6-Jan-26

Reproductive System

Today's Learning Intention:

To find out about reproduction

By the end of this lesson I will be able to

- ✓ Define the term reproduction.
- ✓ Compare the difference between sexual and asexual reproduction.
- ✓ Describe the human reproductive organs.

6-Jan-26

Reproduction

Reproduction

Reproduction is the process where **new life** is produced within organisms.

The new life is called an **offspring**.

Reproduction

Sexual

Asexual

Reproduction

Sexual

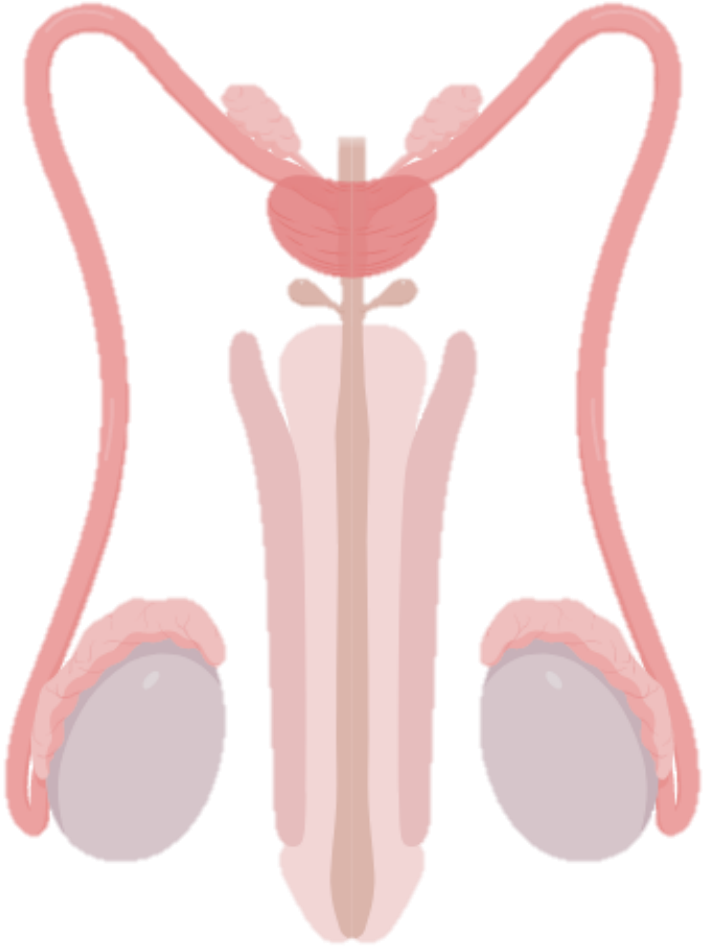
Requires **two** parents to produce an offspring.

