

Introduction to HGD

Foundation:

- Talk to the adult(s) in your life about our sessions
- There will be an opportunity to ask questions
- Use appropriate language (if you don't know, ask!)
- In HGD, when we talk about the male and female body, it's referring to the *biological sex* assigned to you at birth.
- Gender identity is different from biological sex.
- Some students may identify as male, female, non-binary, gender-fluid, non-conforming, intergender, agender, or another term we may not be familiar with, so please let us know.
- While we go through this presentation, please be aware that "male and female" are referring to biological sex that has been assigned at birth and not a person's gender.

Terminology

Sex - Biology:

- Male - XY Chromosome
- Female - XX Chromosome

Sex assigned at birth: The sex (male or female) given to a child at birth, most often based on the child's external anatomy. This is also referred to as "assigned sex at birth."

Puberty

Puberty is the name for the time when your body begins to develop and change as you move from kid to adult.

Everyone goes through puberty

Hormones - endocrine system

Reproduction

What is the Endocrine System?

- It influences almost every cell, organ, and function of our bodies
- Regulating mood, growth and development, tissue function, metabolism and reproductive processes.

Hormones and glands.

- Hormones transfer information and instructions to cells.
- Each type of hormone is designed to affect only certain cells.

A gland is a group of cells that produces and secretes hormones.

- Some glands release their secretions in specific areas in the body.

Pituitary Gland:

Responsible for making Growth Hormones, which stimulates the growth of bone and other body tissues and plays a role in the body's handling of nutrients and minerals

Glands

The major glands that make up the human endocrine system include the:

- *Pituitary gland*
- *Reproductive glands** (*ovaries and testes*)
- Hypothalamus
- Thyroid
- Parathyroids
- Adrenal glands
- Pineal body
- Pancreas

*These glands, along with the external genitalia of a baby, are used to assign biological sex at birth.

Reproductive Glands

XY Chromosome (Male):

- Testes or Testicles
 - Secrete hormones
 - Testosterone
 - Puberty
 - Sperm Production

XX Chromosome (Female):

- Ovaries
 - Secrete hormones
 - Estrogen
 - Puberty
 - Regulate menstruation
 - Pregnancy
 - Progesterone
 - Regulate menstruation
 - Pregnancy

XY Chromosome - Male

- Vocal changes
- Hair growth
 - Body and face
 - Usually not full, uneven
 - Pubic area, underarms, arms, chest, legs and face
- Body odor - sweat changes
- Acne
- Weight gain
- Dramatic emotional changes
- Growth Spurt
 - During puberty, your body will grow faster than at any other time in your life, except for when you were a baby.
- Increase muscle mass
- Widening of shoulders
- Testicles produce sperm
- Nocturnal emission (wet dreams)
 - Ejaculation of semen out of the penis during sleep

XX Chromosome - Females

- Breast Development
- Wider hips
- Hair growth
 - Body
 - Pubic region, legs, arms and underarms
- Body odor - sweat changes
- Acne
- Weight gain
- Dramatic emotional changes
- Growth Spurt
 - During puberty, your body will grow faster than at any other time in your life, except for when you were a baby
- Ovaries produce eggs
- Menstruation (having a period)

WASH YOUR HANDS!

Things to remember:

Take a shower or bath everyday or every other day to stay clean

Ask about deodorant/antiperspirant

Brush your teeth 2x/day

Wear clean clothes every day!

Make sure you wash your winter gear regularly

“Bad” Bacteria, Viruses, Fungus moves from object to hand, or from a hand to a hand.

Impetigo
Measles
Meningitis
MRSA
Mumps
Ringworm
Scarlet Fever
Thrush
Chicken pox
Common cold
Conjunctivitis (pink eye)
Croup
Norovirus (stomach bug)
Fifth Disease
Flu
Hand Foot and Mouth Disease
Whooping cough

