Reproductive System

Grades 7 and 8, Lessons #6 and 7

Time Needed

Two periods

Student Learning Objectives

To be able to...

1. Pronounce, spell, and describe the function (with 75% accuracy) of the 45 terms in the glossary on Reproductive System Reference Sheet 3.
2. Explain that variation in size and shape of sexual parts is normal.

Agenda

1. Explain the relevance of the lesson to the unit and to students' lives.
2. Use Reproductive System Reference Sheets 1-3 or draw on the blackboard, to introduce the anatomy.
3. Answer students' verbal and anonymous questions.
4. Play the Reproductive System game.
5. Assign homework.

Materials Needed

Classroom Materials, equipment:

- *Reproductive System Reference Sheets 1 and 2* on transparencies*
- 32 *Reproductive System Game Cards* (one class set ... that is: one single-sided copy of each of eight pages, cut into four parts, so there's one question on each "card.")
- Overhead projector
- Shoe box or coffee can
- 500 paperclips

Student Materials (for each student):

- *Reproductive System Reference Sheets 1-3*
- *Family Homework Exercise: The Reproductive System*
- *Family Homework Letter* (Appendix B)
- *Reproductive System Worksheet* (2 copies per student)

* Unless you prefer to draw freehand, introducing one part at a time

Activities, Day One

1. **Explain the relevance of the lesson to students' lives and to what you have studied so far:**

   Home & Family Life - Just as we have studied how to take care of a home and a family in this course, we also want to work on "how to take care of yourself." The first step is to understand how your own body and other peoples' bodies work.

   Health - Before you can learn about how to keep a body system healthy, you have to understand how it is supposed to work, when it *is* healthy. We have studied other systems; today we will look at the reproductive system.

   Science - We have studied how individual cells reproduce, and we have looked at simple life forms. It is time to look at reproduction in mammals, and humans in particular.

2. **Hand out to each student a copy of Reproductive System Reference Sheets 1-3.**

   Then introduce the reproductive system in one of two ways. You can use transparencies of Reproductive System Reference Sheets 1 and 2. Or, preferably, draw the systems on the blackboard, so that you can introduce one part at a time. Pronounce the name, and explain the function of each part. Describe the path of a sperm cell, using the terms "erection" and "ejaculation." Describe the menstrual cycle, beginning with "ovulation." If you do not consider yourself knowledgeable enough to do such a lecture/demonstration, it is fine to use a video instead (many puberty videos contain a section on reproductive anatomy).

3. **Answer students' questions, both verbal and anonymous.**

   Depending on how long this takes, you may or may not finish the lesson today.

Activities, Day Two

4. **Play the Reproductive System Game.**

   a. Begin by refreshing everyone's memory about ground rules and emphasizing mutual consideration.
   b. Drop the *Reproductive System Game Cards* into a shoe box or coffee can.
   c. Have students pair up and provide each pair with plenty of scrap paper.
   d. One student draws a game card and hands it to you.
   e. You read the question aloud and give each team a half a minute to consult with one another, and/or look at their reference sheets, and jot their answer on a slip of scrap paper. Thus, all teams play at once holding their answers up, as soon as they can.
   f. Either you or the student who drew the question reads the answer and explanation aloud.
   g. Every team with a correct answer gets a paper clip.

h. A second student draws a game card ... repeat steps d-g, until all 32 game cards have been used.
i. Any team with at least 16 paper clips gets a prize (perhaps an extra "A," extra participation points, penny candy).

We recommend that students read the answer and explanation aloud, in groups who can do it with a minimum of giggling and a reasonably mature, matter-of-fact attitude. It gives them the opportunity to practice pronunciations and especially to rehearse a new behavior: communicating about sexuality in a responsible, dignified way. However, a participatory exercise can be counter-productive (can decrease comfort and respect) if the class is too rambunctious and/or has had less experience with active learning. Use your own judgment.

This game is a learning tool, not just a review. So some items in the game are new information. The teams should be encouraged to guess. Playing matters more than winning.

Homework

Students' options ...

- ***Family Homework Exercise: The Reproductive System***
  Students will need to take home two copies of ***The Reproductive System Worksheet*** to complete this Family Homework. And, as always, students will also need to take home the ***Family Homework Letter*** (Appendix B).
- Complete and turn in ***The Reproductive System Worksheet***, independently.

NOTE: If you assign a ***Family Homework Exercise***, it is essential to offer at least one alternative assignment. There will be some students who do not have a family member with whom they feel they can discuss these issues. Also, allow at least a week for ***Family Homework Exercises***, as many families are very busy.

Q: True or False? The menstrual period lasts about a day each month.

A: False

Explanation: It usually takes between two and 10 days for the uterus to completely empty. There are about four to six tablespoons of blood and tissue in all.

Q: True or False? Each time a man or boy ejaculates, about 360 million sperm cells come out.

A: True

Explanation: He may release a half to a whole teaspoonful of semen. It usually contains at least 200 million sperm cells. 360 million is average.

REPRODUCTIVE SYSTEM GAME CARDS

Q: How long after its release can an egg be fertilized? About a day, about a week, or about month?

A: About a day.

Explanation: If it doesn't meet with a sperm within a day, or two at most, the ovum just dissolves.

Q: True or False? Another word for tube is "duct."

A: True

Explanation: That is why many books call the fallopian tubes "oviducts" and the vas deferens tubes "sperm ducts." Duct is spelled D-U-C-T, not D-U-C-K like the bird.

Q: The end of the uterus that opens into the vagina is the _____

A: Cervix

Explanation: The cervix is not a separate part; it's just the neck of the uterus. The doctor wipes some cells from the cervix when a woman has a Pap Test for cancer. These cells are examined under a microscope.

Q: The sac that holds the testes is called the _____

A: Scrotum

Explanation: The scrotum holds them and. controls their temperature. Sperm can only grow at temperatures a little cooler than normal body temperature of 98.6 degrees ... so the testes have to be outside the body, in the scrotum, in order to be cool enough to make sperm.

REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? Once a girl starts having menstrual periods, she will get one every 28 days.

A: False

Explanation: 28 days is only an average. Adult women may have periods every 20 to 36 days. In some adults and most young girls, the cycle is a different length each time ... 3 weeks one time, 5 weeks another, maybe even skipping some months altogether. Then, around age 45 to 55, a woman stops having menstrual periods.

Q: True or False? Having intercourse a lot will make the penis larger?

A: False

Explanation: The penis is not made of muscle, so exercise has no effect on its size. Like the ears and the feet, the penis is a different size in each person. But no matter how big it is, it works just as well. And most penises are about the same size when they are erect.

Q: True or False? When a boy is circumcised, the doctor removes the glans of the penis.

A: False

Explanation: Neither the glans, nor the shaft is removed. It's the foreskin that is removed in a circumcision operation. The foreskin is a sleeve of skin that partly covers the glans.

Q: When a woman or girl releases an egg, it's called _____

A: Ovulating or Ovulation

Explanation: The Latin name for egg is "ovum." So when an ovum pops out of an ovary, it's called ovulation. That happens about once a month, a couple of weeks before a girl's period.

REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? A woman usually ovulates during her menstrual period.

A: False

Explanation: She usually ovulates two weeks before her next period. She ovulates and then, if she does not get pregnant, the extra lining in the uterus is not needed. So after two weeks, it comes out. That's called menstruating or "having a period."

Q: Name one of the parts of the body that makes some of the liquid in semen.

A: Seminal vesicles, prostate gland, Cowper's glands.

Explanation: Any of these answers is OK. Actually, the seminal vesicles and prostate contribute directly to the semen. The Cowper's glands make a discharge that lines the urethra and makes it less acid-like. All three parts are important in keeping sperm healthy.

Q: True or False? After puberty, the vagina is wet most of the time.

A: True

Explanation: Just like the mouth and eyes, the vagina is normally wet. That's how it cleans itself. This normal discharge is white or clear; it does not itch and it varies in amount. It's a sign of good health.

Q: The liquid that carries sperm is called _____

A: Semen

Explanation: Semen is the thick, white discharge that nourishes sperm and helps it travel further and live longer. A teaspoonful or less of semen comes out each time a man or boy ejaculates.

REPRODUCTIVE SYSTEM GAME CARDS

Q: When sperm comes out, it's called _____.

A: Ejaculation or Nocturnal Emission

Explanation: Either answer is correct. Ejaculation means the release of sperm. If a man or boy ejaculates in his sleep, it's called a nocturnal emission or "wet dream.".

Q: When the penis or clitoris fills with blood and becomes larger, it's called an _____.