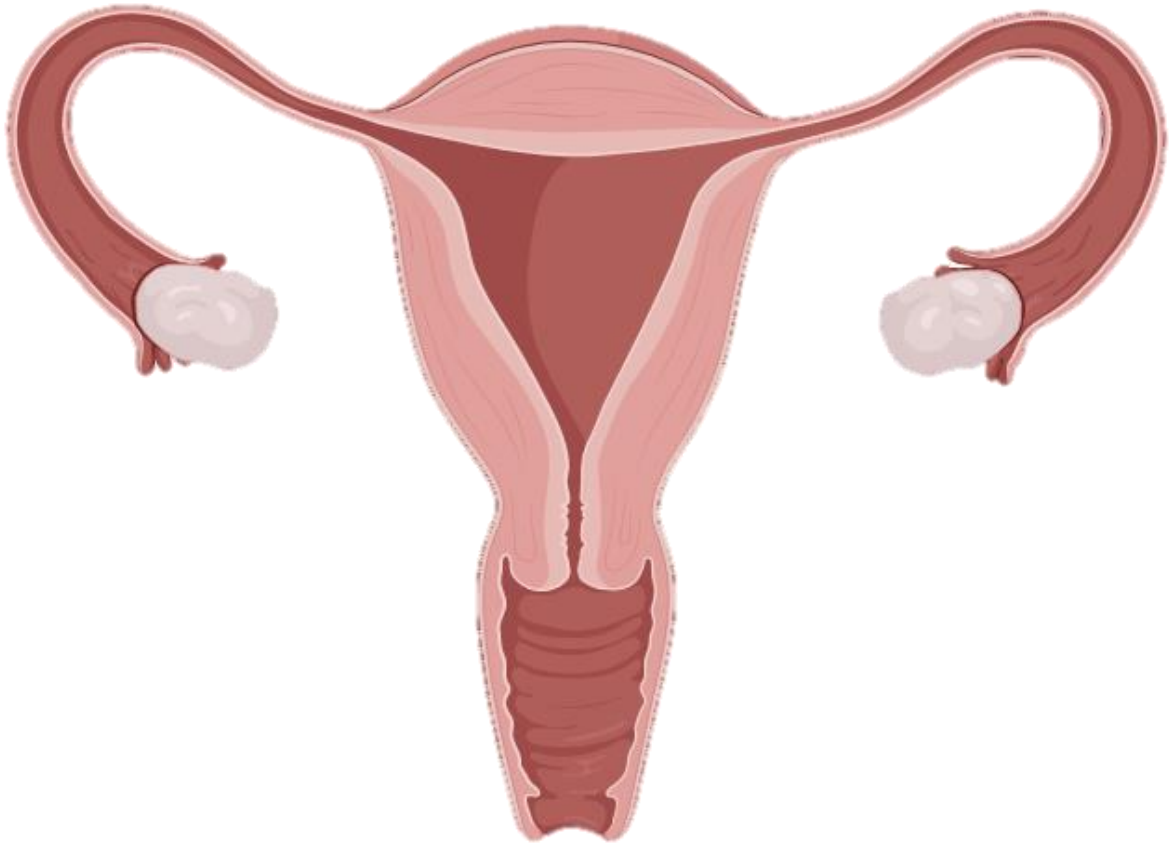
Asexual

Only requires **one** parent to produce an offspring.