Female Reproductive System

Reproductive System

External part - Vulva, or covering

Vagina and other reproductive
organs located inside the body

Located in the pelvis - lower
abdomen

Vulva

Labia

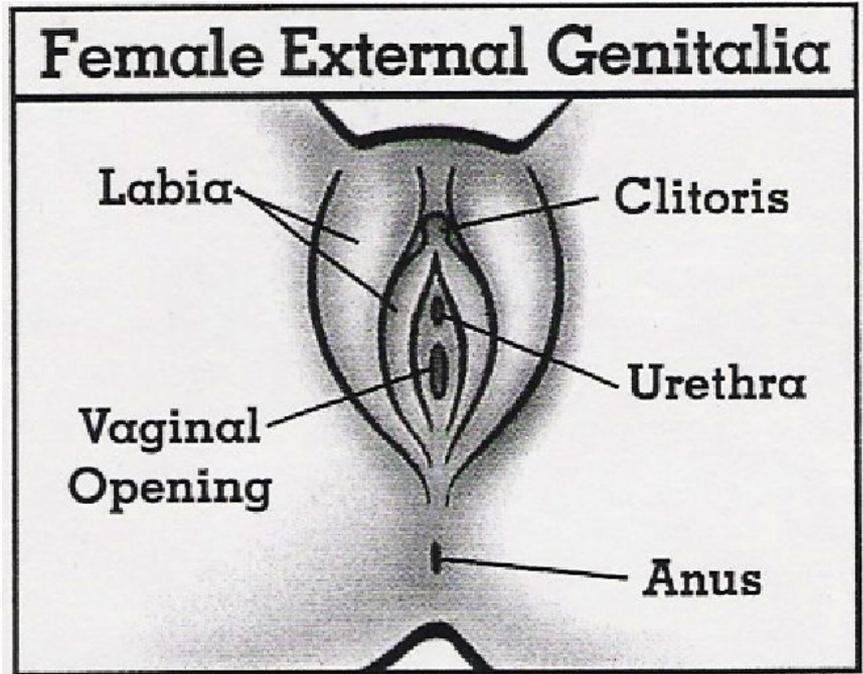
- Skin flaps that surround the vaginal opening & urethra

Clitoris

- Small sensory organ, toward the front of the vulva where the labia folds join

Urethra

- Carries urine from the bladder out of the body
- Located between the labia



Internal Organs

- Vagina
- Uterus
- Fallopian tubes
- Ovaries

Vagina

- Muscle-contract and expand
- Hollow, extends from vaginal opening (just below the urethra) to the uterus
- 3-5” long in grown women

Uterus

- Womb
- Expands/contracts
- Above the cervix

Cervix

Narrow passage forming the lower end of the uterus

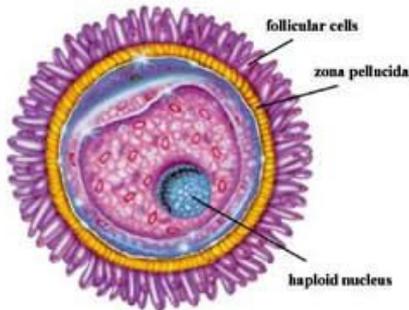
This is what changes when a woman is in labor

