

SEXUAL DEVELOPMENT

Lesson 1

7
GRADE

LEARNER OUTCOME¹ W-7.3:

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



MATERIALS:

1. Students will need colored pencils or markers
2. HANDOUT: The Male Reproductive System: How Does it Work
3. HANDOUT: Male Reproductive System
4. ANSWER KEY SLIDE: Male Reproductive System
5. SLIDE: Male Reproductive System
6. HANDOUT: The Female Reproductive System: How Does it Work
7. HANDOUT: Female Reproductive System
8. ANSWER KEY SLIDE: Female Reproductive System
9. CARDS: Reproduction
10. HANDOUT: "When I Was Your Age..."
11. SLIDE: Menstrual Cycle
12. SLIDE: Sperm Production
13. SLIDE: Conception
14. SLIDE: Implantation



INTRODUCTION:

Students need to be able to identify the basic components of the human reproductive system and to describe how they function in order to discuss human sexuality. This lesson provides them with an overview of human sexual anatomy and physiology, menstruation, sperm production, conception and fertilization.



APPROACHES/STRATEGIES:

NOTES:

A. Ground Rules

(5 15 min)

Ensure ground rules are established before beginning this lesson. For classes that have already established ground rules,

quickly reviewing them can promote a successful lesson.

B. Male and Female Reproductive System Diagrams

(20 min)

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

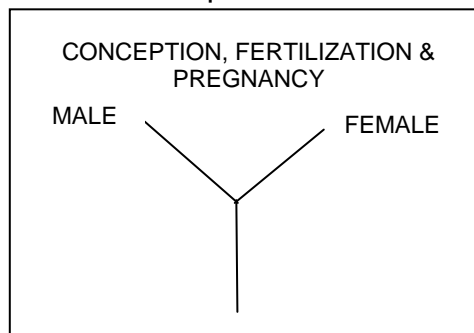
1. Distribute the handout Male Reproductive System: How Does it Work, and the handout Male Reproductive System
2. Ask students to label and colour the diagram according to the instructions. You may choose to do this activity together with the students using a slide of the handout and coloured markers while student volunteers read from the handout Male Reproductive System: How Does it Work?
3. Ask students to correct their diagram's using the slide of the Male Reproductive System answer key.
4. Repeat the same process using the Female Reproductive System handout Female Reproductive System: How Does it Work?, Female Reproductive System Slide, and Female Reproductive System answer key slide.

C. Reproduction Chain

(20 - 40 min)

Students demonstrate a basic understanding of the male and female reproductive physiology. This is a review of grade 5 Human Sexuality.

1. Draw a "Y" shaped continuum on floor using tape or chalk (ensure the line can be removed once the activity is complete). Label one part of the top of the "Y" "MALE", the other "FEMALE", and the bottom "CONCEPTION, FERTILIZATION & PREGNANCY" as in the example below.



- Using the Reproduction cards, give one card per student until all cards are distributed.
- Have students arrange themselves in the proper order along the “Y” continuum. Ask the students to sit down along the lines once they feel that they are in the correct order.
- Go through the cards together, and make corrections according to this answer key and overheads. Menstrual Cycle, Sperm Production, Conception & Implantation.

**“FEMALE” axis
(Menstruation)**

- Lining of uterus is shed (day 1 of menstrual flow)
- Lining of uterus thickens with blood
- Ovulation occurs (egg released from ovary)
- Egg travels through fallopian tube
- Egg enters the uterus
- Egg dissolves if unfertilized
- Lining of uterus is shed (day 1 of menstrual flow)

**“MALE” axis (Sperm
Production)**

- Sperm made in testicles
- Sperm travel up vas deferens
- Sperm mix with seminal fluid to make semen
- Sperm leave the penis (ejaculation)

**“FERTILIZATION &
CONCEPTION” Axis**

- Sperm enters vagina.
- Sperm travels up the vaginal canal.
- Sperm meets egg in the fallopian tube (fertilization).
- Fertilized egg travels down the fallopian tube into the uterus.
- Fertilized egg attaches itself to the lining of the uterus.
- Fertilized egg uses lining of the uterus for nourishment.
- Fertilized egg takes nine months to grow completely into a full-term baby.



Teachers may consider color coding the lines of the “Y” and the cards into three sets: Male, Female, and Conception & Fertilization. This will help students place themselves. For example, the “BOY” axis could be purple, and the cards outlining sperm production could be printed on purple paper.

5. Debrief this activity using the following questions:

What else do you know about menstruation?

- It can begin as early as 8 and as late as 16.
- Usually one egg is released each menstrual cycle. If more than one egg is released, and if they are fertilized, it means a woman may have a multiple pregnancy (twins, etc.). If twins are a result of two eggs being fertilized, they are called fraternal twins. Identical twins happen when a fertilized egg splits into two before cells begin dividing.
- Eggs can live 12-24 hours from the time of ovulation.
- Girls need to be aware of good hygiene (using pads, etc.) to ensure healthy practices during menstruation.
- Cramps can be a part of menstruation, and can be alleviated using wellness methods like exercise or a hot water bottle. For severe cramps, your doctor may give medication.