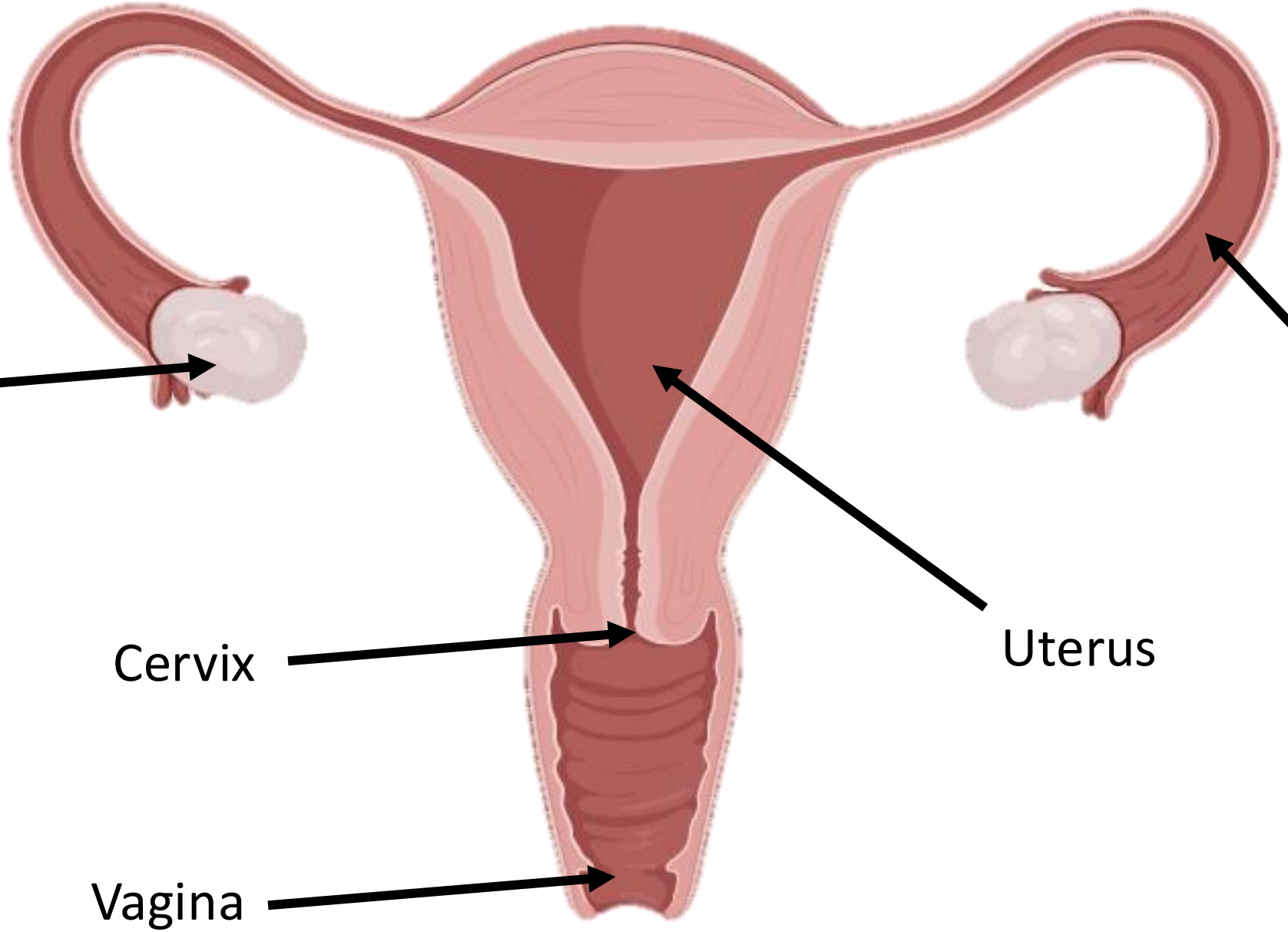
Human Reproductive System

Human Reproductive Organs





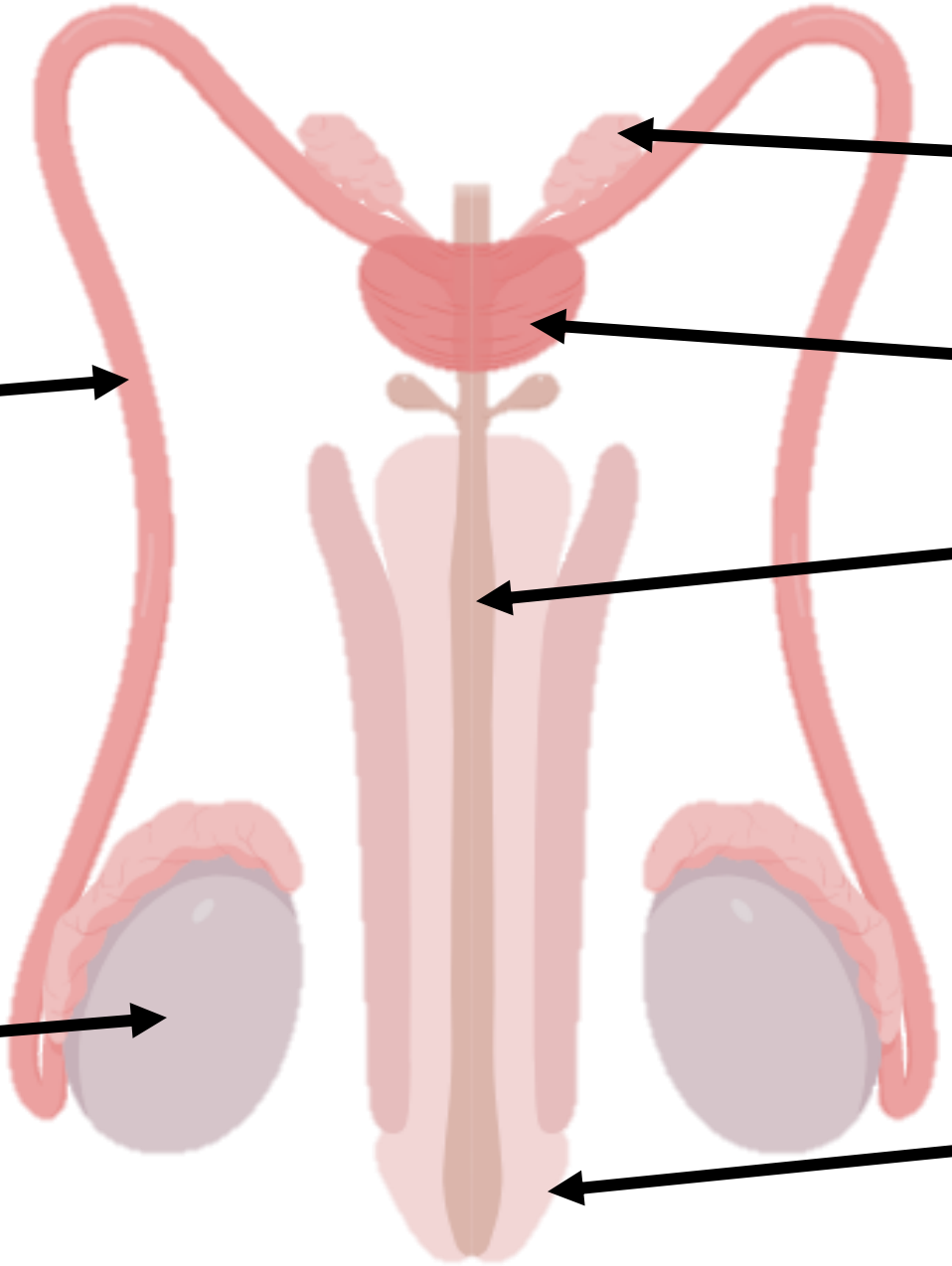
Female Reproductive Organs



Female Reproductive Organs

Structure	Function
Vagina	Penis is inserted here and sperm is deposited.
Ovary	Produces the egg cells
Oviduct	Where egg meets sperm; site of fertilisation
Womb	Site where baby develops
Cervix	Muscle that holds the baby in during pregnancy