Fallopian Tubes

- Transfer ovum(egg) from ovary to uterus
- Site of fertilization

Ovary

Ova/Egg



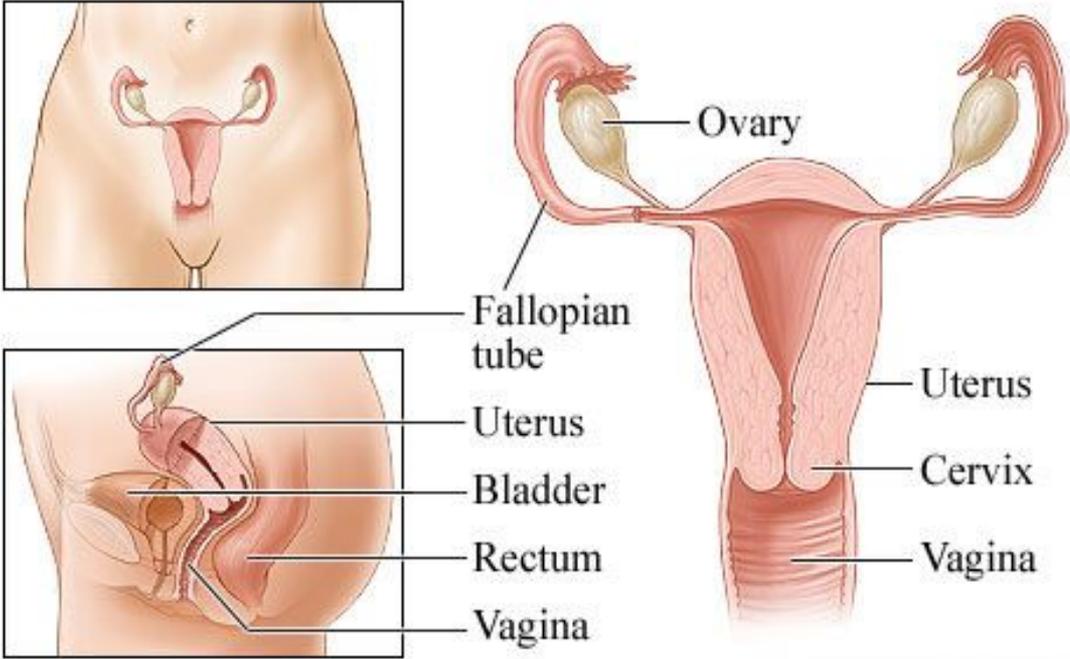
- Produce, Store & Release eggs
 - Female Sex Cell
 - Ovulation
 - Needed for reproduction

Born with this cell - mature and release during puberty

Do not regenerate

When eggs no longer mature, ovulation and menstruation stops - menopause (begins around 45 yr old)

Internal - Vagina/Uterus



Periods

- Start usually between 10-16 years old
 - About 2 years after breasts develop
 - Soon after growing pubic hair
 - After start to notice vaginal discharge
- Usually lasts 3-7 days
- Might not be regular at first
 - Could take years!



1

An ovary gets ready to release an egg.



2

The egg is released. The soft lining starts to thicken inside the uterus.



3

The egg travels along the fallopian tube to the uterus. The lining of the uterus gets thicker.

4

The lining is not needed and most of it is shed through the vagina. This is your period.

Ovulation Day 14

 = Ovulation

 = menstrual cycle

January 2010

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				1	2	3
4 	5 	6 	7 	8 	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24 
25	26	27	28	29	30	31

Menstrual Cramps

Ache or cramp in the lower abdomen or along the inner thighs, back

What to do:

- Take a warm bath
- Heating pad - no longer than 15 minutes
- Exercise
- Check with an adult before taking medication

Male Reproductive System

Male

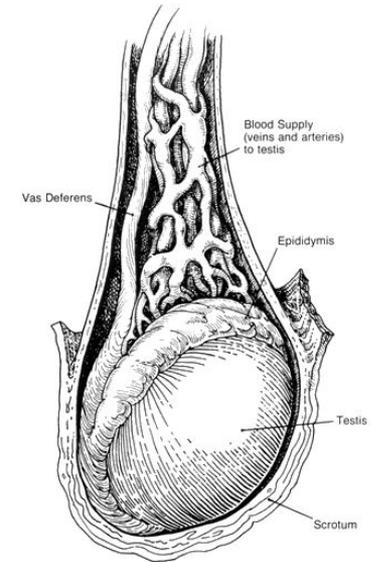
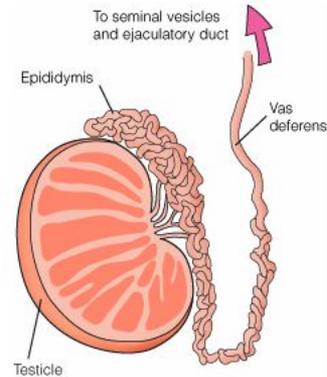
Internal and external reproductive organs or genitals

Include:

- Testicles
- Duct System, epididymis and vas deferens
- Accessory glands, seminal vesicles and prostate gland
- Penis and scrotum

Testes/Testicles

- Produce and store sperm cells.
- Oval-shaped
- Located in scrotum
 - Bag of skin, regulates temperature of the testes to protect sperm
- Produce testosterone
 - Puberty

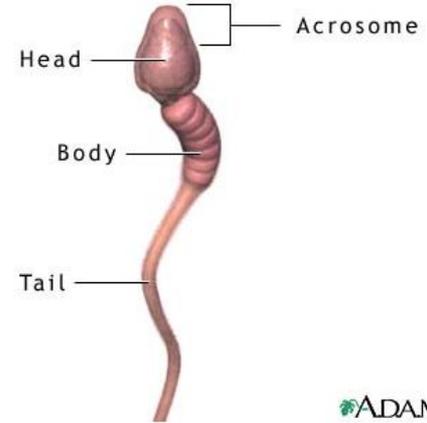


Sperm

Male sex cell

Needed for reproduction

Not born with this cell - puberty -
changes in testicles to begin sperm
cell production.



