirth: A baby passes through the vagina during vaginal delivery.

- A piece of tissue called the hymen surrounds the vaginal opening. Its appearance can vary.
- Vaginal discharge helps keep the area clean. Discharge may range from whitish and pasty to clear and slippery. The appearance of discharge is often a sign that the body is maturing, and periods may soon start. However, if the discharge has a strong odour or if the area feels itchy, it could indicate an infection and may require medical attention.

Other organs

- **Bladder**
 - The bladder is a sac that holds the urine produced by the kidneys.
 - It is part of the urinary system, not the reproductive system.
- **Urethra**
 - The urethra is a tube that carries urine out of the body.
 - It is located below the clitoris and above the vaginal opening.
 - Like the bladder, the urethra is part of the urinary system.
- **Anus**
 - The anus is the opening at the end of the digestive tract where feces or stool leave the body.
 - It is part of the digestive system, not the reproductive system.

How the reproductive system functions (physiology)

- **Eggs**
 - Eggs are stored in the ovaries from birth, with each ovary containing about 250,000 immature eggs.
 - The egg is a reproductive cell that, if fertilized by a sperm cell, can develop into a baby.
 - After puberty begins, one egg is typically released from an ovary each month (ovulation).
 - Sometimes, more than one egg is released.
 - After release, the egg travels through the fallopian tube. If fertilized by a sperm cell, it moves to the uterus for implantation. If not fertilized, it dissolves in the fallopian tube and is reabsorbed by the body.
- **Ovulation**
 - Hormones from the ovaries signal the brain's pituitary gland, which then signals the ovaries to mature and release an egg approximately once a month.
 - Ovulation usually alternates between the two ovaries.
 - People can experience a range of sensations during ovulation, from no sensation at all to discomfort similar to menstrual cramps.

- **Menstruation (Period)**
 - Every month, the uterus builds a thick, nutrient-rich lining in preparation for a fertilized egg.
 - If fertilization does not occur in the fallopian tube, the uterine lining is shed. This process is called menstruation (or having a period).
 - Menstrual fluid includes mucus, blood, and tissue from the uterus lining.
 - A typical period lasts 2 to 7 days, with 5 days being the average.
 - The amount of fluid shed is usually around 60 to 80 ml (which is about 4 to 5 tablespoons, or less than half the amount in a small juice box).
- **Menstrual cycle**
 - The menstrual cycle begins on the first day of one period and ends on the first day of the next.
 - The average cycle range is 24-38 days, but cycles can be even shorter or longer, particularly during the first year or two after menstruation begins.
 - After menstruation ends, the uterus begins preparing a new lining, and the process repeats.

Important notes about menstruation

- Menstruation is a normal and healthy part of puberty and it is not “dirty” or “bad”.
- Some people may experience cramping during menstruation, which can often be relieved with a hot water bottle or heating pad, light to moderate exercise or over-the-counter pain medication (following dosage instructions). Severe cramping may require consultation with a doctor.
- Menstruation is not a sickness, and most people can participate in regular daily activities such as physical education, active play, and extracurricular activities.
- Washing the vulva daily helps remove oil buildup and dried menstrual fluid.
- Menstrual products like pads, tampons, period underwear or menstrual cups help absorb or collect menstrual fluid. Educators may use the Puberty Kit (see [Grade 4: Lesson 2 – Puberty and Personal Hygiene](#)) to demonstrate these products. (This lesson also includes information on how to dispose of these products properly, as well as tips on how students can prepare and get ready for their periods).
- Menstruation continues until menopause, which typically occurs between the ages of 40 and 58. After menopause, a person no longer releases eggs, has periods, or can become pregnant.

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. Anatomy Vocabulary Matching Game

In this activity, students will identify the key components of the reproductive system and describe the basic functions.

1. Display the Anatomy Definitions posters around the room.
2. Divide the class into smaller teams of 3-4 students.
3. Give each team a set of Anatomy Vocabulary cards.
4. Teams will work together to match each vocabulary word to its corresponding definition. Once they decide, they will post their vocabulary card on the definition they believe is correct. Encourage teams to make their own decisions and not worry about matching other groups' choices.
5. Review the matches as a class. Discuss the correct answers and adjust the cards to the correct definitions as needed.

