

# The Beginning of the Life Cycle

Pregnancy and Childbirth Stages





# Objective:

Students will examine the changes that occur to mother and fetus during pregnancy, labor and delivery in order to describe the reproductive process.

Warm up...

1. Explain the process of fertilization?
2. How many sperm can fertilize an egg?





# How Do You Know If You Are Pregnant?

Complete Handout...

- Signs of Pregnancy
- Pregnancy Tests

- What is prenatal care?





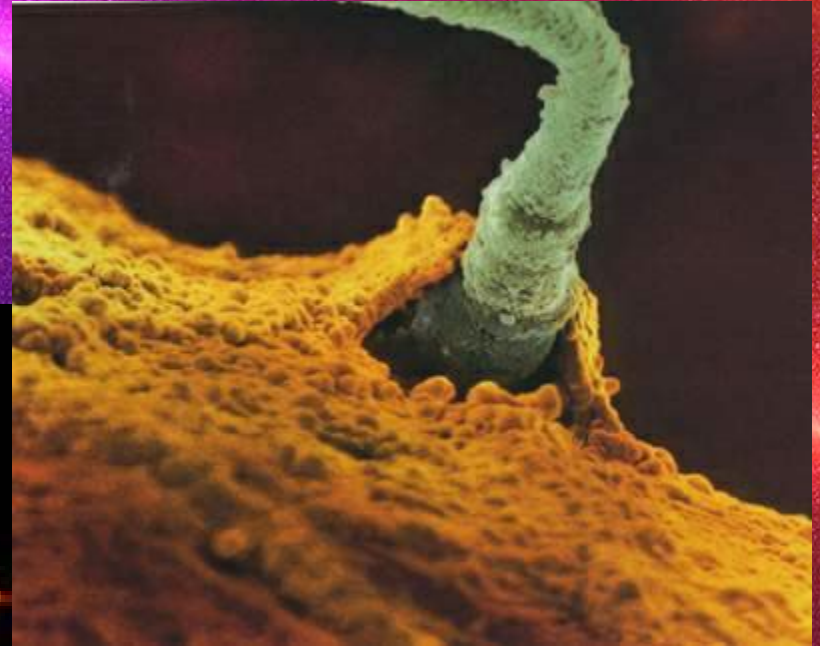


# Step One

- The union of a male sperm cell and a female egg is called **FERTILIZATION**, which is also known as **CONCEPTION**. The resulting cell is called a **ZYGOTE**.. This usually results in the Fallopian Tubes.



