

Human Growth and Development

Girls Only – 5th Grade

Lesson Two – Reproductive System and Reproduction

Materials needed: computer, projector, index cards, pencils, slide presentation: girls 5th Grade

Essential Unit Questions: What is the reproductive system? What is reproduction?

Standard of Learning: 5.2 and 4.1 The student will identify the human reproductive organs in relation to the total anatomy. 5.3 The student will explain how human beings reproduce. 3.7 The student will become aware that both a male and a female are necessary to have a baby. 3.8 The student will comprehend that the baby grows inside the mother's body for nine months and then is born.

The following lesson is intended for GIRLS only. If you are teaching a section of boys, you will find a separate gender-specific lesson within this unit.

Note to the Teacher: “Say to” statements included in this unit (in bold) are intended to guide the teacher by providing suggested wording for the key points in the lesson. It is not intended that the teacher will read these statements. They are provided to give guidance and highlight key points.

Lesson Two: Reproduction

SAY TO STUDENTS

Today we are going to review our discussion of puberty and learn about the female reproductive system. Before we begin, though, let's review the classroom guidelines we set up during the last lesson to make sure everyone feels comfortable asking questions and getting the information they need.

1. Review homework activity by asking how many students had an opportunity to talk to a parent or guardian for the homework activity. If several students have done the assignment, ask if anyone would like to share what it was like talking to an adult family member about these topics. Without permitting students to share personal information from their discussions, briefly discuss their experience.

3=2. Answer index questions from Lesson One.

The Female Reproductive System

SAY TO STUDENTS

We have already talked about the reproductive systems in our discussions of puberty. We know that during puberty the male and female reproductive systems begin to develop. Today we will learn about the parts of the female reproductive system and how it works. First let's define reproduction.

Add Reproduction to the vocabulary list and review the definition of reproduction.

- Reproduction is the process by which new living things are made.

SAY TO STUDENTS

The human reproductive systems are the body systems in the male and female whose purpose is to make new human beings. In the female, the reproductive system not only produces eggs but also provides a special place for the developing baby to be nourished and grow before it is ready to be born. Each system is designed to do its special job in human reproduction.

SAY TO STUDENTS

Now let's take a look at the female reproductive organs and their functions.

Display slide 15: Female Reproductive Organs – Front View and SAY TO STUDENTS

Most of the female reproductive organs are on the inside of the body tucked down low inside the tummy, or abdomen.

Identify and describe the female reproductive organs and their functions:

- Uterus: the pear-shaped organ where the baby develops during pregnancy. The uterus is about the size of the woman's closed fist. Remember, the lining of the uterus produces a fluid that lines the uterus and is shed each month during menstruation.
- Ovaries: two reproductive glands which produce estrogen and release egg cells starting at puberty. An ovary is about the size of a grape.
- Egg cell (ovum): the female reproductive cell. A human egg is a large cell that is about the size of a sharp pencil dot on paper.
- Fallopian tubes: the tubes through which the mature egg travels toward the uterus. Each fallopian tube is about as thick as a piece of thin spaghetti.
- Vagina: the passage that connects the uterus to the outside of the body (also known as the birth canal). When a girl or woman has her period, the menstrual flow comes out through the vagina.

SAY TO STUDENTS

Remember, the genitals are the parts of the reproductive system that are on the outside of the body.

Display slide G16: Female Reproductive System – Side View, show the relative positions of the urethra, vagina, and anus by SAYING TO STUDENTS

In the female there are three openings to the outside—the urethra, the vagina, and the anus. The urethra is a tiny opening through which urine (pee) passes when a girl goes to the bathroom. The anus, in the back, is the opening through which solid waste passes. Only the vaginal opening is part of the reproductive system.

Display slide 20: Reproduction: A Baby Develops in the Uterus and SAY TO STUDENTS

The developing baby, called an embryo and then a fetus, is attached to the uterus by a cord called the umbilical cord. This cord has blood vessels in it that carry oxygen and nutrients to the baby from the mother's blood. It is attached on one end to the developing baby and on the other end to the placenta, which transfers the oxygen and nutrients from the mother's blood to the baby's blood. This is how the fetus gets the nutrients, water, and oxygen it needs to grow and stay healthy.

The umbilical cord also carries waste products from the baby's blood to the placenta where they pass into the mother's blood. That way the baby doesn't need to go to the bathroom inside the uterus. The mother's blood carries away the baby's carbon dioxide and other waste and gets rid of it through her own breathing and urinating.

Any food the mother eats, liquid the mother drinks, or air she breathes can affect the fetus. The placenta is designed to filter out some of the harmful things that might be in the mother's blood that could hurt the baby, like germs, but it can't keep some harmful things from passing from the mother's blood into the baby's blood. That is why it is very important for the pregnant mother not to take any medicines unless her doctor prescribes them, and she should never drink alcohol, smoke cigarettes, or take drugs. These can travel through the placenta, into the umbilical cord, and into the baby and seriously harm it.

Display slide 21: Reproduction: Childbirth and SAY TO STUDENTS

In about nine months or 36 – 40 weeks the baby is ready to be born. The mother knows because her uterus contracts or tightens and relaxes forcefully to help move the baby out of the uterus and out through the vagina. The baby moves out of the uterus, through the cervix and vagina, and into the world. This is known as a vaginal birth.

There are times when it may be necessary for the safety of the baby and/or the mother for the doctor to perform a surgical process called a Cesarean section or C-section. An incision is made through the tummy or abdomen into the uterus to remove the baby.

When the baby is born, the umbilical cord is cut. What's left of the cord where it is attached to the baby dries up like a scab and falls off. Where it was attached is the navel or belly button.

This concludes our lesson on the female reproductive system and reproduction.

SAY TO STUDENTS

Please write any questions you have about anything we have talked about on your card. If you don't have any questions, write down something you learned in class today. Remember, you do not need to put your name on the card.

Collect cards and if time allows answer any questions.