Answer Key:

Vocabulary Word	Definition
Anus	The opening at the end of the digestive tract where feces leave the body.
Bladder	A sac inside the body that holds urine.
Cervix	The bottom of the uterus that opens into the vagina.
Clitoris	Sensitive part of the body, located at the top of the vulva.
Fallopian Tubes	Tubes connecting the ovaries to the uterus. The egg travels through here after ovulation.
Hymen	A membrane that surrounds or partially covers the opening of the vagina.

Menstruation (Period)	Monthly shedding of the lining of the uterus.
Ovaries	Glands that produce and release an egg each month.
Ovulation	Process of releasing an egg from the ovary.
Egg	The reproductive cell made in the ovaries.
Vagina	A passage leading from the uterus to the outside of the body.
Vulva	The external genitals, includes the labia and clitoris.
Urethra	Urine passes through this tube to the outside of the body.
Uterus	Where a developing baby grows.

C. Anatomy Diagrams – Fill in the Blanks

The diagrams of anatomy help students learn the vocabulary associated with reproduction. Some students may need help in understanding the different views of the reproductive systems (e.g., internal, external or anterior view).

1. Distribute the *Reproductive System Diagrams* handout. Explain how the external and internal views of the reproductive system relate to each other.
2. Ask the students to fill in as many of the blanks as they can. They may work individually, in pairs, or in small groups. Emphasize that it's okay if they don't know all the answers.
3. Display the correct answers so all students can assess and correct their diagrams and discuss.
4. Consider asking students to discuss which parts of the anatomy are common to all people and which might serve similar functions.

Emphasize that not everyone's genitals look like the diagrams or pictures shown. Variation in size, shape, and appearance is normal, healthy, and part of human diversity.

D. The Egg's Journey

This activity helps students deepen their understanding of reproductive anatomy by exploring how the reproductive system functions.

1. Distribute *The Egg's Journey* handout.
2. Ask students to complete the activity by filling in the blanks with the appropriate terms. This can be done individually or in a small group.
3. Provide resources such as the Reproductive System Diagrams handout, if needed. You may also display or distribute the Menstrual Cycle Diagram, which illustrates a typical 28-day cycle. Emphasize that a normal cycle can range from 24 to 38 days.
4. Review the handout together as a class, discussing any questions or misconceptions.

Answers

1. Uterus
2. Egg
3. Ovary
4. Fallopian tubes
5. Cervix
6. Vagina
7. Menstrual cycle

E. Class Discussion

In this activity, students will review their knowledge of the reproductive system and menstrual cycle, develop resiliency skills, and identify support people.

Discuss the following questions as a class:

How does a person know when they will get their first period?

- Menstruation typically begins between ages 9 and 15, and everyone's body has its own timeline for puberty.
- Generally, a person can expect their first period about 2 years after breast development begins and shortly after underarm and public hair starts growing.
- Vaginal discharge is often an early sign that menstruation may start soon.

What are some of the things that might worry a person about menstruation?

- Cramps
- Blood
- Smelling different
- Premenstrual syndrome (PMS)
- Getting their period unexpectedly or not having supplies available

What are some ways to cope with menstruation?

- Use pads, tampons, menstrual underwear or a menstrual cup to manage menstrual flow.
- Various sizes are available. Unscented products are less likely to cause skin irritation.
- Be sure to read the instructions before using tampons or a menstrual cup for the first time.
- Change tampons every 3 to 4 hours, or longer at night if indicated by the product instructions.
- Change or clean menstrual cups every 6 to 12 hours.
- Change pads before they become soaked through or at least every 4 hours during the day, and first thing in the morning if worn overnight.
- Wash your hands before and after handling any menstrual products.
- To relieve cramps, try a hot water bottle or heating pad, over-the-counter pain medication or moderate exercise. If severe cramps persist, see a doctor.
- Premenstrual syndrome (PMS) can occur anytime in the two weeks before menstruation, causing mood changes, irritability, breast tenderness, or bloating. Exercise and limiting caffeine and salt may help reduce symptoms.
- If your period starts unexpectedly, ask a friend, teacher, or office staff for supplies. Keep menstrual products in your backpack, desk or locker to be prepared.
- Use a calendar or app to predict when your next period might start and to better understand your body.

Can you swim or exercise while on your period?

- It's completely safe to swim and exercise during menstruation.
- Using the appropriate menstrual products, such as tampons or menstrual cups, can make it easier to stay active without worrying about leaks.

What do you think is the most interesting thing about the menstrual cycle?