# Fertilization





# Zygote





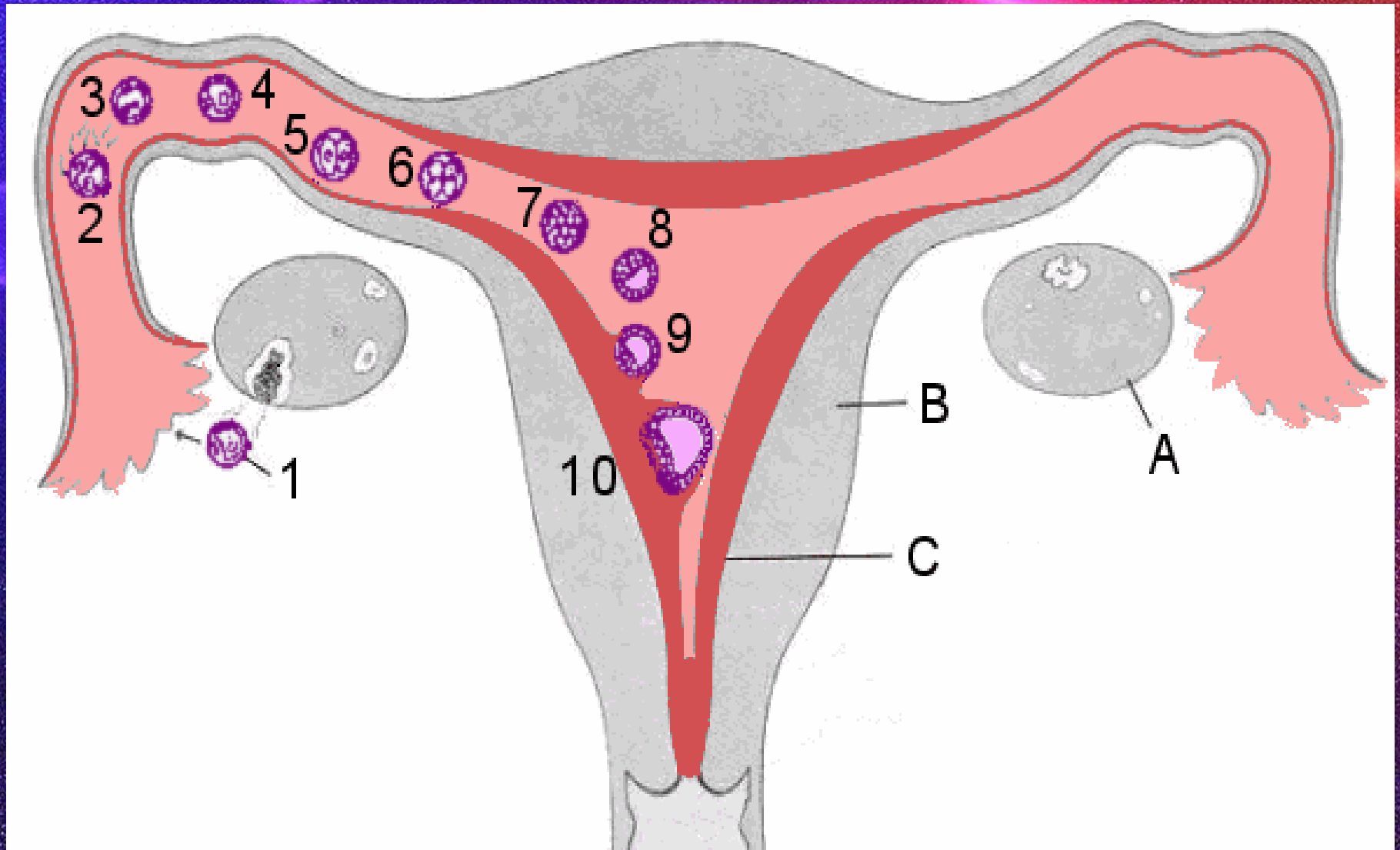
# Step Two

- Within a few days, the zygote attaches to the uterine wall in the process called **IMPLANTATION**.





# Implantation





# Step Three

- What is the difference between a Zygote, Embryo and Fetus?
  - Zygote: Conception until week 3
  - EMBRYO: 3<sup>rd</sup> week to the 8<sup>th</sup> week.
  - FETUS: 8<sup>th</sup> week and on.






# Step Three





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- The **AMNIOTIC SAC** is a thin, fluid-filled membrane that surrounds and protects the developing embryo.