A: Erection

Explanation: Erections happen more frequently after puberty. People get them often, even without feeling sexual feelings. It is nothing to worry about, it is the body's way of practicing. A boy knows when he has an erection. A girl may not notice when she has one, because the clitoris is very small.

Q: The word that describes both testicles and ovaries is _____.

A: Gonads

Explanation: A male's testes and a female's ovaries are a lot alike. Both kinds of gonads make sex cells (sperm and eggs) and both kinds of gonads make sex hormones.

Q: True or False: All human beings have genitals, whether they are male or female.

A: True

Explanation: "Genitals" are simply the outside parts of anyone's reproductive system. Males' genitals are the penis and scrotum. Females' genitals (sometimes called the vulva) are the labia, the hymen, and the clitoris.

REPRODUCTIVE SYSTEM GAME CARDS

Q: The finger-like parts on the end of each fallopian tube are called _____.

A: Fimbria

Explanation: Remember, the tubes are not actually attached to the ovaries. When a girl or woman ovulates, the fimbria wave around, find the egg cell and draw it into the tube.

Q: True or False? Doctors usually recommend circumcision.

A: False

Explanation: Today, it is generally left up to the parents whether to have a baby boy circumcised. Doctors disagree about whether it is a good idea. Parents may choose to do it because of religious beliefs or so the son will look like the father or to try to reduce future infections. Many parents today choose not to have their sons circumcised, unless there is a problem.

Q: The tube that carries urine and (in males) semen out of the body is the _____.

A: Urethra

Explanation: The male's urethra is the tube that runs through the penis. The female's is the opening in front of the anus and vagina. It is connected to the bladder. In a male it is also connected to the vas deferens.

Q: True or False? The human sperm cell is about as big as an apple seed?

A: False

Explanation: It is actually microscopic ... so small you cannot see it without looking under a microscope. In fact, every sperm cell that made every person alive in the world today could fit in a thimble.

REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? An ovum is the size of a grain of sand.

A: True

Explanation: It is big enough to see without a microscope, but small enough that a 2-liter bottle could contain all the egg cells that made all the people alive in the world today.

Q: True or False? The sperm cells take about a week to develop, before they come out.

A: False

Explanation: They grow in the epididymis for two or three *months* before they can start a pregnancy. That means it is possible for a man to damage his sperm by using certain drugs -- maybe even including alcohol -- before the beginning of the pregnancy. He could possibly harm his future child, while the sperm are maturing.

Q: Is a pregnancy most likely to start *during* a woman's period, just *before* a period, or in *between* her periods?

A: In between her periods.

Explanation: Of course, a pregnancy could start anytime. Many women, and most young girls, do not release eggs on schedule. But the most likely time for fertilization to be possible is about two weeks before a menstrual period.

Q: True or False? A woman with big breasts will be more likely to be able to nurse a baby.

A: False

Explanation: Breast size does not make any difference in nursing. Besides, it does not make a woman more womanly, any more than penis size makes a man manly. Some people worry about breast or penis size, •but size is not what makes a person attractive, lovable, or able to become a parent... and breast size has nothing to do with the amount of milk produced.

REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? A baby develops in a woman's or girl's stomach.

A: False

Explanation: A baby develops in the *uterus*. The stomach is part of the digestive system, not the reproductive system. Some people call a person's abdomen (their whole mid-section) their "stomach" but your stomach is actually a specific organ!

Q: The folds of skin that protect the opening to the vagina and urethra are called _____.

A: Labia, Labia Majora, or Labia Minora

Explanation: Any of these answers is OK. The outer folds are the labia majora and the inner, smaller folds are the labia minora.

Q: The extra membrane around the opening of some girls' vaginas is called the _____.

A: Hymen

Explanation: Some girls are born without this extra skin, or with very little of it. Others may gradually stretch it through sports, masturbation, or tampon use. Some will stretch it or tear it slightly the first time they have vaginal intercourse. Normally, it has an opening to let blood and discharge out.

Q: True or False? Girls are born with all the eggs they will ever have.

A: True

Explanation: A baby girl is born with hundreds of thousands of eggs already in her ovaries. Some of them will mature one day, and may get fertilized and become her babies. That is a good reason for a girl to stay healthy and avoid drugs, to protect those egg cells in case she ever wants children.

REPRODUCTIVE SYSTEM GAME CARDS

Q: True or False? Men run out of sperm around age 50 or if they have too much sex.

A: False

Explanation: Most men keep making sperm their whole lives. However, women stop releasing *eggs* around age 50.

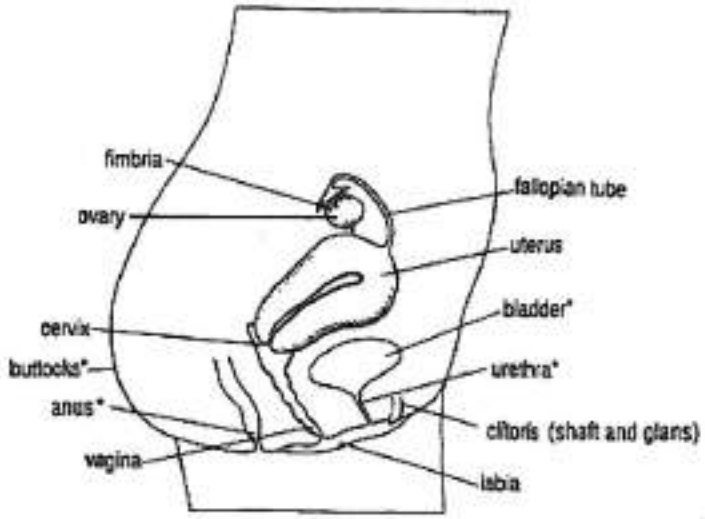
Q: True or False? Alcohol makes a person more sexual.

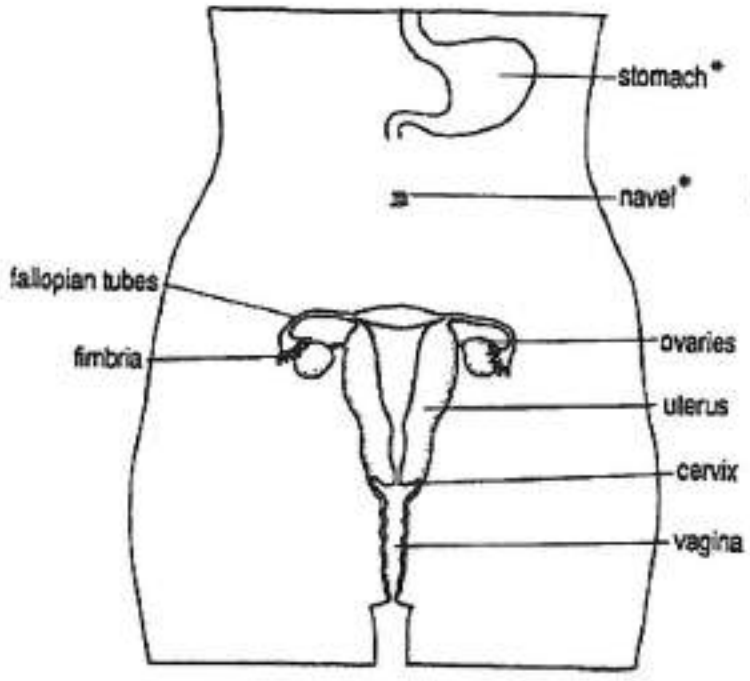
A: False

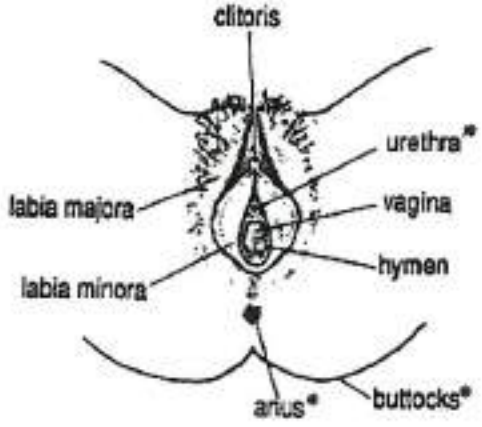
Explanation: Both alcohol and marijuana are depressants. They may make a person feel less worried about the risks of sexual touch, but they do not make the genitals work better. In fact, they decrease the flow of blood to the reproductive system, causing less feeling there. Many males can't get an erection at all after drinking much alcohol.