A few examples:

- How the body prepares each month, just in case it needs to support a baby.
- That everyone’s cycle is a little different—it doesn’t happen the same way for everyone.
- How the body knows when to start and stop the process every month.
- The way the lining of the uterus builds up and then gets released if there’s no fertilized egg.
- How the cycle can give clues about what’s happening inside the body, like when someone might expect their period.

Who can you talk to if you have questions about what we’ve reviewed together?

- Parent or caregiver
- Trusted adult
- Teacher or school staff
- Health care provider

F. Eggs and Ovaries Quiz

This quiz serves as an excellent review tool, a wrap-up for the unit, or a fun energizer to break up other activities.

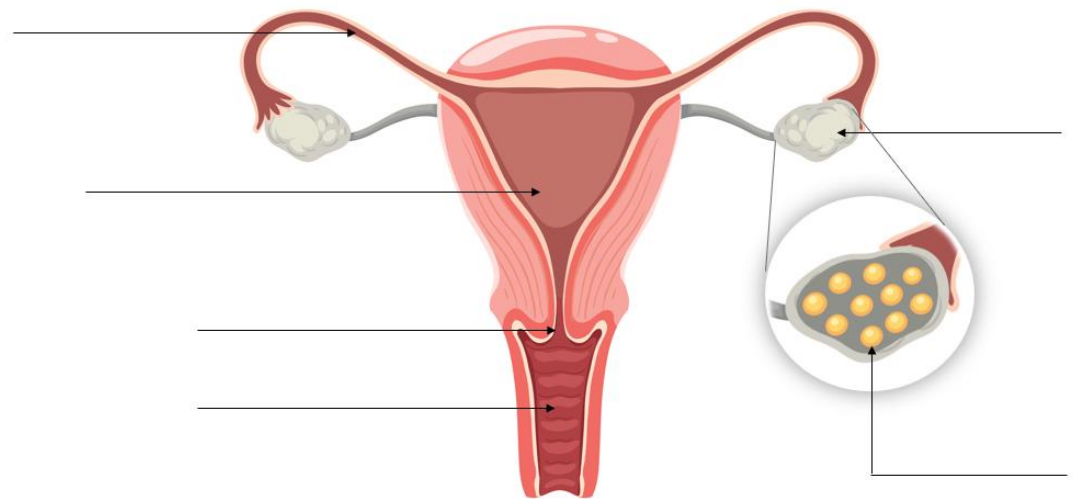
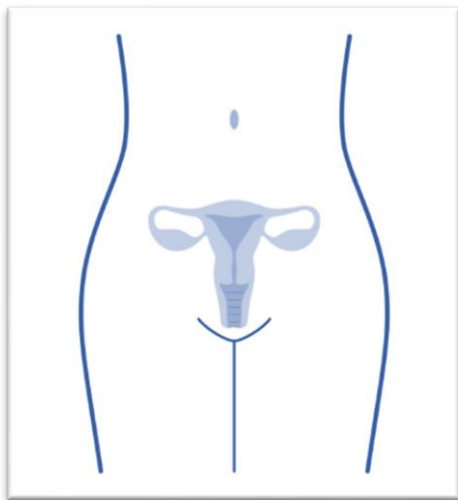
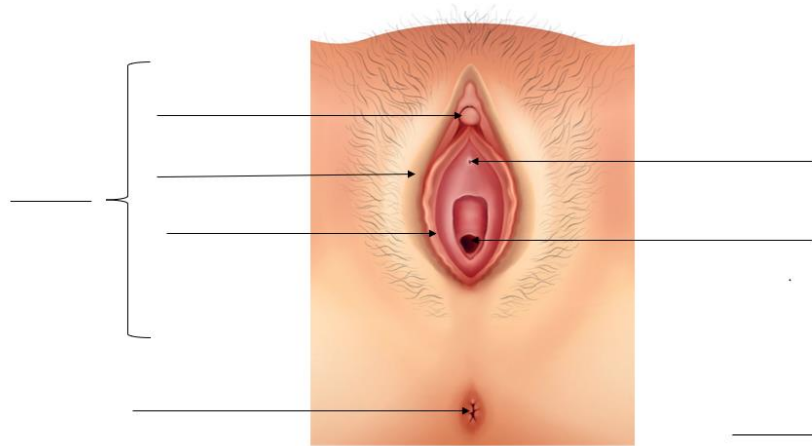
1. Use the “Eggs and Ovaries” Quiz located in the [slideshow](#).
2. As a class, answer the quiz questions together and discuss the answers.