# Embryonic Growth



Amniotic Sac

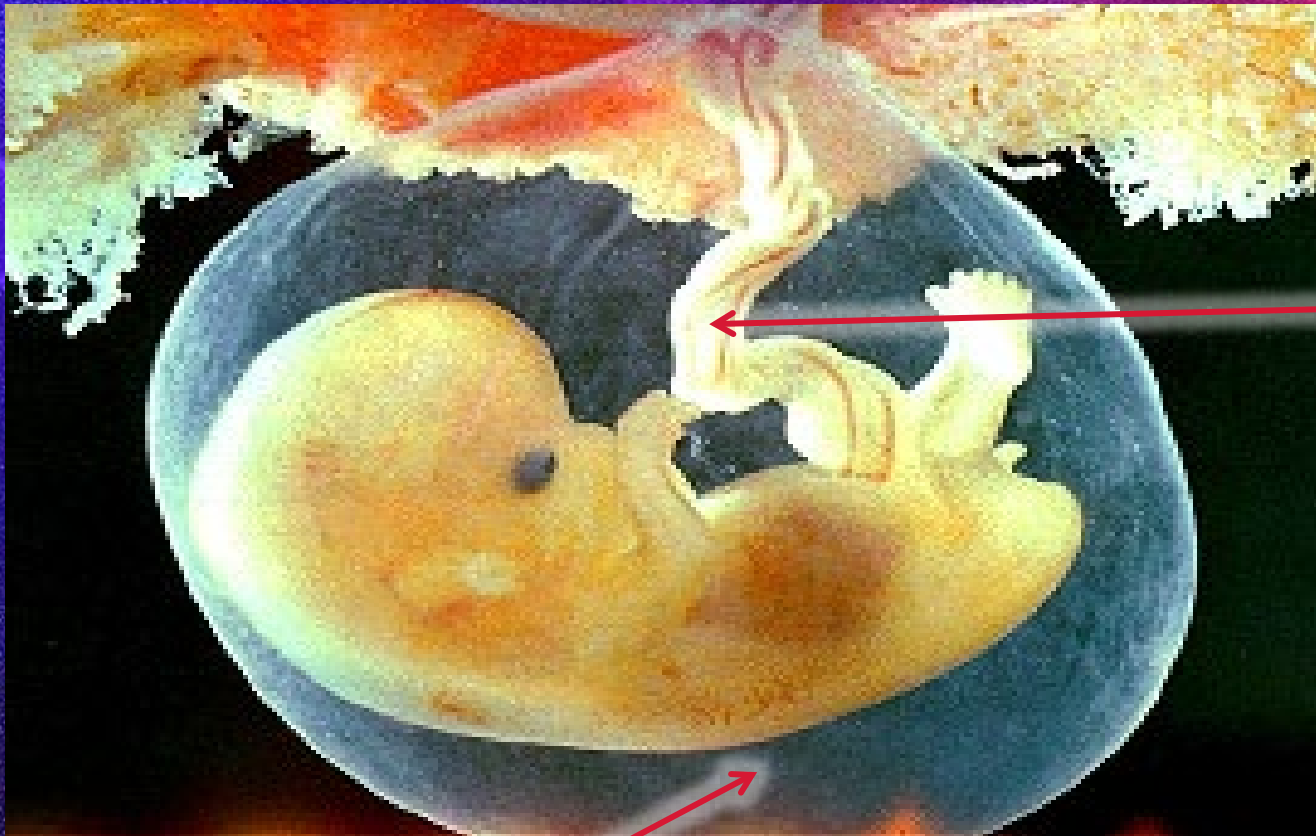




➤ The **UMBILICAL CORD** is a rope-like structure that connects the embryo and the mother's placenta.