Male Reproductive Organs



Seminal Vesicle

Prostate

Sperm Tube

Urethra

Testes

Penis

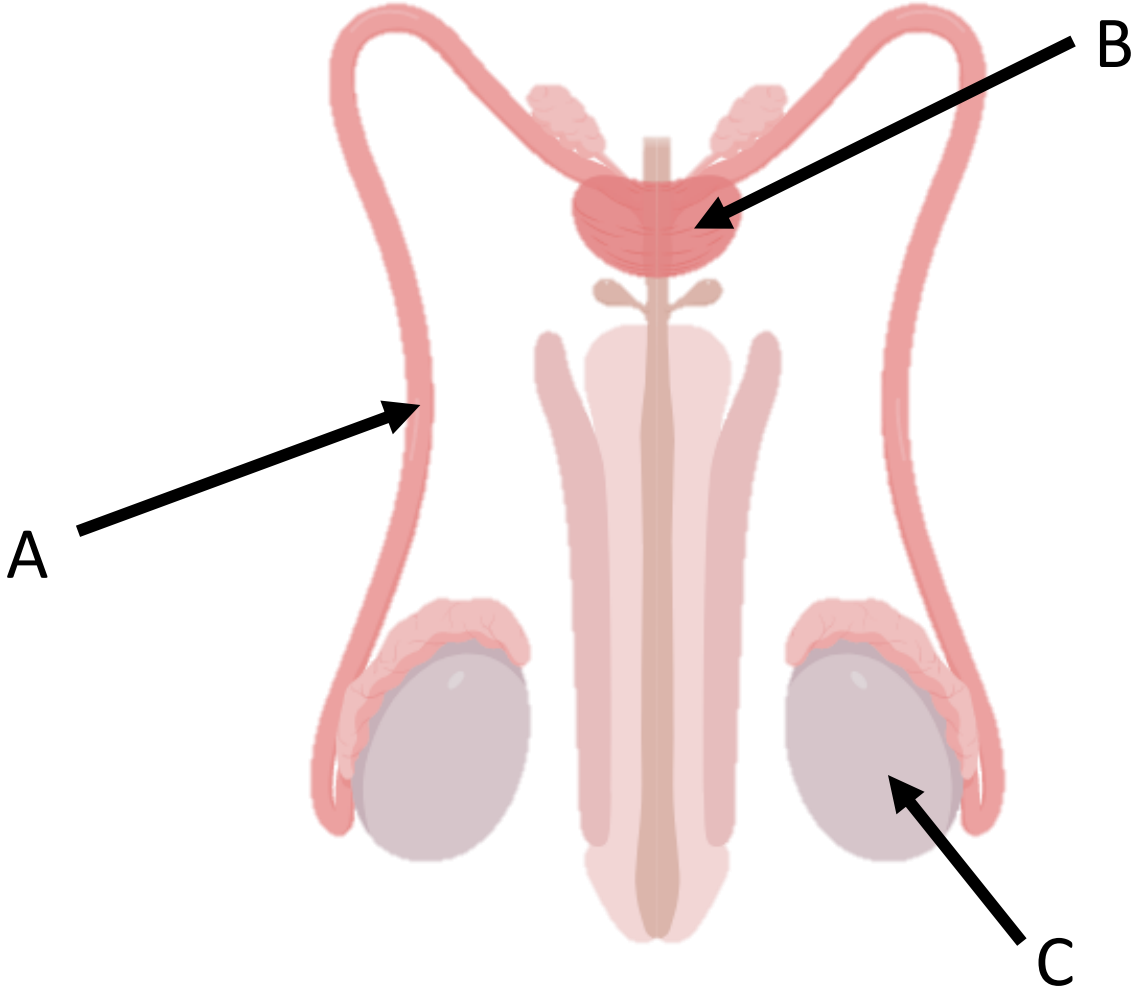
Male Reproductive Organs

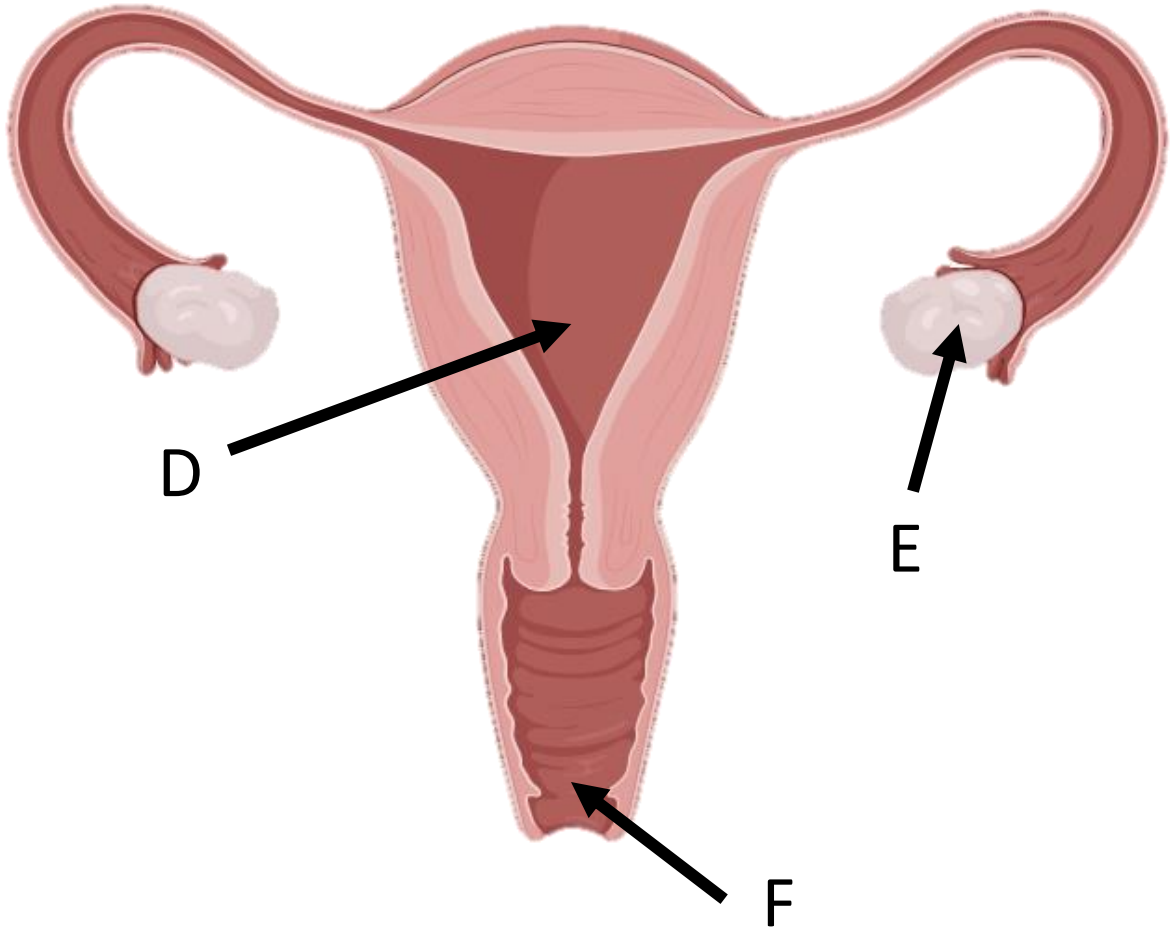
Structure	Function
Penis	Inserted into the vagina; deposits sperm
Testes	Produces the sperm cells
Seminal Vesicle	Fluid is produced for sperm to travel in
Prostate	Fluid is produced for sperm to travel in
Sperm Tube	Tube carries sperm to the penis
Urethra	Tube that carries sperm out of the penis