G. Question Box

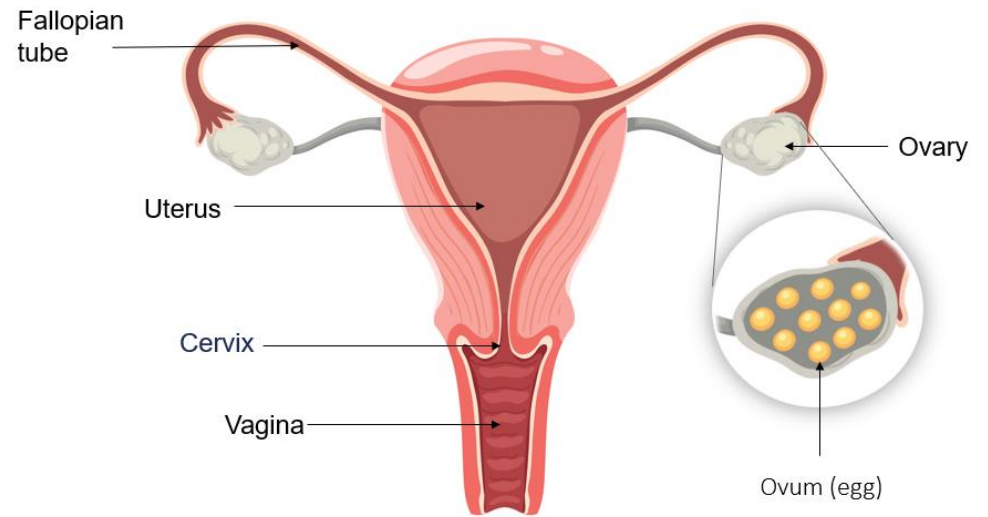
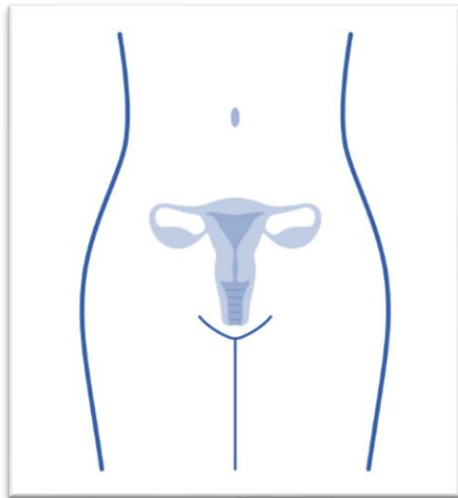
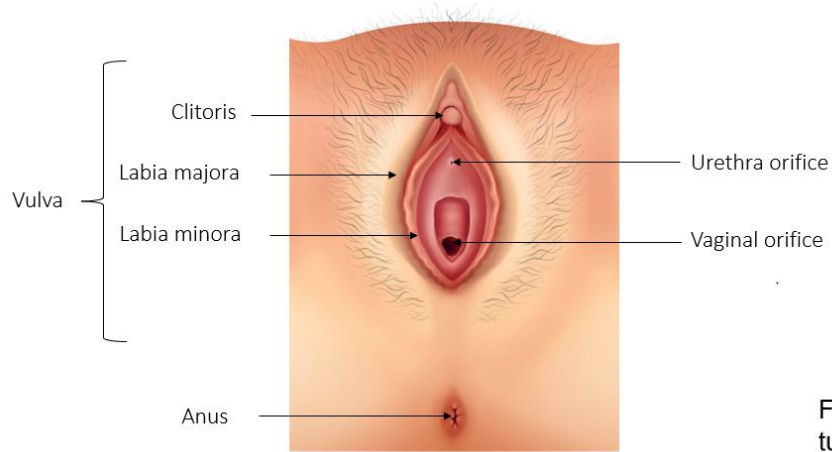
Have students submit questions to the [question box](#) and address them next class.