# Embryonic Growth




Umbilical Cord

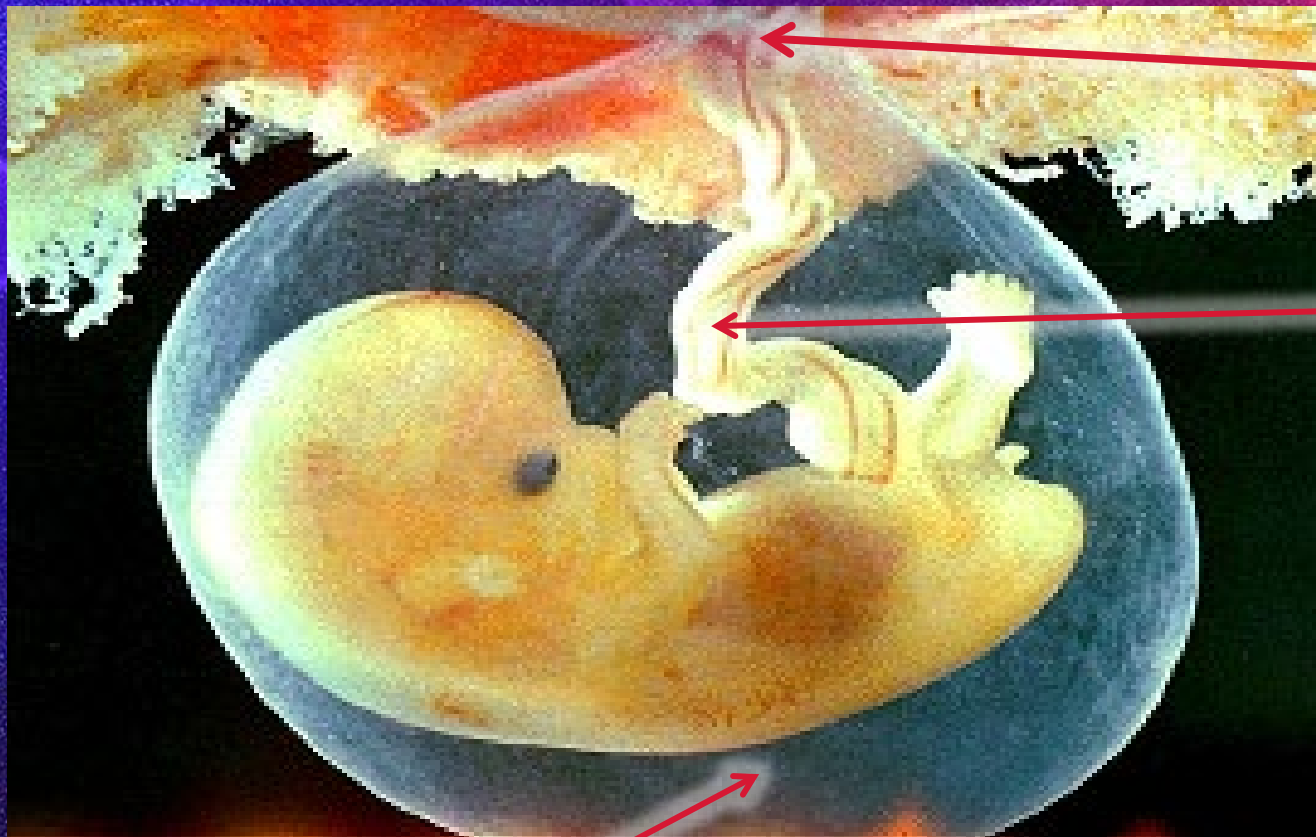
Amniotic Sac





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- The **PLACENTA** is a thick, blood-rich tissue that lines the walls of the uterus during pregnancy and nourishes the embryo.

# Embryonic Growth




Placenta

Umbilical Cord

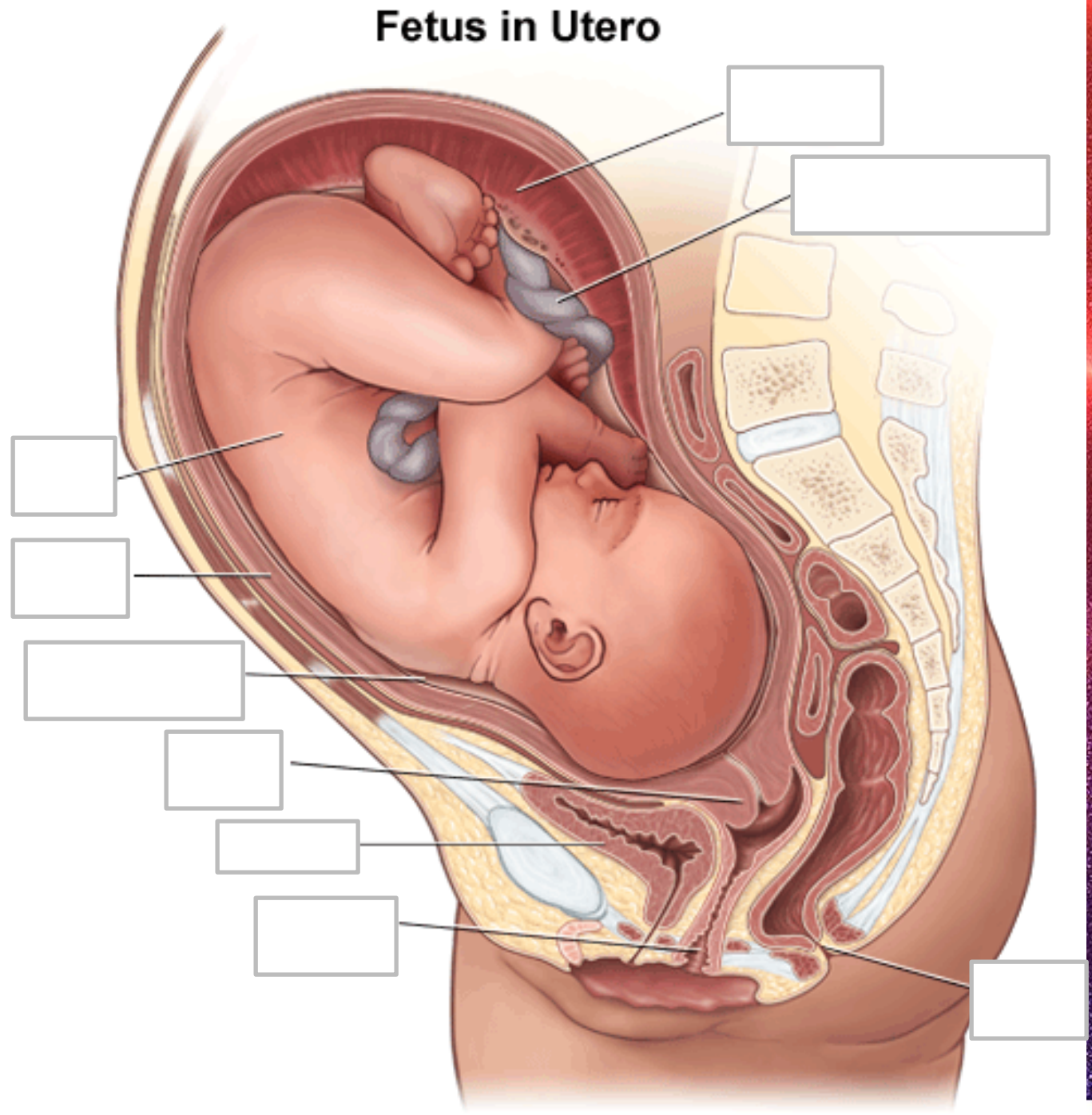
Amniotic Sac





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- The time from conception to birth is usually about nine full months. These nine months are divided into three 3-month periods called **TRIMESTERS**.