I can now

- ✓ Define the term reproduction.
- ✓ Compare the difference between the different types of reproduction.
- ✓ Describe the human reproductive organs.

What structures are labelled?





Today's Learning Intention:

To find out about fertilisation.

By the end of this lesson I will be able to

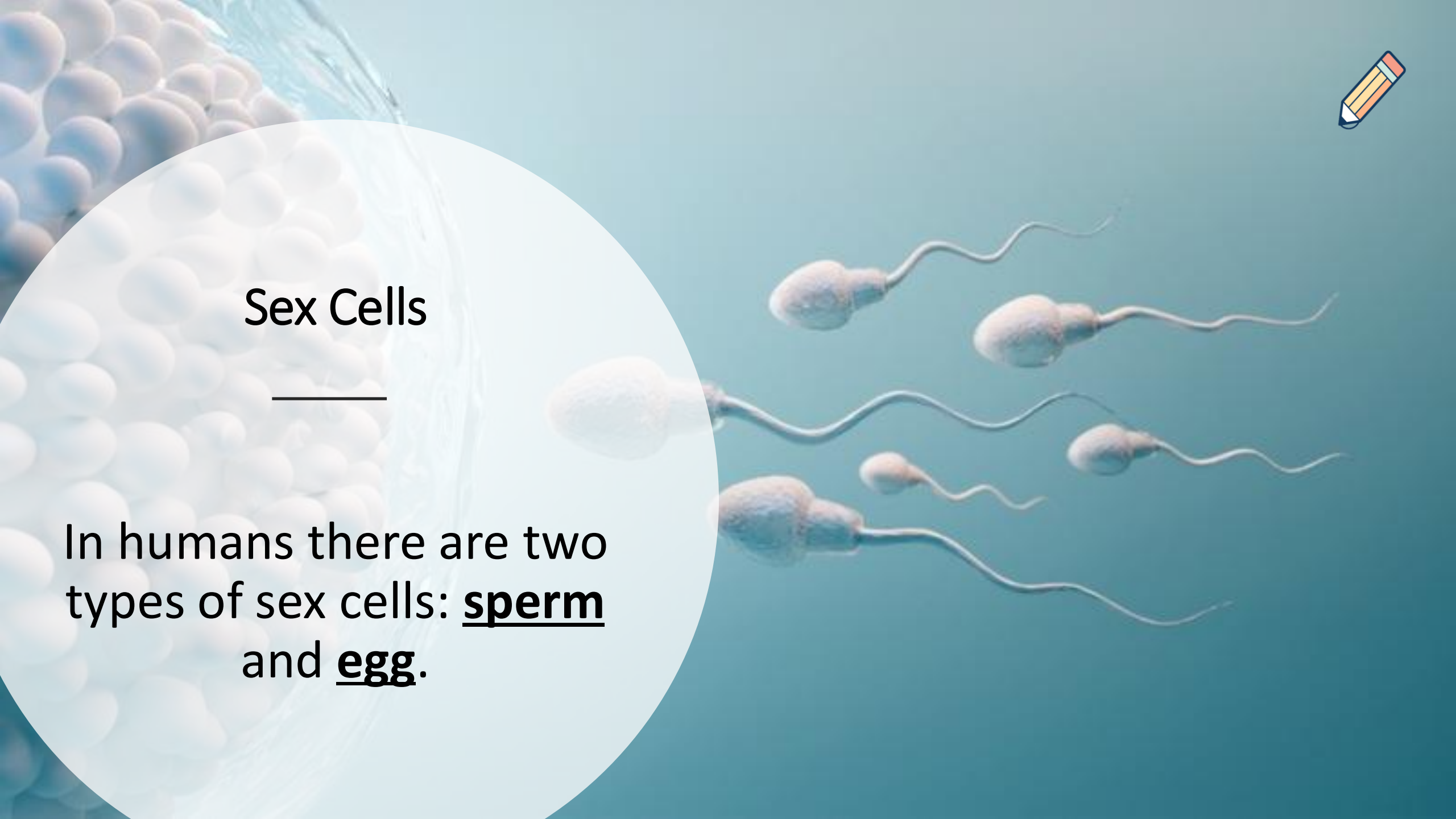
- ✓ State what the sex cells are within humans.
- ✓ Describe the structure of the human sex cells.
- ✓ Explain the process of fertilisation