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

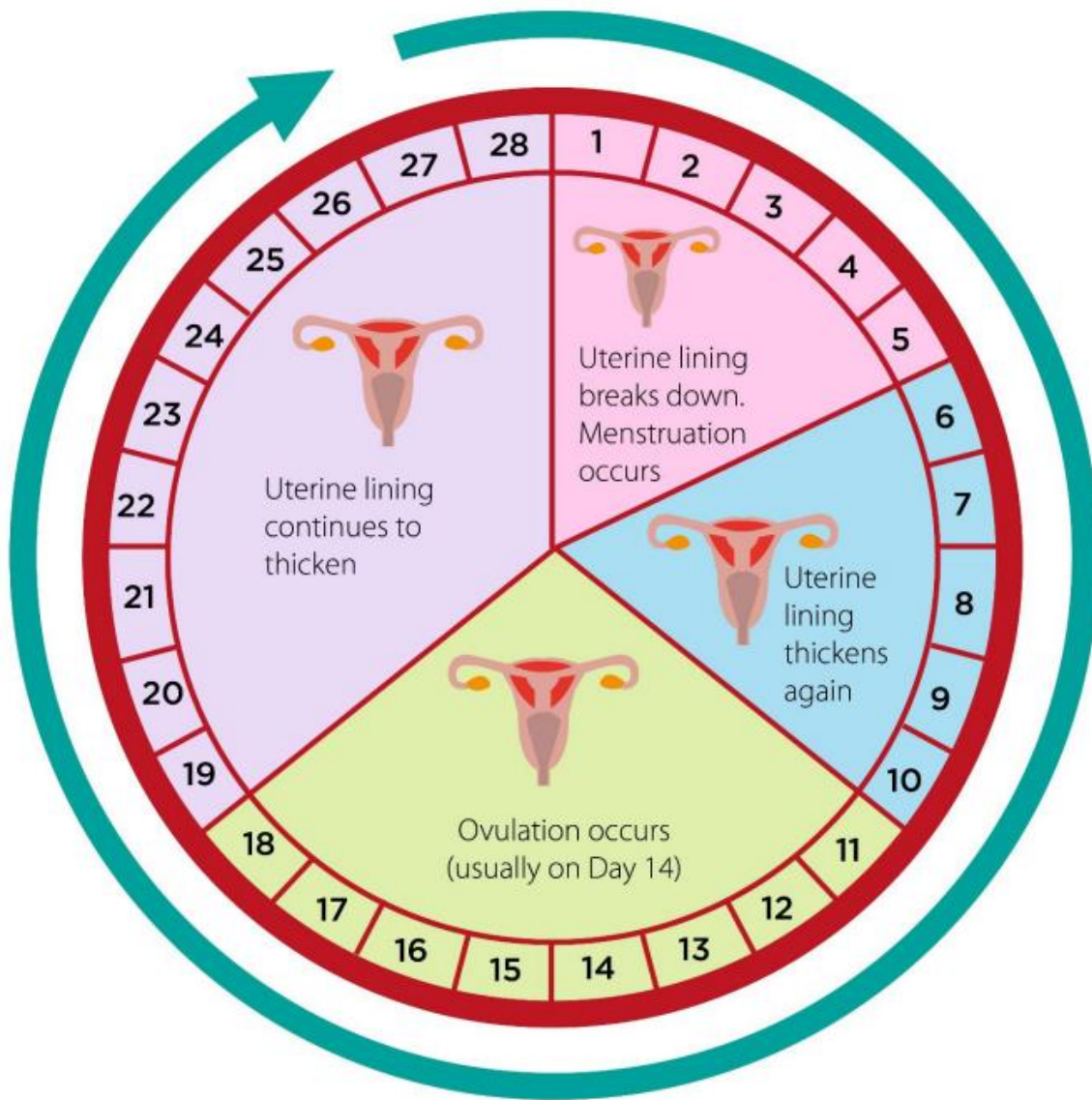
Fill in the Blanks: Reproductive System



Answer Key: Reproductive System



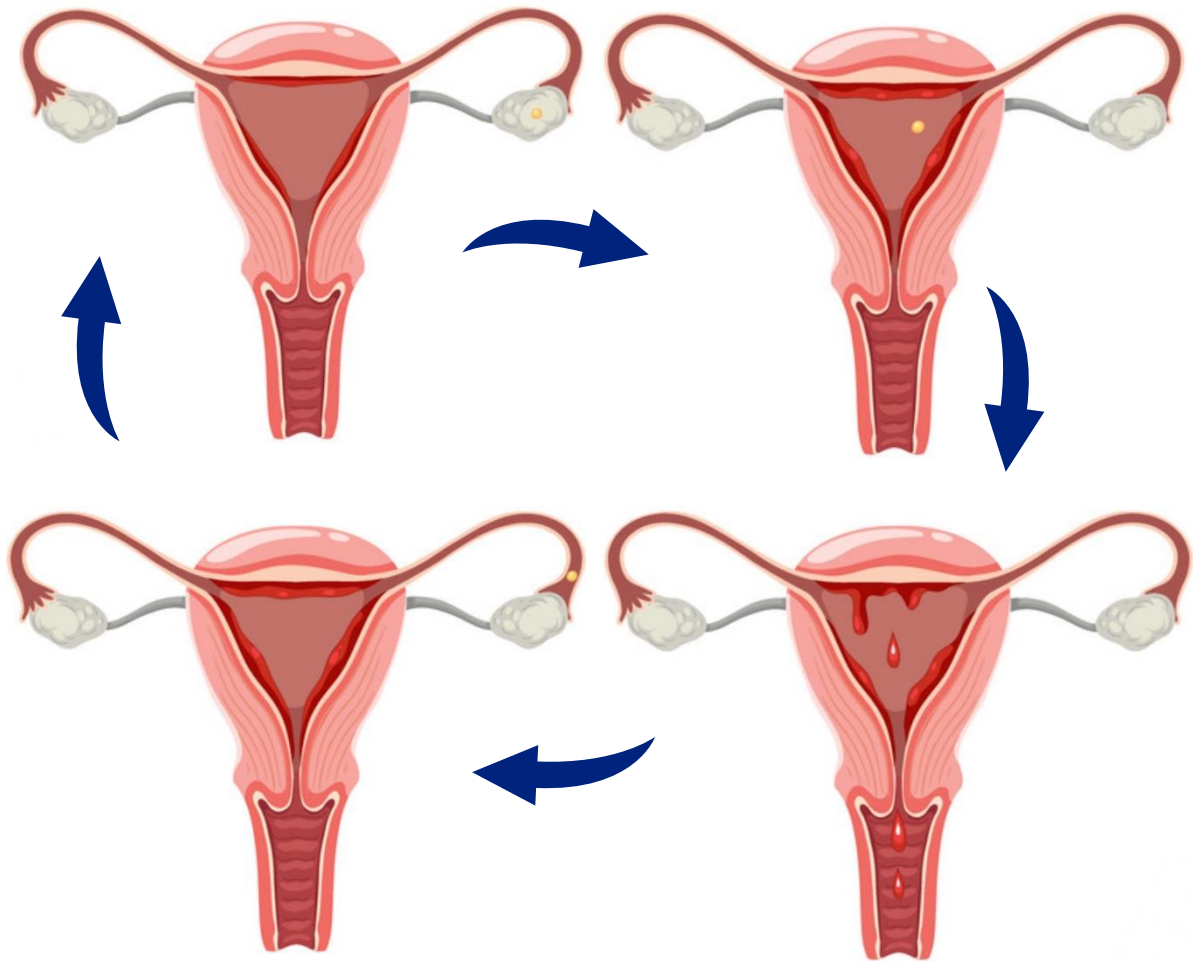
Menstrual Cycle



**Image used with permission from Alberta Health Services*

This diagram shows an average menstrual cycle that is 28 days. Cycles can vary in length from 24 to 38 days.

Menstrual Cycle



*The egg develops and matures inside the ovary, preparing for release. The egg is