What  
Can  
You  
Label?





# Ultrasound Exam Video



# Stages of Birth

## Stage 1: Dilation

- Contractions of the uterus cause the cervix to widen (dilate).
- Cervix must widen to 10 cm or 4 inches.
- Amniotic sac breaks open.





# Stages of Birth

## Stage 2: Passage Through the Birth Canal

- Baby passes through the birth canal (vagina).
- Baby takes its first breath and cries to clear the lungs of amniotic fluid.



# Stages of Birth

## Stage 3: Afterbirth

- Contractions continue until the placenta and remainder of the umbilical cord are pushed from the mother's body.



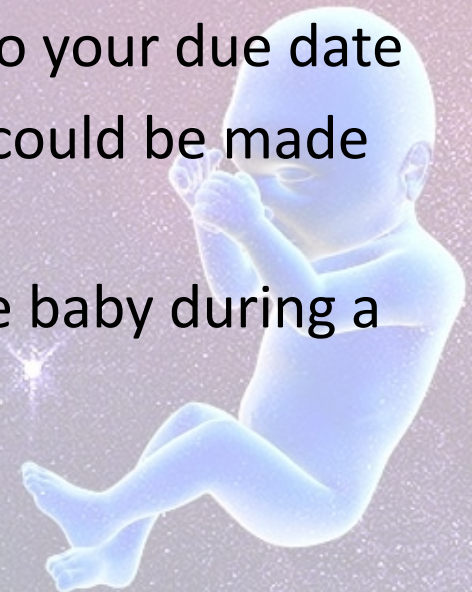


# Caesarean (c-section)

➤ A cesarean section is the delivery of a baby through a cut (incision) in the mother's abdomen and uterus.

## Causes for C-Section:

- Labor is slow and hard or stops completely.
- The baby shows signs of distress, such as a very fast or slow heart rate.
- A problem with the placenta or umbilical cord puts the baby at risk.
- The baby is too big to be delivered vaginally.
- The baby is not in a head-down position close to your due date
- You have a problem such as heart disease that could be made worse by the stress of labor.
- You have an infection that you could pass to the baby during a vaginal birth.
- You are carrying more than one baby.





What are the  
different types  
of twins?