Epididymis/Vas Deferens

Alongside testicles

Transport sperm and fluid called semen

Seminal Vesicles/Prostate

Provide fluid that lubricates the duct system

Assists with nourishment and transportation of sperm

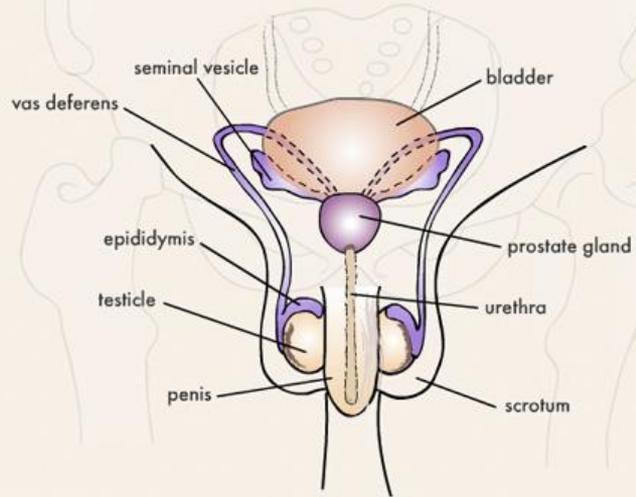
Penis

- Shaft
 - Main part of the penis
- Glans
 - Tip or head of the penis
- Small opening/slit
 - Urethra
 - Semen and urine exit the body

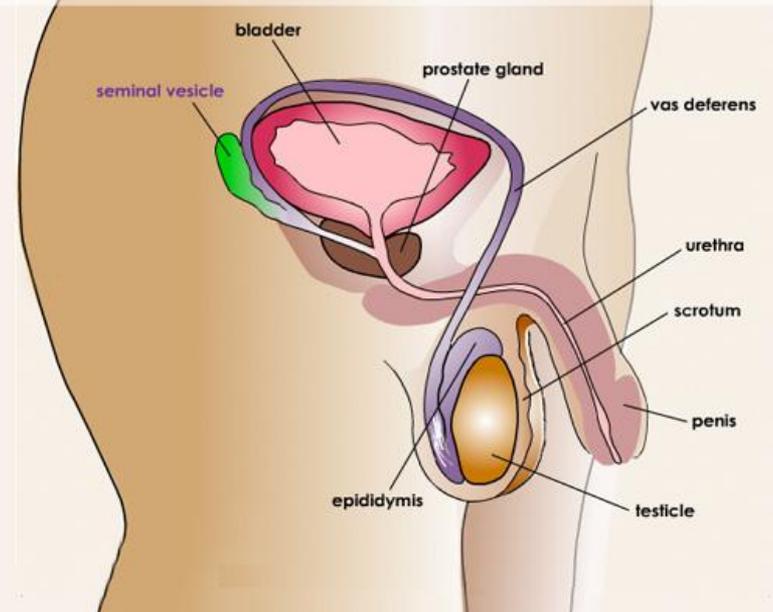
Foreskin

- Layer of skin that covers the end of the penis.
- All boys are born with foreskin
- Removal - Circumcision
 - A few days old