6-Jan-26

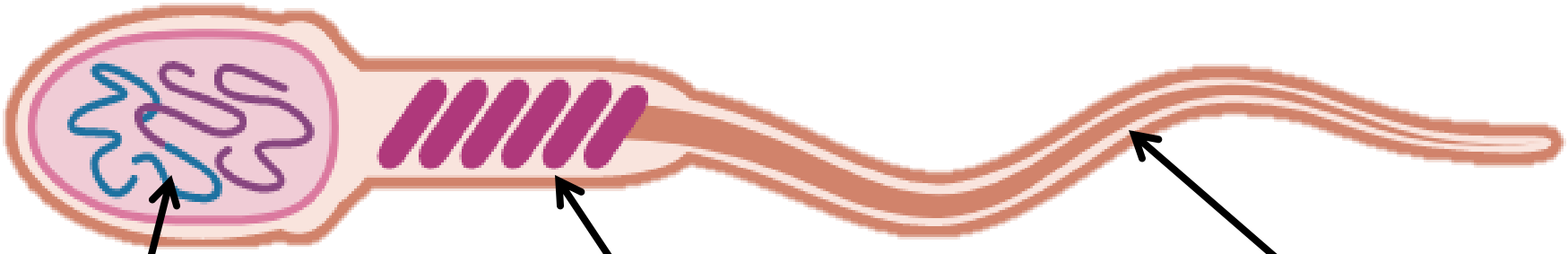
Sex Cells

Sex Cells

In humans there are two types of sex cells: **sperm** and **egg**.



Sperm Cell

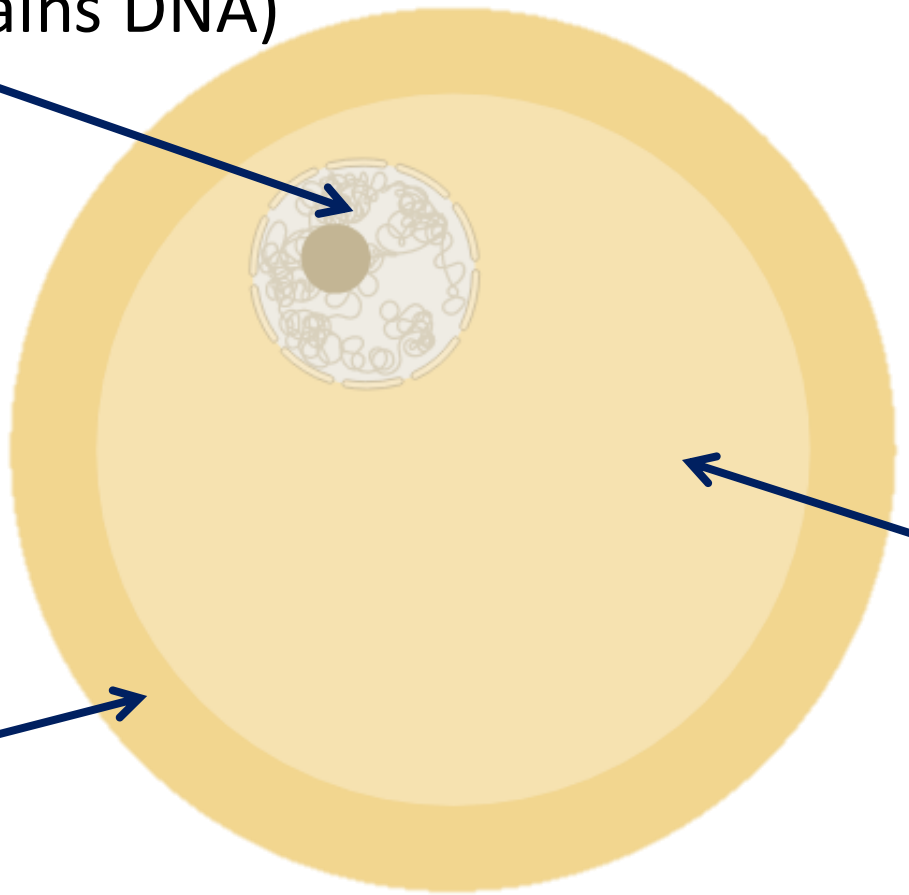


Head
(nucleus containing the DNA)