Reproductive System Reference Sheet and Transparency 1

The Female





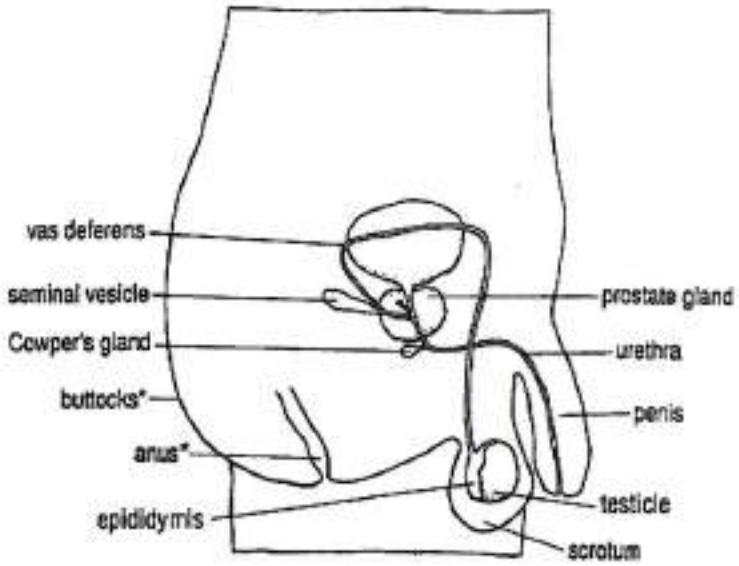


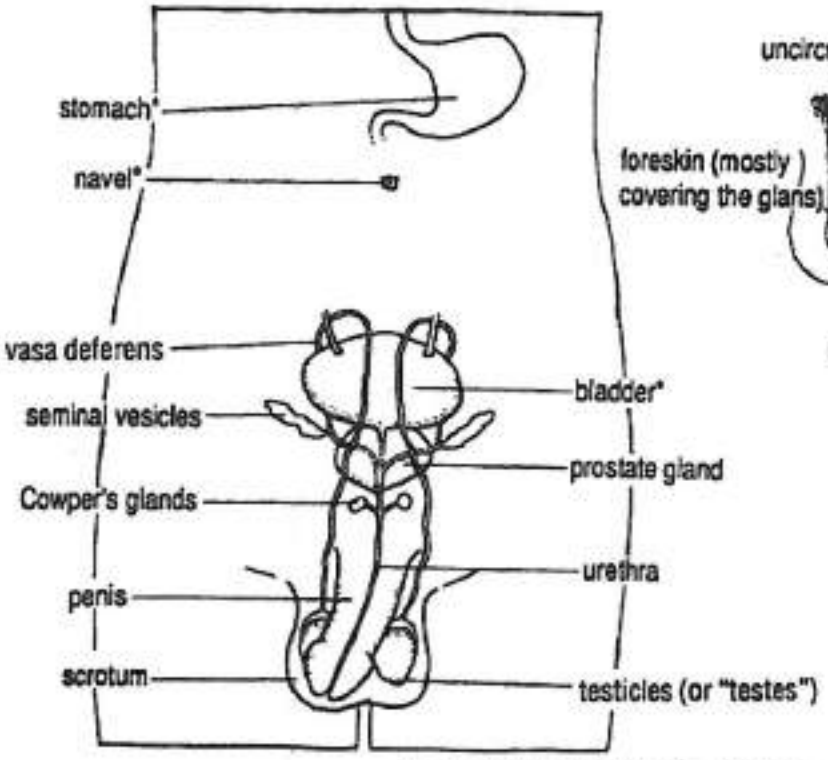
Female genitals or "vulva"

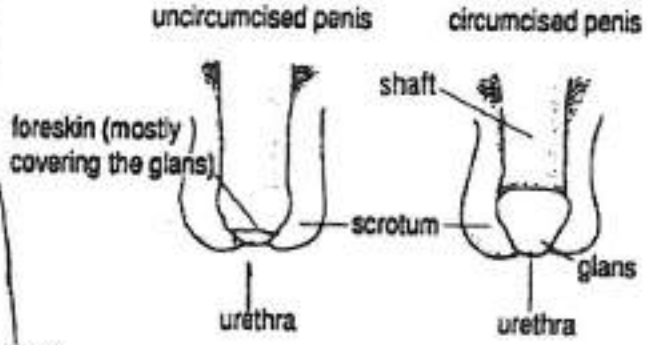
*not part of reproductive system

Reproductive System Reference Sheet and Transparency 2

The male







Male genitals

*not part of reproductive system

Reproductive System Reference Sheet 3: GLOSSARY

Anus – The opening in the buttocks from which bowel movements come when a person goes to the bathroom. It is part of the digestive system; it gets rid of body wastes.

Buttocks – The medical word for a person's "bottom" or "rear end."

Cervix – The opening of the uterus into the vagina.

Circumcision – An operation to remove the foreskin from the penis.

Cowper's Glands – Glands on either side of the urethra that make a discharge which lines the urethra when a man gets an erection, making it less acid-like to protect the sperm.

Clitoris – The part of the female genitals that's full of nerves and becomes erect. It has a glans and a shaft like the penis, but only its glans is on the out side of the body, and it's much smaller.

Discharge – Liquid. Urine and semen are kinds of discharge, but the word is usually used to describe either the normal wetness of the vagina or the abnormal wetness that may come from an infection in the penis or vagina.

Duct – Tube, the fallopian tubes may be called oviducts, because they are the path for an ovum. The vas deferens may be called sperm ducts, because they are the path for a sperm.

Ejaculation – The release of semen from the penis.

Epididymis – The coiled tubes, behind the testicles, where sperm mature, and are stored.

Erection – The penis or clitoris filling with blood and becoming larger and harder.

Fallopian Tubes – The ducts that carry an ovum from the ovary to the uterus.

Fimbria – The finger-like parts on the end of each fallopian tube which find an ovum and sweep it into the tube.

Foreskin – The sleeve of skin around the glans of the penis. It is sometimes removed by circumcision.

Genitals – The parts of the reproductive system on the outside of a person's body. The female genitals may also be called the vulva.

Glands – The parts of the body which produce important fluids (hormones, sweat, urine, semen, saliva, etc.) or cells (sperm, eggs, white blood cells, etc.).

Glans – The head of the penis or clitoris. It is full of nerve endings.

Gonads – The sex glands. Female gonads are called ovaries. Male gonads are called testicles. Gonads make sex cells (eggs and sperm) and sex hormones. They are part of *both* the reproductive and endocrine systems.

Hormones – Natural chemicals made by many glands, which flow, along with blood, through the bloodstream. They are messengers which help the body work properly.

Hymen – The thin skin that partly covers the opening to the vagina in some females.

Labia – The folds of skin in the female genitals that protect openings to the urethra and vagina.

Labia Majora – The larger, outer set of labia.

Labia Minora – The smaller, inner set of labia.

Menstruation – The lining of the uterus emptying out. It is sometimes called "having a period."

Nocturnal Emission – Ejaculation of semen during sleep. It is sometimes called a "wet dream."

Ovaries – Female gonads. They are glands on either side of the uterus where egg cells are stored and female hormones are made. The singular is *ovary*.

Ovulation – The release of an ovum from the ovary.

Ovum – The cell from a woman or girl that can start a pregnancy when it joins with sperm cell. It is sometimes called an "egg cell." The plural is *ova*.

Penis – The organ of the male genitals which is sometimes circumcised. It is made of a shaft and a glans, and partly covered at birth by a foreskin. It is used for urination and ejaculation.

Prostate Gland – A gland under the bladder that makes some of the liquid part of semen.

Reproduction – Making more of something. In humans it means making babies (more humans).

Scrotum – The sac that holds the testes and controls their temperature.

Semen – The thick, whitish liquid which carries sperm cells.

Seminal Vesicles – Glands on each vas deferens that make some of the liquid part of semen.

Sexual Intercourse – The kind of sex when the penis is in the vagina. Also called "vaginal intercourse," because oral sex and anal sex may be considered intercourse, too. Usually during vaginal intercourse the male ejaculates and this is how most pregnancies begin.

Sexuality – The part of us that has to do with being male or female, masculine or feminine or some of both, being able to trust, liking and respecting ourselves and others, needing and enjoying touch and closeness, and reproducing (making babies).

Shaft – The long part of the penis or clitoris. (The shaft of the clitoris is inside of the body.)

Sperm – The cell from a man or boy that can start a pregnancy when it joins with an ovum.

Testicles – Male gonads. They are glands in the scrotum that make sperm and male hormones. They are sometimes called testes; the singular is testis.

Urethra – The tube that carries urine out of the body. In males, it also carries semen, but not at the same time.

Urine – Liquid waste that is made in the kidneys and stored in the bladder. It is released through the urethra, when we go to the bathroom. Urine is not the same as semen.

Uterus – The organ where an embryo/fetus (developing baby) grows for nine months. Sometimes it is called the "womb."