What else do you know about sperm production?

- Sperm cells mature at about 15 – 16 years of age.
- Sperm production and ejaculation first happens around ages 12-14.
- “Wet dreams” are ejaculations that occur while sleeping. It is normal to experience these, or not to experience these.
- As many as two million sperm can be released during each ejaculation.
- Sperm can live inside a female’s body 3 to 7 days from the time of ejaculation.

Will a pregnancy occur every time sexual intercourse occurs?

- No. Pregnancy only happens if a sperm fertilizes an egg and if the fertilized egg implants in the uterine wall.
- This can happen if intercourse takes place when a female is ovulating.
- Women are most likely to become pregnant if intercourse happens around the middle of the menstrual cycle. The length of the menstrual cycle is different for each woman, so it is difficult to predict.

What do menstruation and sperm maturation make possible?

- Menstruation and sperm maturation are indications



Students may have different views concerning

nocturnal ejaculation. It is important to be sensitive to these views, but to reassure students that “wet dreams” are a normal occurrence during puberty.

Keep in mind that students with differing abilities may have very different interpretations of the menstrual cycle, menstrual bleeding, ejaculation, etc.. This may be very scary or very funny to them and it is important for the teacher to anticipate different reactions. Keep explanations concrete and use simple visuals where possible.

- that a person can produce a baby.
- It is important to remember that ovulation occurs before bleeding; therefore a girl can get pregnant before her first period.

Although the body is capable of producing a baby once menstruation and sperm maturation occur, why would most people wait until they are much older to have a baby?

- Discuss issues surrounding the need to be emotionally, educationally or financially ready to parent.
- There are health problems for the baby and the mother that are associated with an early pregnancy such as low birth weigh babies.



Students considered high risk or with differing abilities may benefit from more instruction about fetal development and parenting. For example:

- Have each student evaluate whether or not he/she is ready (has the skills and desire) for parenting. Recognize and acknowledge those goals that they would like to achieve before parenting.
- List with students persons whom they know and respect who do not have children.
- Create a realistic budget for a couple with a child. Have students compare this budget to their current income.
- Discuss other factors which might increase expenses even further, such as an extended illness.
- Go to a local department store or use advertisements and price a pre-made list of essential items one would need for a baby.

D. “When I Was Your Age...”

Students begin to build a support network to help them cope with puberty.

1. Distribute the handout, “When I Was Your Age...” for students to complete as a homework assignment.
2. Explain that students can complete this interview with a parent or guardian.
3. Allow students to work in partners or small groups to brainstorm a list of questions they would like to ask a trusted adult regarding the adolescent experience, and choose the three best questions to use as interview questions. If time permits, groups could share their chosen questions with the rest of the class.

(5 min today, 30 min homework, 5 min next class)



Although adolescents challenge their parents’ ideas, they want to hear their parents’ opinions and values. A 2005 survey conducted with Canadian teenagers found the teens saw their parents as their role models when it came to sexuality and sexual health, not celebrities from movies, television, music or sport.² Many personal values are learned and reinforced at home. Invite students to

4. Dedicate time to debrief this activity during the next lesson.

discuss this topic with their family and encourage open dialogue.



QUESTION BOX:

(10 min)

Introduce the question box. You could have students fill out questions every lesson, or have students begin to think about questions that they might ask next lesson.



TAKE IT HOME:

Students complete the handout "When I Was Your Age..."



Keep in mind that all students do not live in a "traditional" family nor do they have equal opportunities for open discussion within their "family." Although it is best for students to complete this assignment with a supportive parent or guardian, it may not be possible. Be sensitive to the needs of your students.



SELF REFLECTION:

During the lesson, were:

- Ground rules being followed?
- Good practices established regarding group work and discussion?

What will you change for future classes with this group?

What will you change for future use of this lesson?



STUDENT ASSESSMENT:

During the lesson, did students:

- Knowledge:**
- Identify the basic parts of the human reproductive system?
 - Describe the process of sperm production?
 - Describe the process of menstruation?
 - Describe how pregnancy can occur?
- Skills:**
- Participate in class discussion and exemplify listening and appropriate speaking skills?
- Attitudes:**
- Begin to articulate that menstruation and sperm production are signs that a person is capable of reproduction?
 - Accept that menstruation and sperm production are positive, healthy aspects of puberty?

¹Alberta Education. (2002). *Health and life skills guide to implementation: Kindergarten to grade 9*. Retrieved from <http://education.alberta.ca/media/352993/pos.pdf>

²Frappier, J.Y., Kaufmen, M., Baltzer, F., Elliott, A., Lane, M., Pinzon, J., et al. (2008). Sex and sexual health: A survey of Canadian youth and mothers. *Paediatr Child Health*. 2008 13(1): 25–30. Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528827/pdf/pch13025.pdf>