Middle
(to produce energy to swim)

Tail
(to swim to the egg)

Egg Cell



Nucleus (contains DNA)

Tough Cell Membrane

Cytoplasm (containing food store)

Fertilisation

https://www.bbc.co.uk/teach/class-clips-video/science-biology-ks3-ks4-gcse-human-fertilisation/zkjhbdm

Ovulation

Every **28 days** a female will release one **egg** from the ovary.

This is called **ovulation**.

Fertilisation

Fertilisation is the **fusion** of the **nucleus** of the sperm and

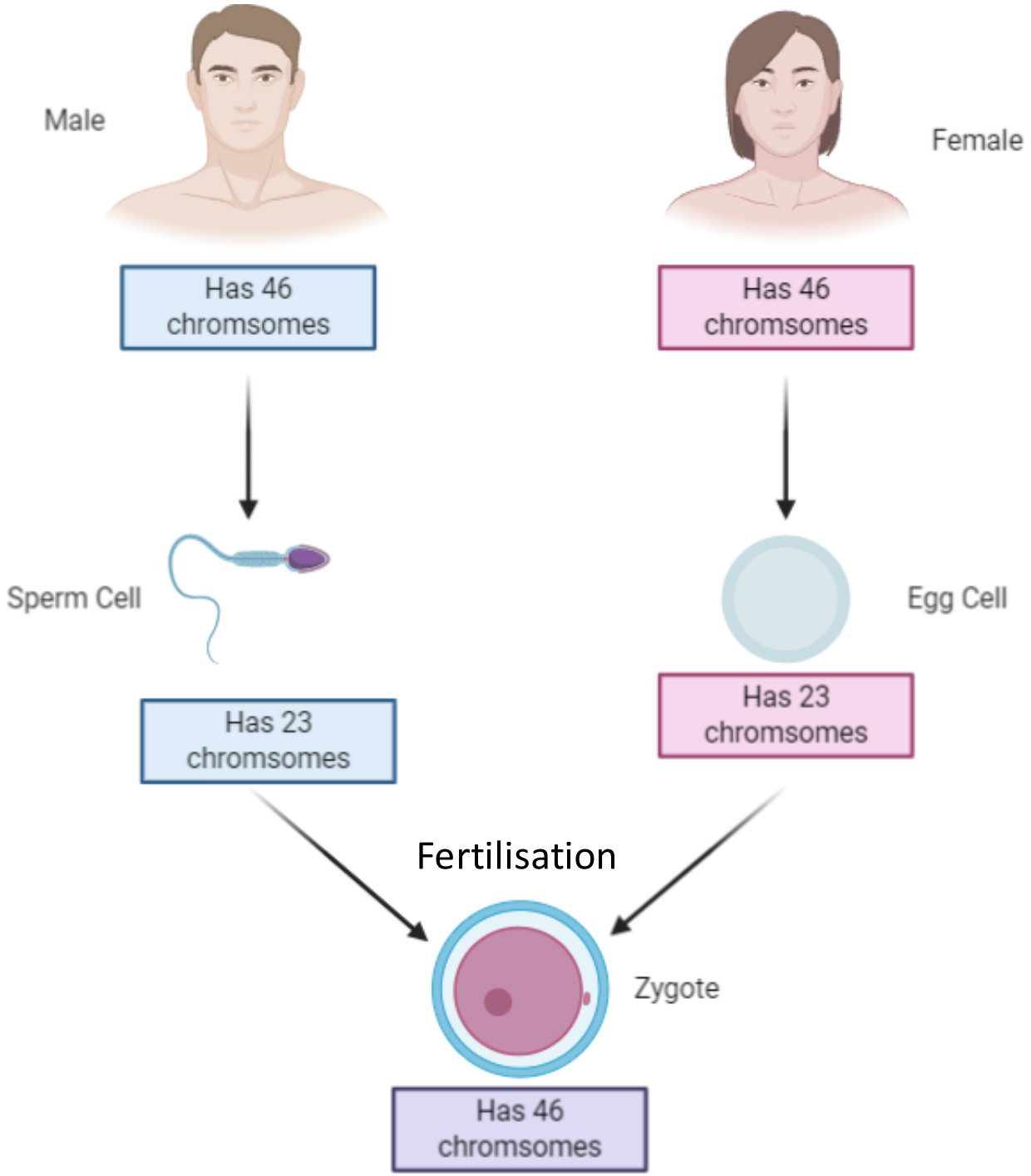
the nucleus of the egg to produce a **zygote**.