Vagina – The tube leading from the uterus to the outside of the female's body. It is the middle of the three openings in her private parts.

Vas Deferens – The tube that carries sperm from the epididymis up into the male's body. The plural is vasa deferens.

Vulva – Another word for female genitals.

A Family Homework Exercise: The Reproductive System

ALL FAMILY HOMEWORK EXERCISES ARE OPTIONAL.

(1) First, read this aloud together:

> As children start to become teenagers, or even before the teens, they go through many changes. One change is a maturing reproductive system. Change can be exciting, but it can also be confusing. Sometimes people need a little advice or reassurance.

(2) Each of you try filling out "*The Reproductive System Worksheet*" by yourself.

(3) Discuss your answers.

Did you give similar or different advice?
Do you like each other's ideas or do you disagree?
Has any of those kinds of things ever bothered either of you?
If so, how did you handle it?

Were there any letters neither of you knew how to answer? If so, you may want to get a book or call your family doctor. If you have access to the Internet, you can find helpful answers to this kind of question at **www.sxetc.org** (from the Network for Family Life Education at Rutgers University). If you live in King County (Washington State), you can call the Planned Parenthood **Facts of Life Line** (206-328-7711), together. If you have two extensions, you can both call at the same time.

NOTE THESE FACTS:

- It is common, and not a problem for one testicle to be lower than the other.
- Signs of testicular cancer could be a lump or a pulling sensation.
- A white discharge between periods is very normal for young women, as long as it does not smell funny or itch.
- The breasts often develop at an uneven rate. It does not mean anything is wrong.

NOTE: Turn in a Family Homework Confirmation Slip by _____ if you want credit.

The Reproductive System Worksheet

Name_____ **Due Date**_____

Directions: Pretend you are "Dear Abby." How would you answer the following letters? If you are not sure how to respond, ask someone in your family or call your family doctor. If you have access to the Internet, you can find helpful answers to this kind of question at **www.sxetc.org** (from the Network for Family Life Education at Rutgers University). If you live in King County (Washington State), you can call the Planned Parenthood **Facts of Life Line** (206-328-7711) But after you gather information, answer the letter in your own words.

1. Dear Abby,

   One of my testicles is lower than the other. I worry if I have cancer or something. What should I do?
   — Worried

   Dear Worried,

   _____

   _____

   _____

2. Dear Abby,

   I have this white liquid between my menstrual periods. I'm sort of afraid to ask my parents about it. If I went to the doctor, would my parents find out? Help!
   — Confused

   Dear Confused,

   _____

   _____

   _____

3. Dear Abby,

   My older brother is always asking me if I have ever had a wet dream. What if I never do? Should I lie to him or what?
   — Little Brother

   Dear Little Brother,

   _____

   _____

   _____

4. Dear Abby,

   One of my breasts is starting to develop, but not the other. My mother says that is very common, but it still makes me feel funny. If my friends ask me to spend the night, I don't know what I'll do.
   — Growing

   Dear Growing,

   _____

   _____

   _____

5. Dear Abby,

   My friends are always talking about sex. I don't mind when we talk about it in class. It's like it's serious there, plus I learn a lot. But when my friends talk about it, it's all a joke, or sort of cheap. It embarrasses me. What can I do about it?
   — Listener

   Dear Listener,

   _____

   _____

   _____

You can turn in this worksheet for credit or use it to do ***Family Homework Exercise: The Reproductive System.***

Pregnancy

Grades 7 and 8, Lessons #8 and #9

Time Needed

Two class periods

Student Learning Objectives

To be able to...

1. Distinguish (with 75% accuracy) 15 myths and facts re: how conception can or cannot happen.
2. Pronounce, spell, and explain the meanings (with 75% accuracy) of the 31 terms in the glossary of *Pregnancy Reference Sheet 4*.

Agenda

1. Explain the relevance of the lesson and identify it as primarily review.
2. Using *Pregnancy Transparencies* or drawing on the blackboard, describe the components of a cell, the processes of conception, gender determination and multiple births.
3. Hand out *Pregnancy Reference Sheets 1-4* and have students read 1-3 aloud.
4. Answer student's verbal and anonymous questions and discuss the causes of miscarriage and prematurity.
5. Play the Pregnancy Game.
6. Assign homework.

Materials Needed

Classroom Materials, equipment:

- *Pregnancy Transparencies 1-5* *
- 32 *Pregnancy Game Cards* (one class set ... that is: one single-sided copy of each of eight pages, cut into four parts, so there's one question on each "card.")
- Overhead projector
- Shoe box or coffee can
- 500 paperclips

Student Materials (for each student):

- *Pregnancy Reference Sheets 1-4*
- *Family Homework Exercise: Pregnancy*
- *A Young Person's Birth Information Sheet*
- *Family Homework Letter* (Appendix B)

* Unless you prefer to draw freehand, introducing one part at a time

Activities, Day One

1. **Explain the lesson's relevance:**
   It's not enough to know the parts of the reproductive system. It's also important to understand how the system works, how pregnancy happens.

   Identify the lesson as primarily review. (Seventh and eighth graders frequently believe they already are quite knowledgeable regarding pregnancy, and some actually are. You do not want them to feel you are talking down to them.)

2. **Using *Pregnancy Transparencies 1-5*, or drawing on the blackboard, describe briefly:**

   - The components of a cell
   - The process of conception
   - The process of gender determination
   - How multiple births occur

   } Ask volunteers to try to explain these. Some may know.

   NOTE: The egg and sperm on *Transparencies 2 and 3* have been greatly magnified, whereas the uterus is of normal size. The embryo in *Transparency 5* has also been magnified. It has developed a month and would really be 1/10 to 1/4 of an inch long.

3. **Then hand out *Pregnancy Reference Sheets 1-4* and ask for volunteers to read 1-3 aloud.**

4. **Answer students' verbal and anonymous questions, unless you are saving the anonymous questions for a homework assignment.** See Homework, below.

   Students will, ordinarily, bring up pregnancy problems (miscarriage, birth defects, prematurity, low birth weight). **If they don't, you raise these issues:**

   - Miscarriages and birth defects may be caused by:
     - a chromosomal abnormality in the ovum or sperm
     - mother's consumption of drugs (including alcohol and tobacco)
     - father's consumption of drugs (including alcohol and tobacco)
     - mother's illness, including some STD's
     - radiation and environmental pollution
     - mother's age (the healthiest, safest time is in her 20's and early 30's)
     - father's age
     - birth trauma
     - baby's illness
     - unknown factors

   - Some possible reasons for the especially high rate of birth defects, miscarriages, premature birth, and low birth weight in babies born to TEENS are:
     - no prenatal care
     - late prenatal care
     - poor nutrition
     - consumption of alcohol, cigarettes and other drugs

- high rates of sexually transmitted diseases (STDs) among teens

Activities, Day Two

5. **Play the Pregnancy Game.**
   It's played exactly like the Reproductive System Game (see Lesson 7), except with Pregnancy Game Cards.

Homework

Students' options ...

- ***Family Homework Exercise: Pregnancy***
  The student will also need to take home ***A Young Person's Birth Information*** Sheet. And, as always, students will also need to take home the ***Family Homework Letter*** (Appendix B).

- Call one of the phone numbers or use one of the web sites on *Pregnancy Reference Sheet 4* in the resource section, to get an answer to one or more of the **anonymous questions** asked by your classmates.

Advice to teachers, if you use this (latter) assignment...

a. Transcribe the questions on a typewriter or in your own handwriting to protect the anonymity of the askers.
b. Assign specific questions to whichever students volunteer.
c. Do not assign this to every student, or they will get a frustrating number of busy signals.
d. Allow at least four days for students to complete the assignment because these information sources may have restricted hours.
e. Students can report their findings orally to you, to the class (if you can afford the time), or in writing. This is a good way to get students to rehearse the important skills of information seeking and written and/or oral communication. If students report only to you, make sure you convey the answers to the class.

Q: From conception to about eight weeks, the developing baby is called what? A: An embryo Explanation: First there are a separate sperm and egg. Then they join to become a fertilized egg, which becomes a tiny ball of cells. It is called an embryo once it has nested in the uterus.	Q: After about eight weeks of development, the developing baby is called what? A: A fetus Explanation: After *another* 30-34 weeks, or a total of 38-42 weeks, the fetus will be ready to be born. It will be a fully developed baby.
PREGNANCY GAME CARDS	
Q: What do you call the meeting of a sperm and an ovum? A: Fertilization Explanation: This fertilization is the joining of the mother's and father's chromosomes. It happens near the top of the fallopian tube.	Q: What do you call it when the ball of cells nests in the uterus? A: Implantation Explanation: The ball of cells actually burrows into the wall of the uterus. It is implanting itself.