THE MALE REPRODUCTIVE SYSTEM



THE MALE REPRODUCTIVE SYSTEM

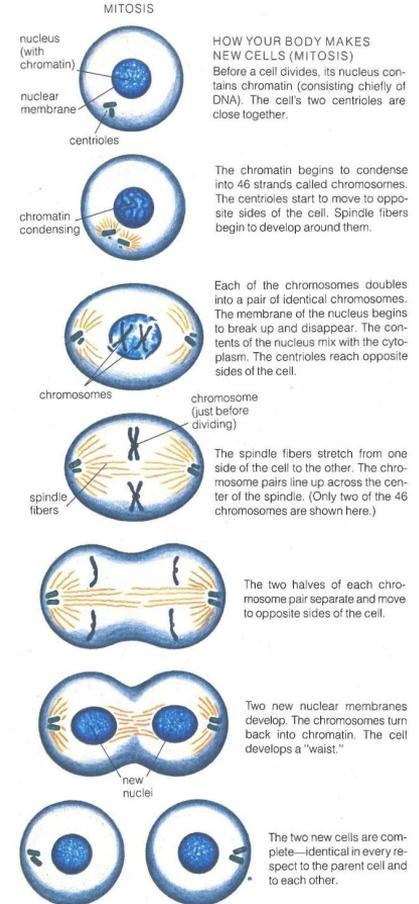


Cell Division

- Almost all cells regenerate (divide) - 46 chromosomes = Mitosis
- Reproductive cells (Sperm and Egg) have 23 chromosomes = Meiosis
- When the Sperm and Egg unite, they each bring 23 chromosomes - totaling 46 chromosome = the start of new life
 - Sexual intercourse
 - Artificial insemination through fertility treatments