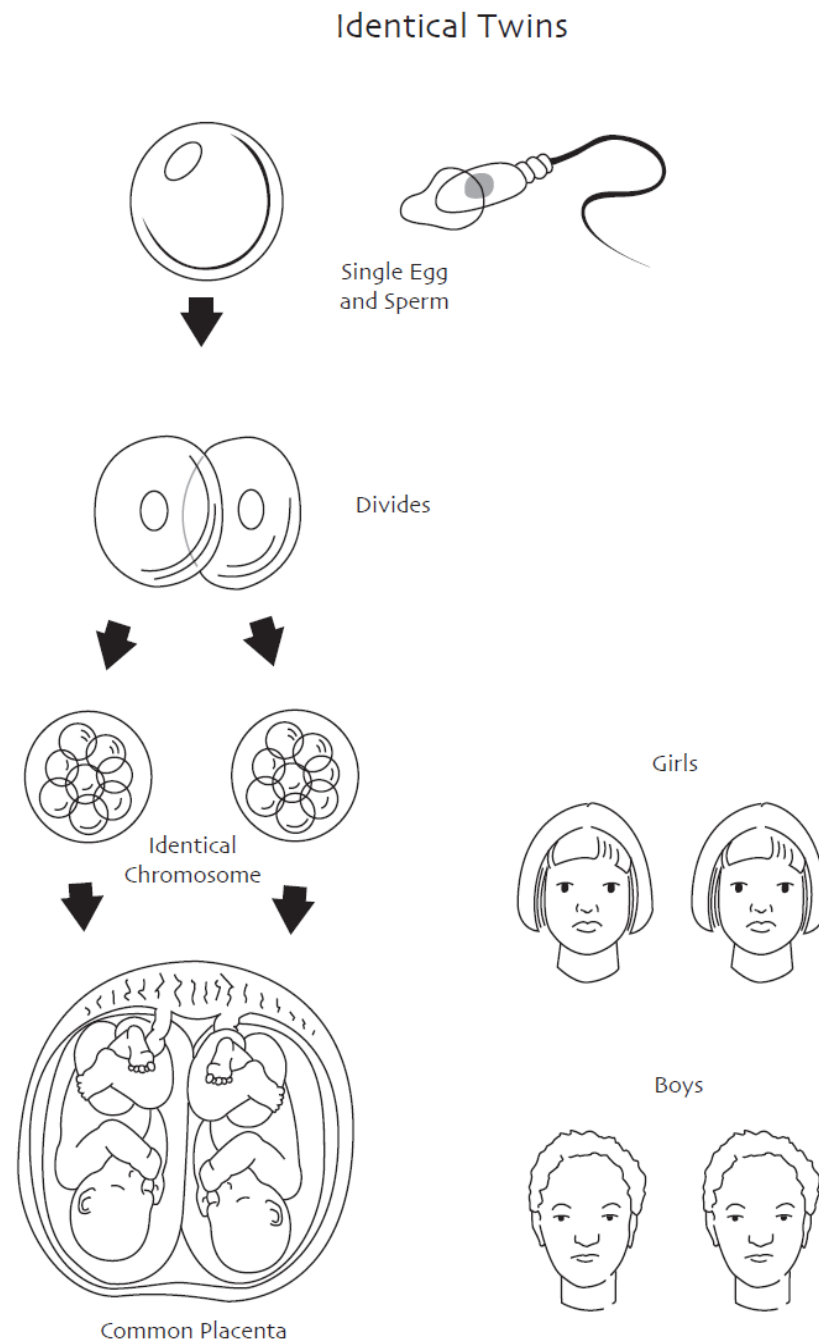




# Identical Twins

A single egg is fertilized by a single sperm and divides and forms two embryos.

They have the same genetic makeup, are the same gender, and look almost exactly the same.