Q: The organ that brings oxygen and nourishment to the fetus, and removes waste products is the _____.

A: Placenta or umbilical cord

Explanation: Either of these answers is OK. The placenta attaches to the wall of the uterus and connects to the mother's bloodstream. It also makes hormones and is actually a separate organ. The umbilical cord is just a tube made of blood vessels, connecting the fetus to the placenta.

Q: The plans for a new human being are contained in DNA molecules called _____.

A: Chromosomes

Explanation: DNA is the chemical of life. It forms into tiny particles called genes. Strings of genes are called chromosomes. A gene controls a chemical reaction. The total of these chemical reactions determines much of how our bodies and minds are built and how they work.

PREGNANCY GAME CARDS

Q: The core of a cell is called the _____.

A: Nucleus

Explanation: On the outside of a cell is a very thin cell membrane, like a soap bubble. Inside it is a jello-like substance (with many parts floating in it) called cytoplasm. Then there's another membrane. And finally there is a core or nucleus.

Q: When the uterus squeezes during the baby's birth, it is called a _____.

A: Contraction

Explanation: These contractions continue for several hours, or even a day or more. That period of time is described as "labor." Finally the baby is pushed out through the vagina.

Q: What would make a girl or woman think she might be pregnant?

A: If she had vaginal intercourse and then missed her period, got breast tenderness, felt sick to her stomach a lot, felt unusually tired or upset, had to go to the bathroom more often than usual.

Explanation: Any of these answers is correct. These are all common signs of pregnancy. She could also be pregnant *without* having any of these early symptoms. Only a pregnancy test or a doctor can tell her for sure.

Q: How many chromosomes are in a human body cell (like a white blood cell, a brain cell, or a muscle cell)?

A: 46

Explanation: Your body is made of about 100 trillion cells. Usually, each one contains the exact same 46 chromosomes. And, unless you are an identical twin, no one in the world has the exact same 46 chromosomes as you.

PREGNANCY GAME CARDS

Q: How many chromosomes are in an ovum or a sperm cell?

A: 23

Explanation: These 23 chromosomes are half of the plans for a new human being ... Its eye color, hair color, the shape of its ears, when it will go through puberty, how it will digest food, and even some of its personality.

Q: Is it the ovum or the sperm that determines what sex the baby will be?

A: The sperm

Explanation: Every ovum has an X chromosome. But a sperm may have an X or a Y chromosome. If an X-sperm fertilizes the egg, the baby will be a girl. A Y-sperm will make it a boy. This means girls usually have two X's (one from their mother's egg and one from their father's X-sperm) and boys have one of each kind of chromosome (an X from the mother and a Y from the father).

Q: If a hundred couples had sex for one year, without any birth control, how many would start pregnancies -- about 30, about 60, or about 90?

A: About 90

Explanation: For most people, intercourse eventually leads to pregnancy. Some of those couples got pregnant on the first day of the year; others after a few tries. But 85 or 90 would by the end of the year.

Q: When is the most likely time of the month for a pregnancy to start -- two weeks *before* the girl's or woman's period, or *during* her period, or right *after* her period?

A: Two weeks before her period.

Explanation: Pregnancy happens whenever people have intercourse around the time of ovulation. Ovulation can happen at any time, but it is usually about two weeks before menstruation.

PREGNANCY GAME CARDS

Q: How long can sperm live in the woman's body waiting for an egg?

A: About five days.

Explanation: So intercourse on a Sunday could lead to fertilization on Wednesday or Thursday!

Q: How long can an egg live after it leaves the ovary, waiting for a sperm?

A: About one day.

Explanation: So if ovulation happened on Sunday, fertilization could happen Sunday or even Monday. After about 24 hours, if it isn't fertilized, the egg dissolves.

Q: How many egg cells need to be released to form identical twins?

A: One

Explanation: Identical twins look exactly alike because they start from a single egg and a single sperm. They have the same genes. The fertilized egg just splits into two balls of cells before implantation.

Q: True or False? One drop of semen can start a pregnancy.

A: True

Explanation: That's right. Each drop of semen can contain a million sperm cells. It only takes one to fertilize an ovum.

PREGNANCY GAME CARDS

Q: True or False? Unless a boy and girl really love each other, they cannot start a pregnancy.

A: False

Explanation: Some people believe you shouldn't have sex unless you are in love. Others believe you should be married. Most think it is best to wait until you are older. But once people go through puberty, if they have intercourse, a pregnancy could start no matter how they feel about each other.

Q: True or False? A pregnancy will usually not start unless the people really want a baby.

A: False

Explanation: Some people believe you shouldn't have intercourse unless you want a baby. Others believe if you don't want a baby you should either not have intercourse or else use birth control. But if you have intercourse, you can start a pregnancy, whether you want one or not.

Q: True or False? Most people need to have sex at least four or five times to start a pregnancy. A: False Explanation: It does not matter how many times. Even once is enough, if there happens to be an egg just ovulated or about to ovulate. And most women and girls can't tell when they ovulate.	Q: True or False: Most people need to have sex for at least half an hour to start a pregnancy. A: False Explanation: It does not matter how long intercourse lasts. Even one second is long enough, if semen comes out.

PREGNANCY GAME CARDS

Q: True or False? A girl or woman can get pregnant by masturbating. A: False Explanation: It never causes pregnancy because there is no sperm to meet the egg.	Q: True or False? Some girls can get pregnant as young as age 9. A: True Explanation: As soon as she starts ovulating, a girl can get pregnant. That might even happen before she has her first menstrual period. Remember, puberty begins at different times in different people. The youngest mother ever reported was five years old.
Q: True or False? Some boys	Q: True or False? Pregnancies

can start pregnancies as young as age 11. A: True Explanation: Whenever his testes start to make sperm, a boy can father a child. He may not be a very *good* father when he's so young, but that's in his head and his heart, not his testes. Puberty makes a boy fertile, it does not make him a mature man.	can start even without intercourse. A: True Explanation: If a boy or man ejaculates on the labia, even without actually having intercourse, his sperm can travel inside. If they find an ovum, pregnancy begins.

PREGNANCY GAME CARDS

Q: True or False? A girl can get pregnant at any time of the month. A: False Explanation: A girl or woman can only get pregnant if an egg is present. However, most girls and women have no way of knowing when they ovulate. So there is no "safe time" when they can have intercourse and know that they won't get pregnant.	Q: True or False? A girl cannot get pregnant from sexual abuse or rape. A: False Explanation: *Any* intercourse can lead to pregnancy ... whether or not she was forced or talked into it. She does not have to love the person, or enjoy it, to get pregnant. If a girl has been raped or sexually abused, she can take emergency contraceptive or "EC" pills to try to prevent getting pregnant.

Q: True or False? Pregnancy usually starts during the girl's or woman's menstrual period.

A: False

Explanation: Some people think they can only get pregnant during their periods. Others think they can only get pregnant when they aren't having a period. The fact is there is no "safe time" of the month when a woman can be sure she won't get pregnant just by looking at the calendar.

Q: True or False? A couple can start a pregnancy the first time they have intercourse.

A: True

Explanation: Some people think it can't happen the first time. Of course it can. The first time, the ninth time, the twelfth time, the seventy-fourth time, or ANY time.

PREGNANCY GAME CARDS

Q: True or False? Each time a couple has intercourse, they start a pregnancy.

A: False

Explanation: Some people think if a couple have three children, they must have had intercourse exactly three times. That's not true. Pregnancy *could* happen any time two people have intercourse, but it doesn't happen every single time.

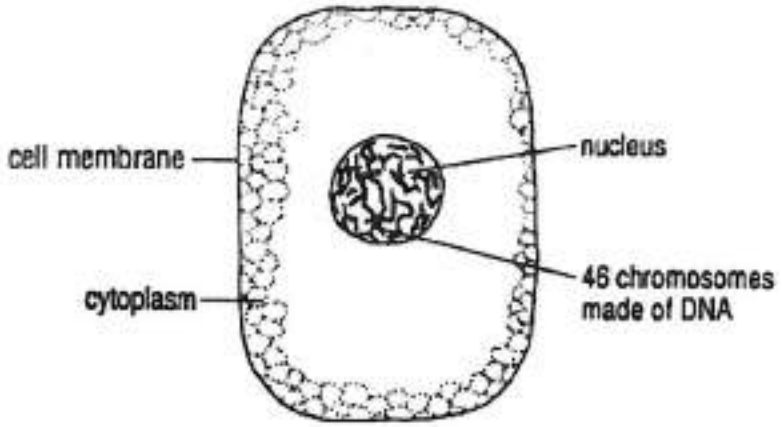
Q: True or False? If a pregnancy does not happen in the first month of intercourse, one of the people must be infertile.