46 Chromosomes = blueprint to build you

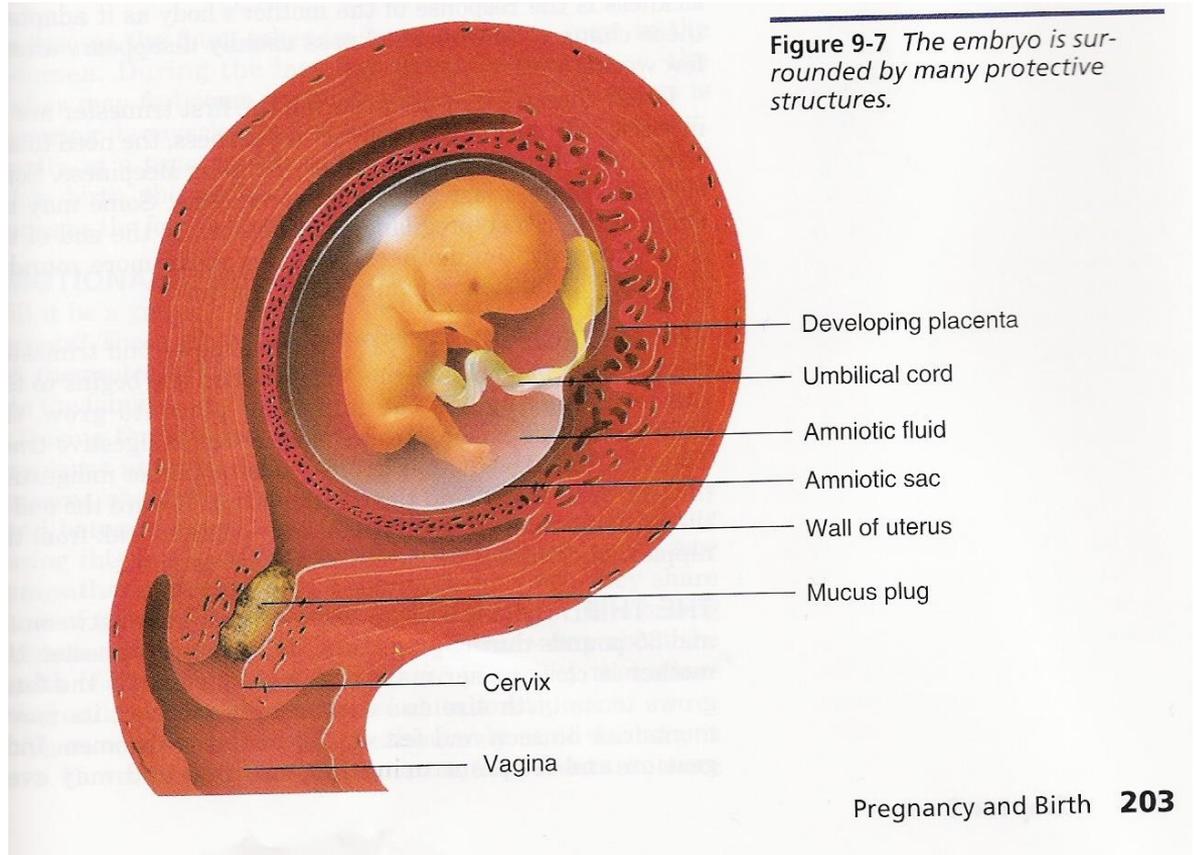
Mitosis: When Cells Divide

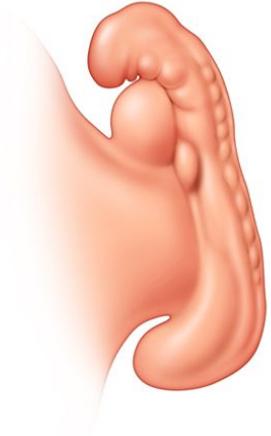


Fetal Development

Trimesters

- 1st Trimester
 - 1-12 weeks
- 2nd Trimester
 - 13-27 weeks
- 3rd Trimester
 - 28-40 weeks





© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

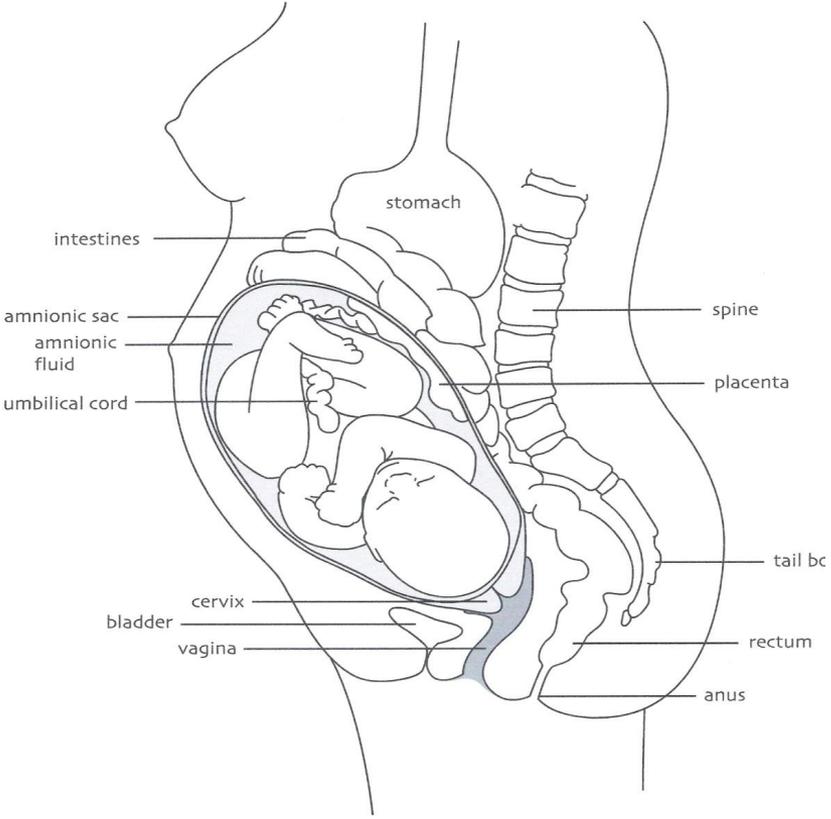


© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Pregnancy



Not effaced



Effaced

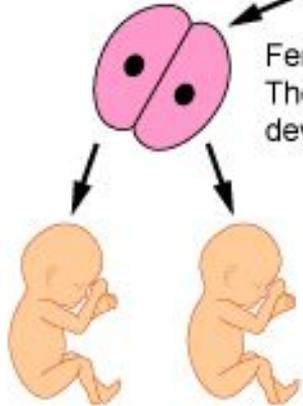
Cervix
Vagina

One egg is fertilised



Fertilised egg

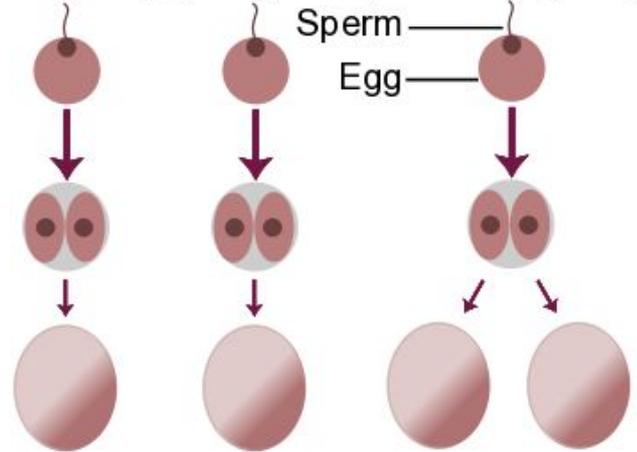
Fertilised egg divides into two. The two parts are separate and develop independently



The two babies have identical chromosomes and genes

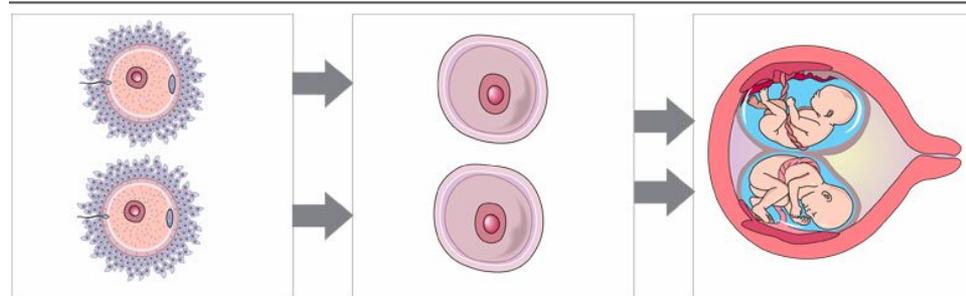
Fraternal (Dizygotic)

Identical (Monozygotic)



Separate placentas

Shared placenta



Wrap up

- Puberty
 - Hormones
 - Testosterone
 - Estrogen/Progesterone
 - Reproductive systems
 - XY Male
 - Sperm Cells
 - XX Female
 - Egg (ovum) Cells
 - Body changes
 - Emotional changes
- Cell Division
 - Fertilization (meeting of the sperm and ovum)
- New Life
 - Pregnancy
 - Fetal Development
 - How babies are born
 - Twins

Reflections

Write about it:

1. What are 5 changes that will happen to me during puberty?
2. I am _____ about these changes:
(excited/nervous/anxious/worried/concerned)
3. Why do I feel this way?
4. How can I address these feelings?
5. Here are the FACTS I know about puberty and growing up:
6. Here are the adults in my life that I can talk to about this:
7. I can also talk to my doctor. Her/His name is:
(If you don't know - now is a great time to ask the adults at home!)

Multiple Choice Q's

1. The best way to protect yourself from germs, and to avoid spreading germs to other people, is to (choose one):

- a) wear a surgical mask and gloves
- b) stay inside
- c) wash your hands
- d) keep a bar of soap in your backpack
- e) sneeze into your desk

2. Underline the times when it's important to wash your hands (choose one or more):

- a) before eating
- b) before putting on gloves
- c) after using the bathroom
- d) after blowing your nose or coughing
- e) after taking a shower
- f) after playing outside or with a pet
- g) after being with someone who's sick

Multiple Choice Q's

3. If you have to cough or sneeze, you should cover your mouth and nose with (choose one or more):

- a) a tissue
- b) your elbow
- c) your hands
- d) a book

4. True or false: It's OK to eat food if it's on the floor for less than 5 seconds.

- a) true
- b) false

Being active is important!

What are some activities you can do to keep you moving?

- swim
- play tag
- ride a bike
- run
- walk
- skip
- jog
- have a dance contest
- shoot hoops
- rollerskate
- skateboard
- go for a walk
- walk the dog
- hula hoop
- capture the flag
- kickball
- street hockey
- soccer
- Frisbee
- make an obstacle course
- volleyball
- tennis
- exercise video games
- football
- flashlight tag
- hide-and-peek
- baseball or softball
- gardening
- hopscotch
- jumping rope
- Ballet
- What else???