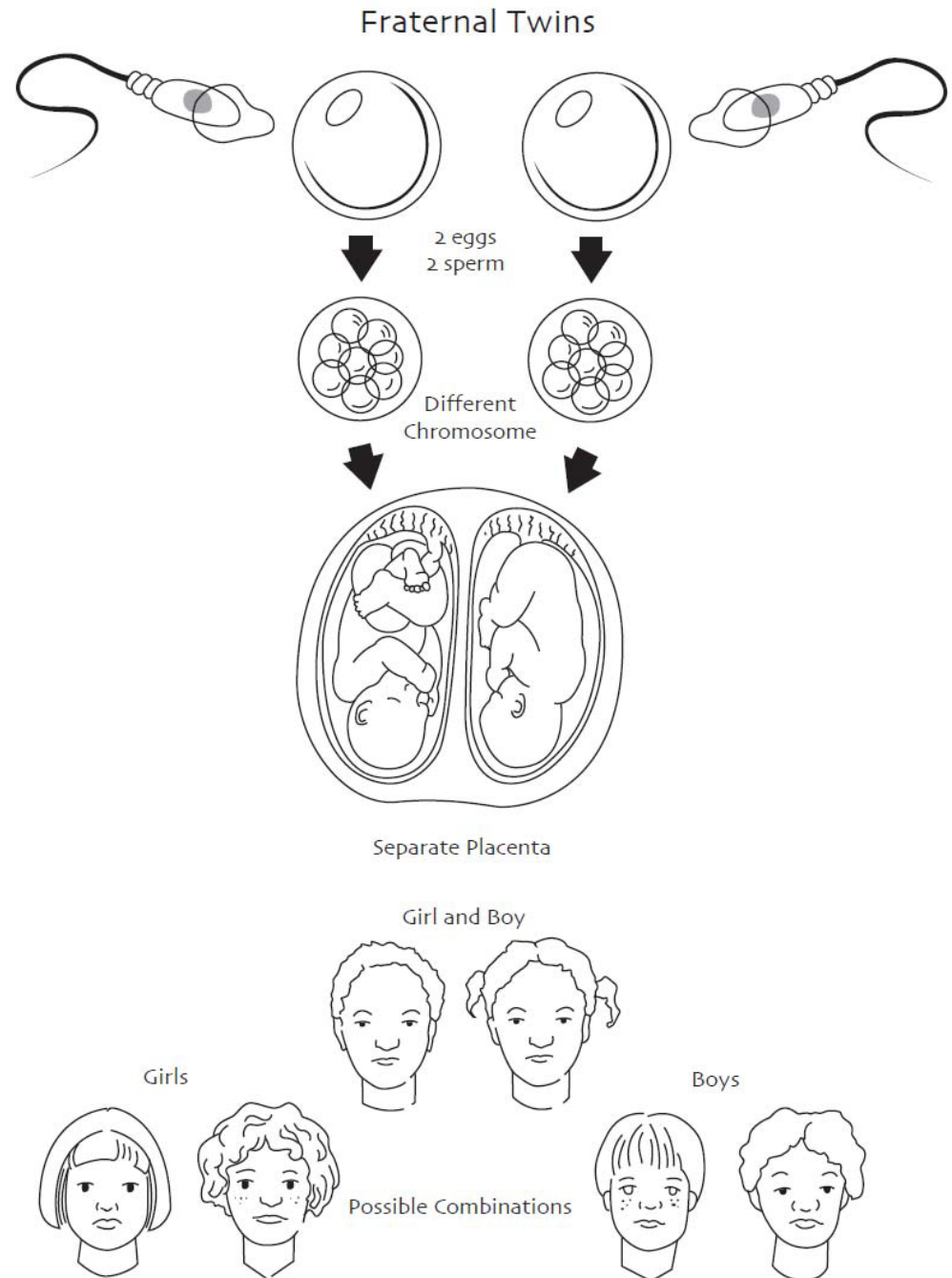


# Fraternal Twins

A female's ovaries release two eggs.

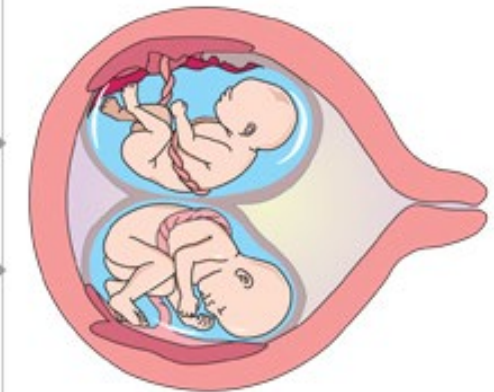
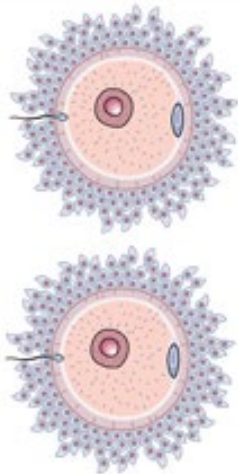
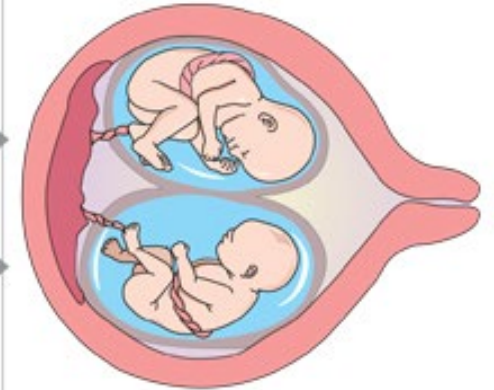
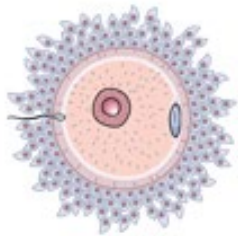
Separate sperm fertilize each egg and two embryos develop.

Each has different genetic makeup, and they may or may not be the same gender.





# Twins



# Triplets



24 Week Triplets



# Twins



# Triplets



# Twins



# Conjoined Twins

Two babies that are born physically connected.