A: False

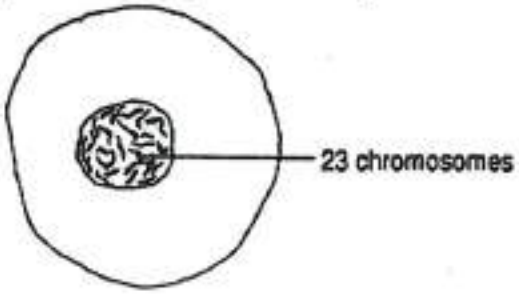
Explanation: It's just a matter of chance. They probably did not have intercourse exactly at ovulation. If a couple has intercourse with no birth control for one or two *years* without getting pregnant, then they should see a doctor.

Pregnancy Transparency 1

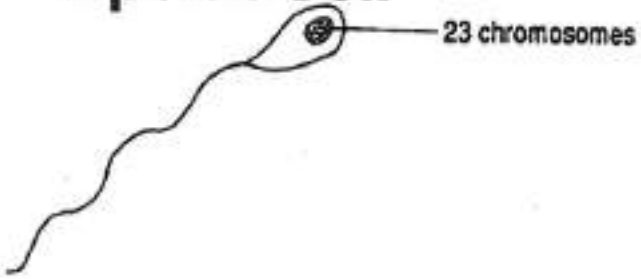
Muscle Cell



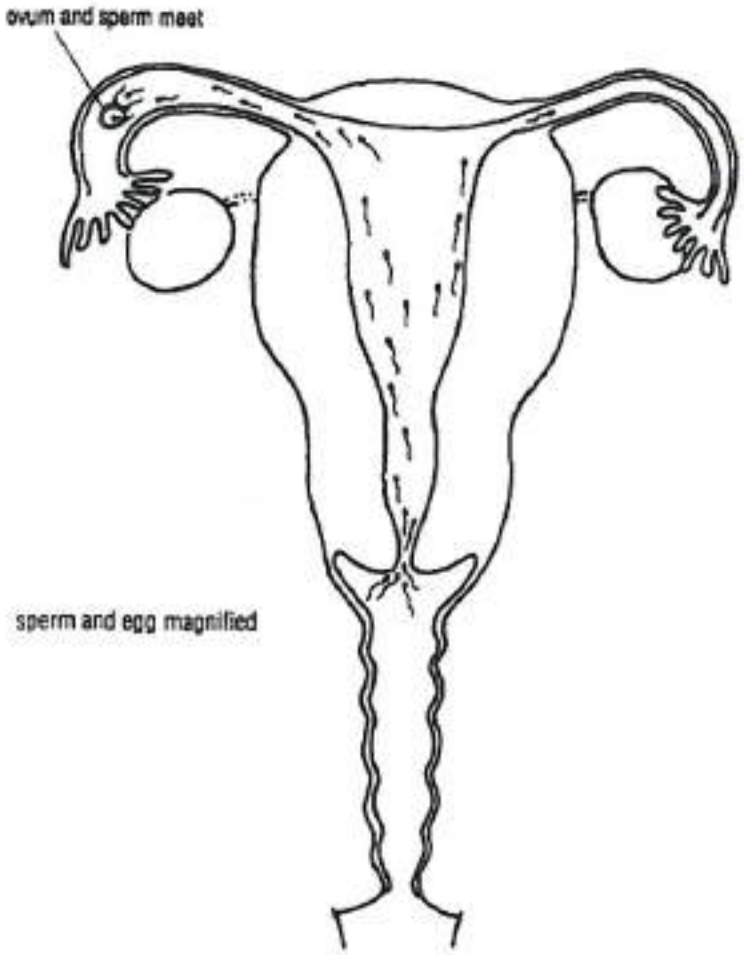
Egg Cell (ovum)