released (**ovulation**) and moves through the fallopian tube towards the uterus. During this time, the uterine lining thickens to prepare for a potential pregnancy. If **fertilization** does not occur, the egg reaches the uterus and eventually disintegrates. The thickened uterine lining is then shed and leaves the body as blood during **menstruation**.*

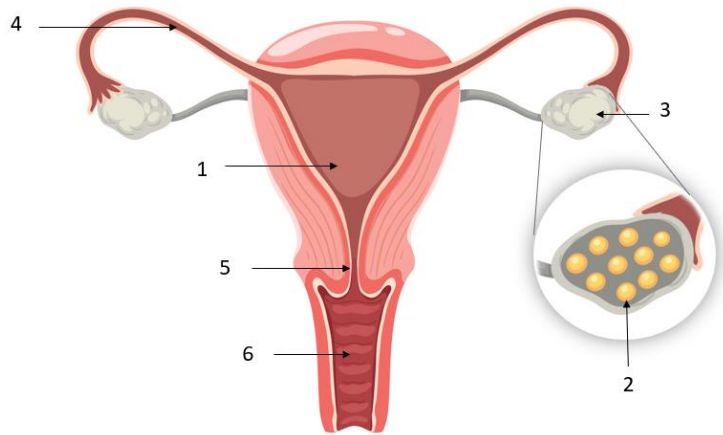
Name: _____

Menstrual Cycle

Read the following story and fill in the blanks using the words provided.