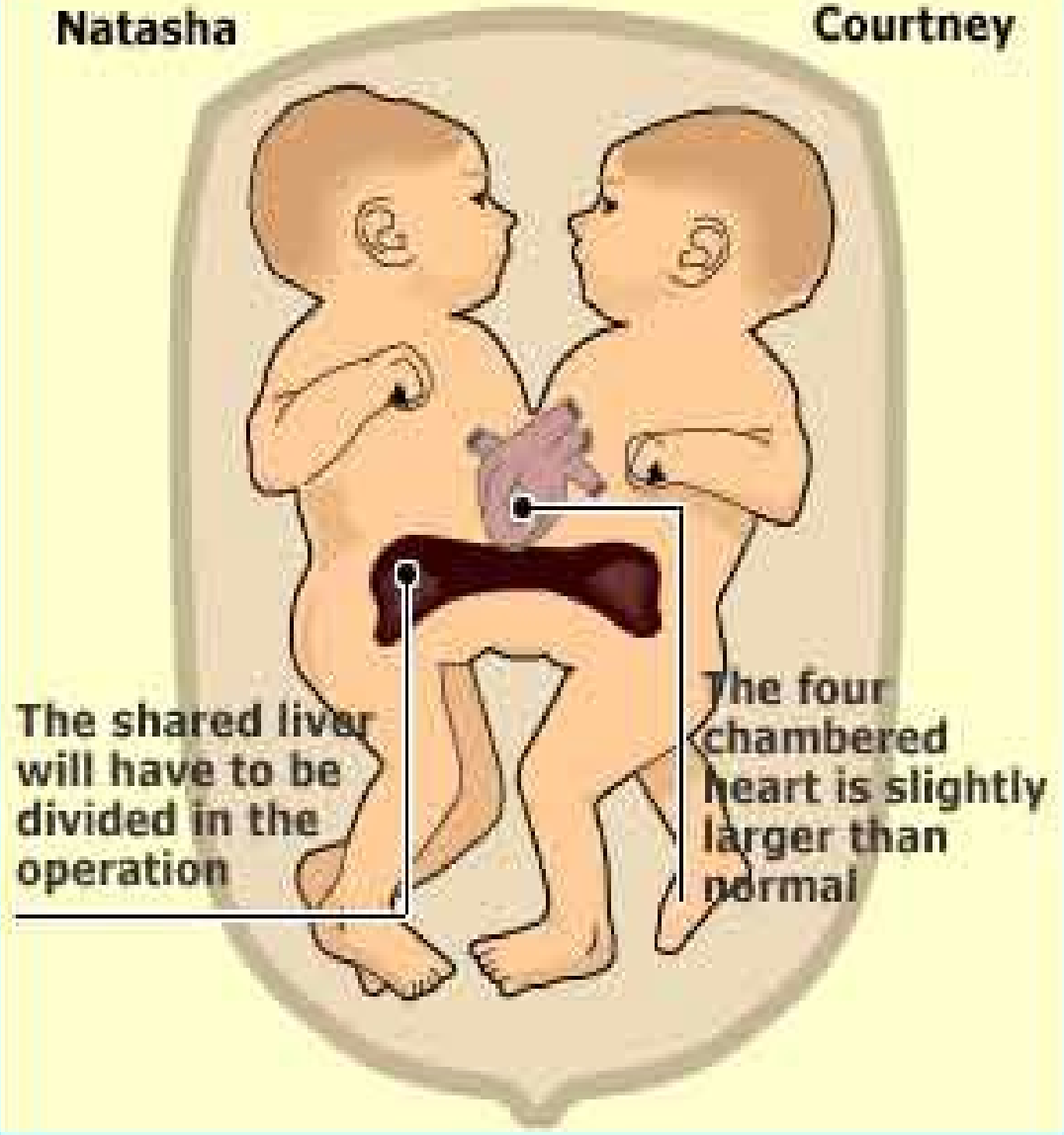
Started off as identical twins.

Occurs about 1 in 100,000 pregnancies.

## CONJOINED TWINS

Natasha

Courtney





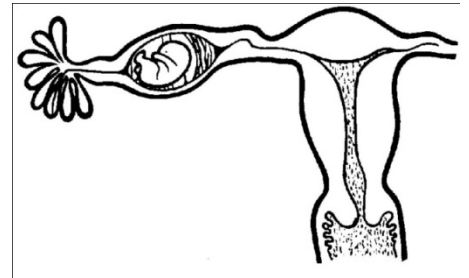
# Pregnancy Complications

## ➤ Premature Birth-

- Birth that takes place at least 3 weeks before the due date.

## ➤ Ectopic Pregnancy-

- when a zygote implants in the fallopian tubes, ovary or cervix- not in the uterus.



# Pregnancy Complications

- Miscarriage-

- The spontaneous expulsion of a fetus before the 20<sup>th</sup> week.

- Stillbirth-

- The delivery of a fetus that has died after the 20<sup>th</sup> week of pregnancy.





# Pregnancy Complications

## ➤ Preeclampsia-

➤ Occurs after the 20<sup>th</sup> week. High blood pressure

➤ This can cause the placenta from getting enough blood to nourish the fetus.

## ➤ Gestational Diabetes

➤ Abnormally high levels of sugar in your blood during pregnancy.





# Closure

Create a flow chart for pregnancy from conception through afterbirth.





# Common Pregnancy Complications

- Ectopic pregnancy
- Gestational diabetes
- Miscarriage
- Preeclampsia
- Premature labor





# For each of the pregnancy complications:

- What is this condition?
- How common is it?
- What causes it and can it be prevented?
- What are the symptoms?
- Can it be treated and if so, how?
- What are the possible results?

\* Ectopic pregnancy, gestational diabetes, miscarriage, preeclampsia, premature labor