Sperm Cell

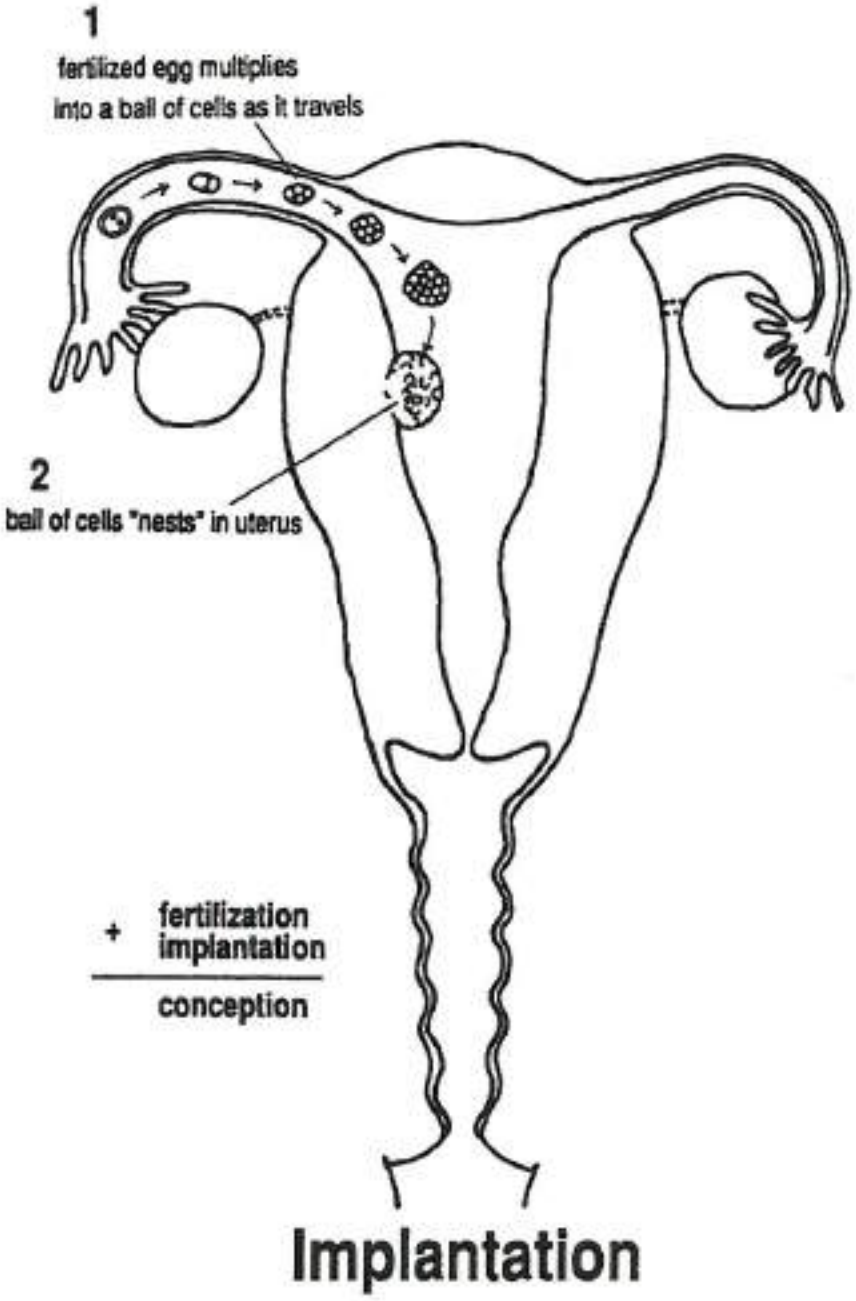


Pregnancy Transparency 2



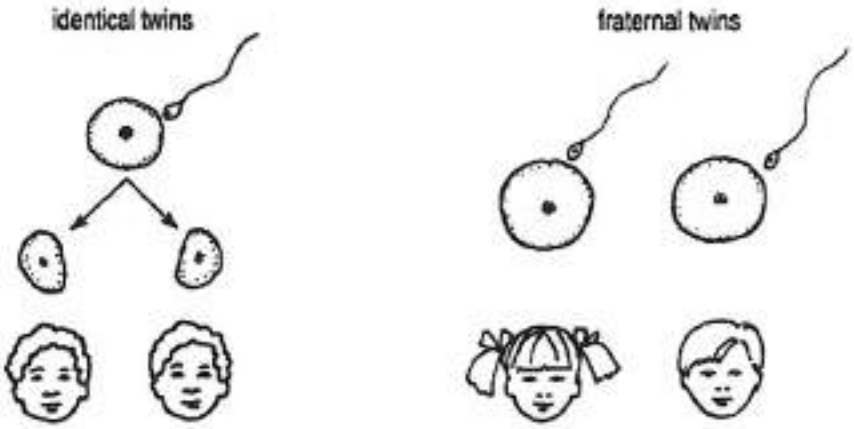
Fertilization

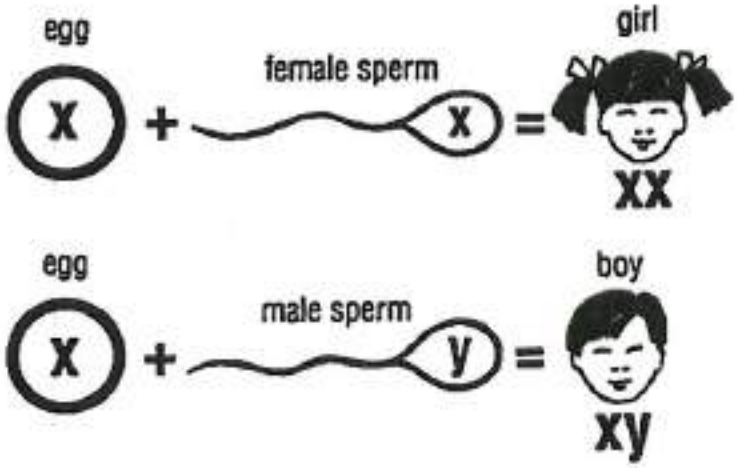
Pregnancy Transparency 3



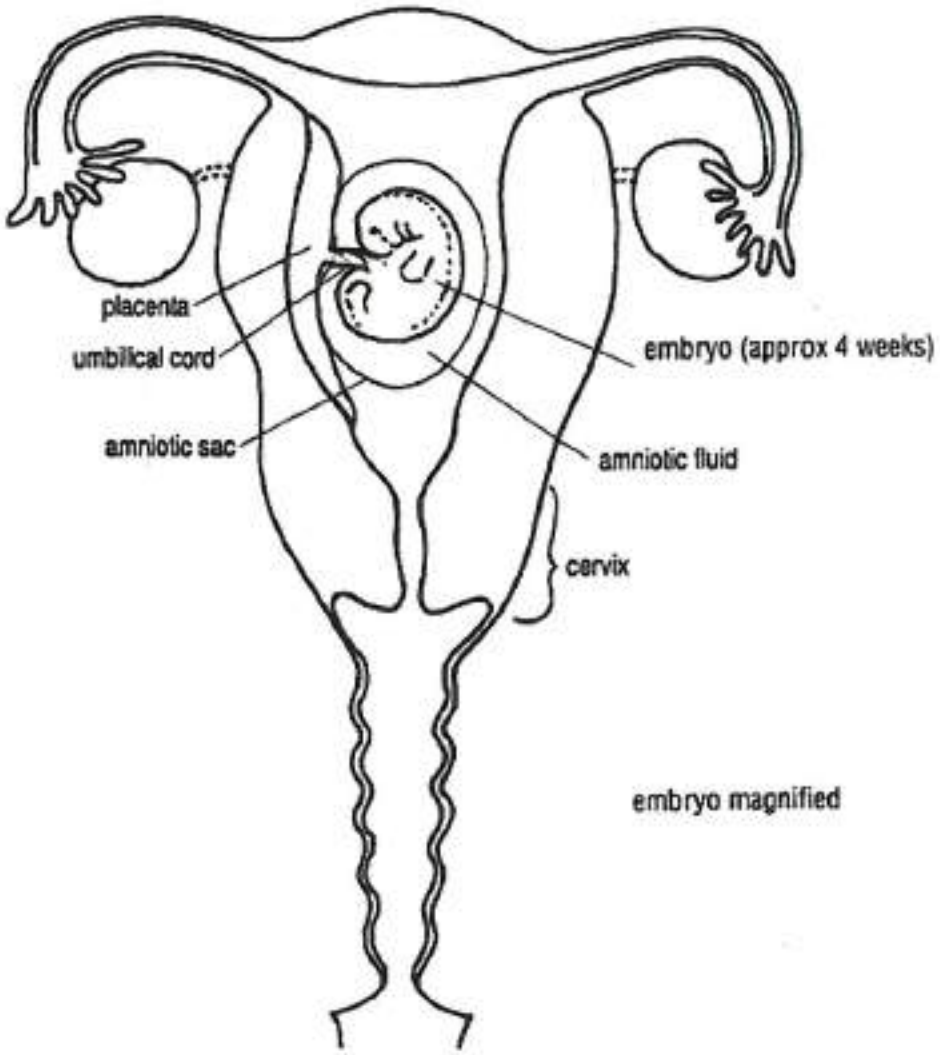
Implantation

Pregnancy Transparency 4





Pregnancy Transparency 5



Pregnancy

Pregnancy Reference Sheet 1

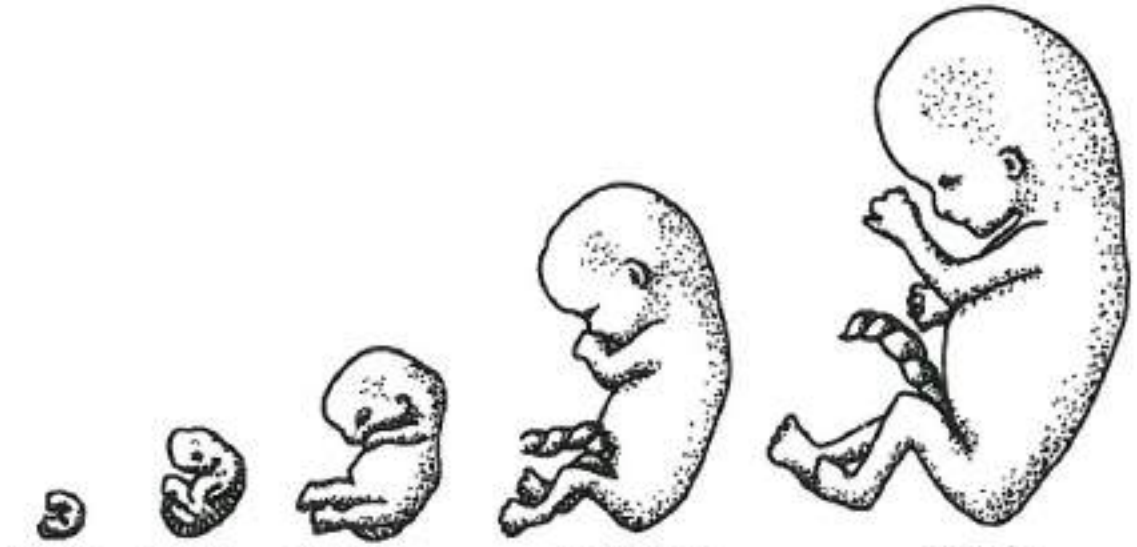
Prenatal Development

First 3 months

During 1st month: Blood begins circulating
Brain is just beginning to form, though it does not work yet

During 2nd month: Arms, legs, and internal organs begin forming
Genitals are starting to form, but male and female still look alike
Tail disappears

During 3rd month: Male and female begin to look different
Fingers, toes, and fingernails form
The head is almost half the size it will be at birth



4 Weeks
1/5 inch

6 Weeks
1/2 inches

8 Weeks
1 1/16 inches

9 1/2 Weeks
2 inches

11 Weeks
3 inches

ACTUAL SIZE

Pregnancy Reference Sheet 2

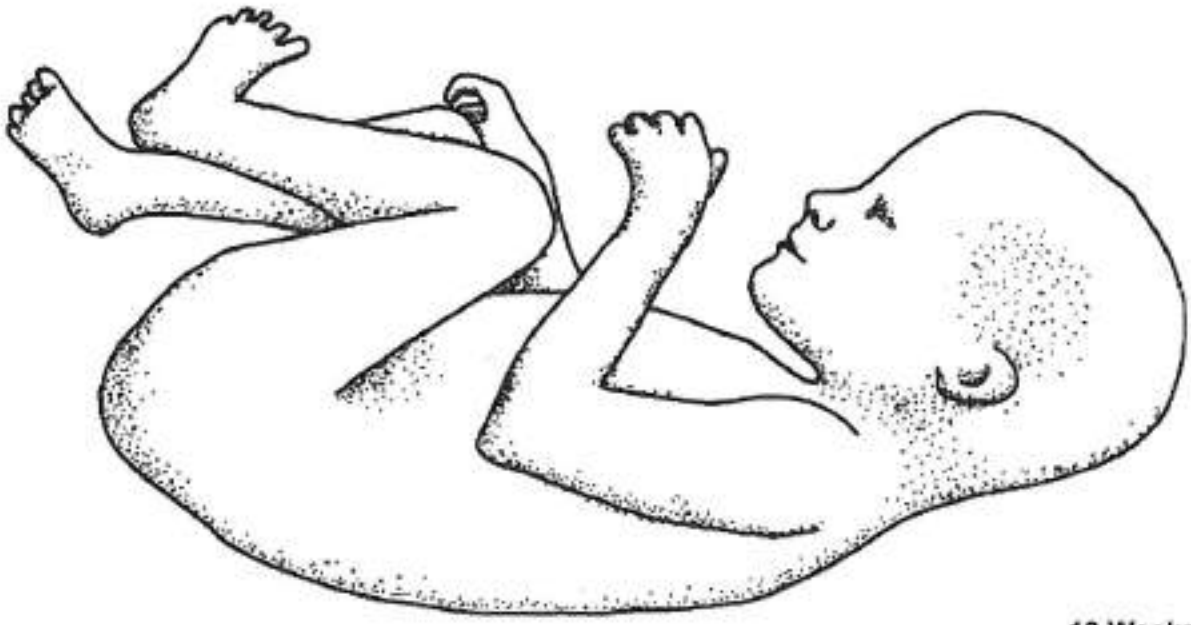
Prenatal Development

Second 3 months

During 4th month: Muscles move
Skin is transparent
Sweat glands, eyebrows, and eyelashes form