Word Bank

Cervix
Fallopian tubes
Menstrual cycle
Ovary
Egg
Uterus
Vagina

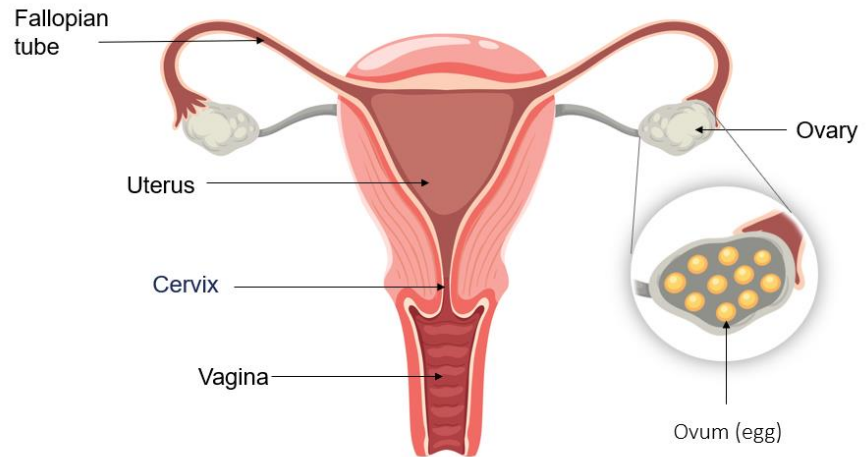


Once upon a time, there was a reproductive system. Each month, due to changes in hormones, the _____ (1) invited a thick, soft lining made up of tissue and blood to grow along its walls. The lining contained nutrients that would be needed to nourish a growing baby if a pregnancy was to occur. Once the lining had grown, it waited for the ovaries to do their job. The ovaries contained special reproductive cells; each cell called an _____ (2). Each month, one of these cells would reach maturity and be released from the _____ (3). This month, it was the right ovary that got to release an egg. The left one would have to wait until the next month. The _____ (4), which wait for the ovaries to release an egg, waved their numerous arms. The waving arms grabbed the egg that was just released and gently guided it into one of the tubes. After about a day of travel, the egg began to dissolve. When it had disappeared, the brain sent a message to the lining of the uterus telling it that a fertilized egg wasn't going to arrive, so it could leave the uterus. Slowly, the lining passed through the _____ (5), into the _____ (6), and out of the body. As soon as the lining was gone, the uterus invited a new lining to start to grow. This time around, it would be the ovary and fallopian tube on the left that would do all the work. Then, the process would start all over again. This process is called the _____ (7).

Answer Key: Menstrual Cycle

Word Bank

Cervix
Fallopian tubes
Menstrual cycle
Ovary
Egg
Uterus
Vagina



Once upon a time, there was a reproductive system. Each month, due to changes in hormones, the **uterus (1)** invited a thick, soft lining made up of tissue and blood to grow along its walls. The lining contained nutrients that would be needed to nourish a growing baby if a pregnancy was to occur. Once the lining had grown, it waited for the ovaries to do their job. The ovaries contained special reproductive cells; each cell called an **egg (2)**. Each month, one of these cells would reach maturity and be released from the **ovary (3)**. This month, it was the right ovary that got to release an egg. The left one would have to wait until the next month. The **fallopian tubes (4)**, which wait for the ovaries to release an egg, waved their numerous arms. The waving arms grabbed the egg that was just released and gently guided it into one of the tubes. After about a day of travel, the egg began to dissolve. When it had disappeared, the brain sent a message to the lining of the uterus telling it that a fertilized egg wasn't going to arrive, so it could leave the uterus. Slowly, the lining passed through the **cervix (5)**, into the **vagina (6)**, and out of the body. As soon as the lining was gone, the uterus invited a new lining to start to grow. This time around, it would be the ovary and fallopian tube on the left that would do all the work. Then, the process would start all over again. This process is called the **menstrual cycle (7)**.

Answer Key: Eggs and Ovaries Quiz

Correct answers are in bold text.

1. The internal parts of the egg-producing reproductive system include:
 - a) The vulva, clitoris and anus
 - b) The uterus, ovaries and fallopian tubes**
 - c) The bladder, urethra and uterus
 - d) The vulva, vagina and ovaries

Internal parts of the egg-producing system include the uterus, the ovaries, and the fallopian tubes. The vulva and clitoris are external parts of the reproductive system, and the anus belongs to the digestive system. The bladder and urethra are part of the urinary system.