During 5th month: Hair, eyelashes, eyebrows form
Hiccups begin and other movement can be felt
Heartbeat can be heard
There is hair on the head

During 6th month: Brain waves begin (brain starts working)
Eyes open
Ears begin to work
There are fingerprints and footprints



19 Weeks
8 inches

Pregnancy Reference Sheet 3

Prenatal Development

Last 3 months

During 7th month: Adds body fat
Moves a lot
Responds to sound
Sometimes awake, sometimes asleep

During 8th month: Less active, less wrinkled
Still growing longer, heavier
Nails, bones begin to harden

During 9th month: Lungs and other organs finish maturing (The brain won't be fully mature for two more years and then it will mature even more in the preteen and teen years and the reproductive system won't *finish* maturing for years, either.)

Pregnancy Reference Sheet 4: Glossary & Resources

Name_____ **Date**_____

Amniotic Fluid – The "water" in which a developing baby floats. It acts as a cushion.

Amniotic Sac – The thin membrane (like the skin inside the shell of a chicken egg) that surrounds the amniotic fluid and the fetus.

Birth Defects – A disability that a baby is born with (retardation, heart problems, blindness, cerebral palsy, and so on).

Cell – A small part of a living thing. We are made of 100 trillion of them: bone cells, blood cells, skin cells, muscle cells, etc.

Cell Membrane – The thin membrane that surrounds every cell.

Chromosome – A string of genes.

Conception – The beginning of a pregnancy. Conception is fertilization of an ovum by a sperm, followed by implantation in the uterus ... fertilization + implantation = conception.

Contraction – The uterus (which is a muscle) squeezing to push a baby out.

Cytoplasm – The jelly-like material inside a cell's membrane, and all the parts floating in it except the nucleus.

DNA – Deoxyribonucleic acid. The hereditary chemical of which genes and chromosomes are made.

Egg Cell – Same as "ovum" ... the cell from a girl or woman that can start a pregnancy.

Embryo – The developing baby from implantation to about 10 weeks. After that, it is called a "fetus."

Fertile – Able to make a baby (to get pregnant or to help someone else get pregnant).

Fertilization – The joining of a sperm and an ovum.

Fertilized Egg – What an ovum is called after the chromosomes from a sperm have mixed with the ovum's chromosomes.

Fetus – The developing baby from about 10 weeks to birth. Before that, it was called an "embryo."

Fraternal Twins – Twins that grew from two eggs, each fertilized by a different sperm. They don't look any more alike than any brothers and sisters because they have different genes.

Genes – The microscopic messenger codes inside each cell of our bodies. They carry the plans for many things about us: whether we are male or female; what color hair, skin, and eyes we'll have; how tall we'll become, how our bodies will work, etc.

Identical Twins – Twins that grew from one egg, fertilized by one sperm, that split into two balls of cells before it implanted in the uterus. They have the same genes, so they look exactly alike.

Implantation – The ball of cells (that used to be a single fertilized egg) nesting in the wall of the uterus.

Infertile – Unable to make a baby (to get pregnant or to help someone else get pregnant).

Labor – The time (a few hours to a day or more) during which a woman is having contractions and giving birth to a baby. It is called "labor" because it is hard work.

Low Birth Weight – A baby that is "too" small ... less than five and a half pounds at birth. A "low birth weight" baby is more likely to be sick or have birth defects; it is also likely to develop more slowly and to have more difficulty in school. It also may turn out healthy and do just fine.

Miscarriage – A pregnancy ending much too soon, before the embryo or fetus is able to live outside the uterus.

Nucleus – The core of a cell, which contains the chromosomes.

Ovum – Same as "egg cell" ... the cell from a girl or woman that can start a pregnancy when joined with a sperm.

Placenta – An organ that grows inside the uterus during pregnancy to carry food and oxygen from the mother and waste from the embryo or fetus. It produces many hormones that affect both the mother and the baby. It develops from the original ball of cells that implanted in the uterus.

Pregnant – A woman who is going to have a baby.

Premature – Born "too" soon ... after fewer than 38 weeks (9 months) of pregnancy. Depending on how early she or he is born, a premature baby may have serious birth defects or problems and die, minor birth defects or problems and do OK with help from the hospital, or no birth defects or problems and do just fine.

Prenatal – Before birth. Prenatal care means getting special check-ups at least once a month from a doctor starting as early in a pregnancy as possible. Good, early prenatal care can greatly reduce the risk of birth defects, low birth weight, or prematurity. It also helps keep the mother healthy.

Sperm – The cell from a boy or man that can start a pregnancy when joined with an ovum.

Umbilical Cord – The tube leading from the navel of the embryo or fetus to the placenta. It carries food and oxygen to the developing baby, and waste from the developing baby.

RESOURCES

Where can you get up-to-date, accurate answers to questions about pregnancy?

- Call your county **Public Health Department.** In King County (WA), call 206-296-4600 (voice/TDD). Elsewhere, look under your county in the blue pages.
- Call the **Planned Parenthood's Facts-of-Life Line**. You can talk to a trained sexuality educator Monday-Thursday, 3-6pm Pacific time. In King County (WA), call 206-328-7711; Outside King County, call 1-888-30-SX-ASK (307-9275). The Facts of Life Line, a recorded library of information, is available 24 hours a day at the above numbers.
- Call or visit your school or public **library**.
- If you have **Internet** access, try:
    - www.marchofdimes.com
    - www.sexetc.org
    - www.teenwire.com
- Or ask your school **nurse**, family **doctor** or an OB/GYN doctor (they specialize in women's health, pregnancy and birth), or an adult **family** member.

A Family Homework Exercise: Pregnancy

ALL FAMILY HOMEWORK EXERCISES ARE OPTIONAL.

Adult, read this first:

If you are a mom, the birth mother, this exercise will be straightforward. If you are a father, or a non-biological mother, a grandparent or other close adult, you may not have all the answers. Just be honest.

If you are a foster or adoptive parent, join the student in making up your *own* History Sheet, describing in detail how you came to be a family and what the first day of your being together was like (from agency name to feelings).

Student and adult, read this together:

Most of us are curious about our own births. We may also *need* to know about them, if we ever have related medical problems. Now is a good time to fill out *A Young Person's Birth Information Sheet* together. **Then put it someplace safe, to keep.**

NOTE: Turn in a Family Homework Confirmation Slip by _____if you want credit.

A Young Person's Birth Information Sheet

Your name _____

Date of birth _____ Time of birth _____

Place of birth (include name of hospital, if you were born in a hospital)_____

_____

About the pregnancy:

Did your mother get prenatal care and, if so, what was the midwife or doctor's name?

_____

How did your mother feel during the pregnancy?_____

How old was she when you were born?_____

Did you arrive early, late, or just when you were expected?_____

You might also discuss:

Did anything interesting or funny happen while your mother was pregnant with you? Was she at a "good age" to have you or would she have had you earlier or later if she could have?

About the birth:

How long was your mother in labor?_____

Who was present besides your mother? _____

Was there anything unusual about the birth (Breech? C-Section?) _____

_____

You might also discuss:

Did anything interesting or funny happen the day you were born? How was your name chosen?

About you:

What was your weight?_____ length?_____

Did you have any problems the first few days?_____

If you were born in a hospital, how long did you stay there?_____

Were you fed by a bottle or by breast?_____

You might also discuss:

Was anything special done to "welcome" you? Any kind of shower or a naming or adoption ceremony or religious observance, like a Baptism or Bris? How did your arrival change your mother's life? Your family's lives? Do you have any other questions?