2. The external parts of the egg-producing reproductive system include:
 - a) Urethra, vagina and clitoris
 - b) Fallopian tubes, labia major and labia minor
 - c) Labia minor, labia major and clitoris**
 - d) Uterus, urethra and vagina

The labia (major and minor) and clitoris are external parts of the egg-producing reproduction system. The vagina, fallopian tubes and uterus are all internal parts, while the urethra belongs to the urinary system.

3. The place where a baby grows is called the:
 - a) Stomach
 - b) Vagina
 - c) Ovaries
 - d) Uterus**

The uterus is the part of the body where a baby grows and develops during pregnancy. Other parts, like the stomach, ovaries, and vagina, have different functions and are not involved in this process.

4. The eggs are produced and stored in the:
 - a) Uterus
 - b) Fallopian tubes
 - c) Ovaries**
 - d) Cervix

At birth, the ovaries contain all the eggs a person will ever have. Each ovary contains about 250,000 eggs, but only a small number of these will be released during a person's lifetime. The uterus, fallopian tubes, and cervix have different functions in the reproductive system.

5. On average, an ovary will release:
- a) **One egg each month**
 - b) One egg each year
 - c) One egg each time the person eats
 - d) A dozen eggs each month

The ovary typically releases one egg during a menstrual cycle, which is an average of 28 days but can range between 24 and 38 days. Cycles are often irregular for the first few years. Understanding this process can help predict when a period might start, which is why some people track their cycles.

6. Menstruation:
- a) Is the release of an egg from the testicles
 - b) **Is the shedding of the uterine lining each month**
 - c) Only happens if there is a fertilized egg in the uterus
 - d) **Can be a normal and healthy part of growing up**

Menstruation is the shedding of the uterine lining; which happens if a fertilized egg is not present. It is a normal and healthy part of growing up for people with a uterus.

7. People who get cramps during menstruation (their period) can:
- a) Avoid physical activities altogether
 - b) **Try a hot-water bottle or heating pad to relieve cramps**
 - c) **Continue to do their daily activities**
 - d) **Try exercising to relieve cramps**

Cramps are a common experience during menstruation. Options like using a hot water bottle or heating pad, staying active, or moderate exercise can help relieve discomfort. Everyone is different, and finding what works best may take time. If these measures don't provide relief, it's a good idea to talk to a parent/caregiver or see a health care provider.

8. The average length of a menstrual cycle is:
- a) 1 year
 - b) 1 week
 - c) **28 days**
 - d) 7 days

The average length of a menstrual cycle is around 28 days, but this can vary between 24 and 38 days. For those just starting their periods, cycles can often be irregular, especially during the first few years of menstruation.

9. The menstrual cycle includes:
- a) **Ovulation, thickening and shedding of the uterine lining**
 - b) Ejaculation, fertilization, implantation
 - c) Ovulation, fertilization, implantation
 - d) Fertilization, thickening and shedding the uterine lining

The menstrual cycle includes ovulation, the thickening of the uterine lining, and its shedding (menstruation) if pregnancy does not happen. Fertilization and implantation happen when a sperm meets an egg and the fertilized egg attaches to the uterus, but these are part of pregnancy, not the menstrual cycle. Ejaculation happens when sperm is released, but it is not part of the menstrual cycle itself.

Anatomy Vocabulary Matching Game Definitions

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

A sac inside the
body that holds
urine.

The bottom of the
uterus that opens
into the vagina.

Sensitive part of the
body, located at the
top of the vulva.

Tubes connecting
the ovaries to the
uterus. The egg
travels through here
after ovulation.

A membrane that surrounds or partially covers the opening of the vagina.

Monthly shedding of
the lining of the
uterus.

Glands that produce
and release an egg
each month.

Process of releasing an egg from the ovary.

The reproductive
cell made in the
ovaries.

A passage leading
from the uterus to
the outside of the
body.

The external
genitals, includes
the labia and the
clitoris.

Urine passes
through this tube to
the outside of the
body.

Where a developing
baby grows.

Anatomy Vocabulary Matching Game Words

Anus

Bladder

Cervix

Clitoris

Egg

Fallopian Tubes

Hymen

Menstruation

Ovaries

Ovulation

Vagina

Vulva

Urethra

Uterus