Implantation

If the implantation is successful then pregnancy can

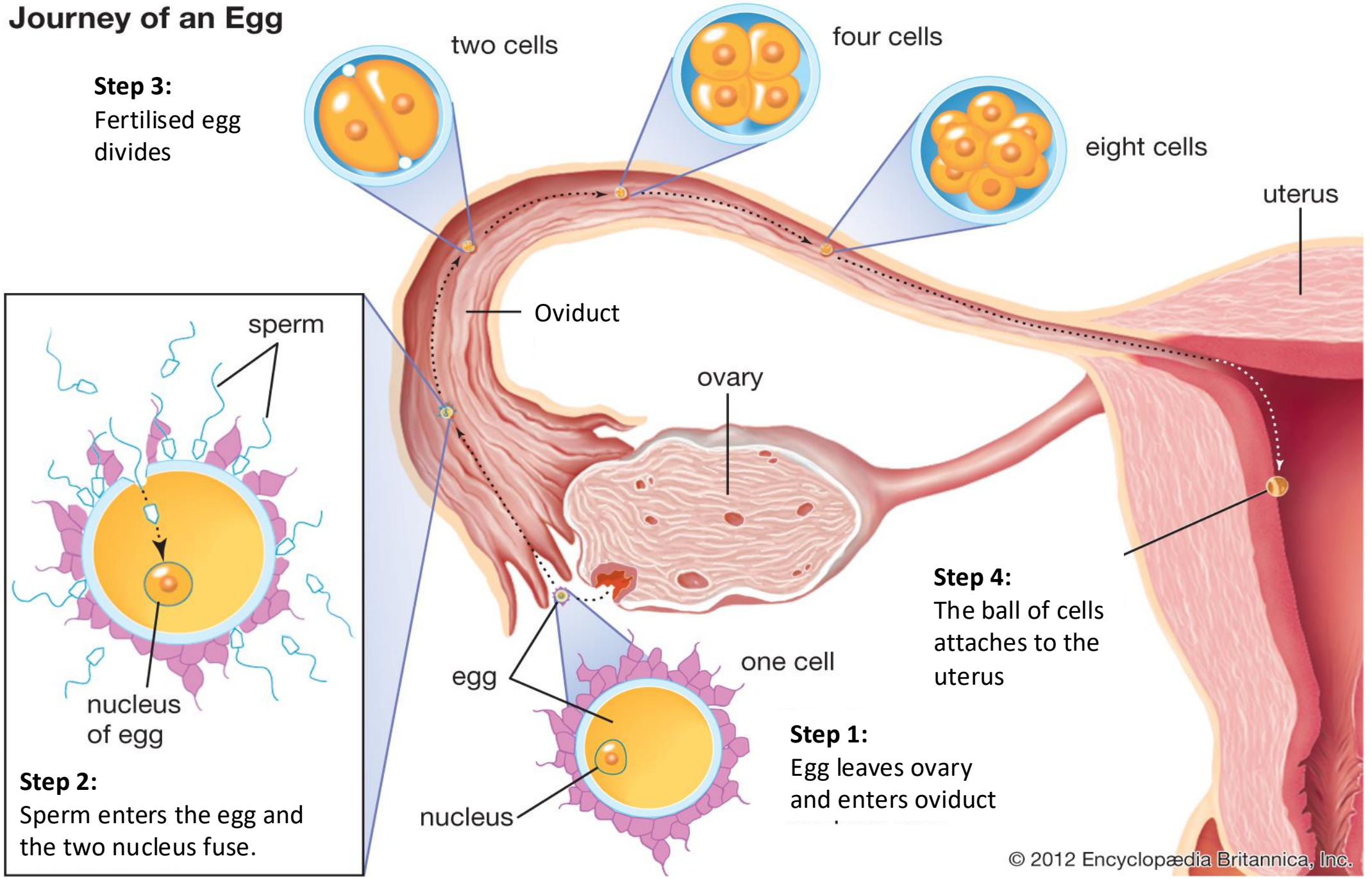
commence.

https://www.bbc.co.uk/teach/class-clips-video/science-biology-ks3-ks4-gcse-human-fertilisation/zkjhbdm


Male
Female
Has 46 chromsomes
Has 46 chromsomes
Sperm Cell
Egg Cell
Has 23 chromsomes
Has 23 chromsomes
Fertilisation
Zygote
Has 46 chromsomes

Journey of an Egg

Step 3:
Fertilised egg divides



Step 2:
Sperm enters the egg and the two nucleus fuse.

Step 4:
The ball of cells attaches to the uterus

Step 1:
Egg leaves ovary and enters oviduct

I can now

- ✓ State what the sex cells are within humans.
- ✓ Describe the structure of the human sex cells.
- ✓ Explain the process of fertilisation

Today's Learning Intention is

To find out about the stages of pregnancy

By the end of this lesson I will be able to…

- ✓ State how long a pregnancy lasts in humans.
- ✓ State what is meant by a trimester.
- ✓ Describe structures involved in the developing baby.
- ✓ Explain how the baby gets nutrients and oxygen.

6-Jan-26

Pregnancy

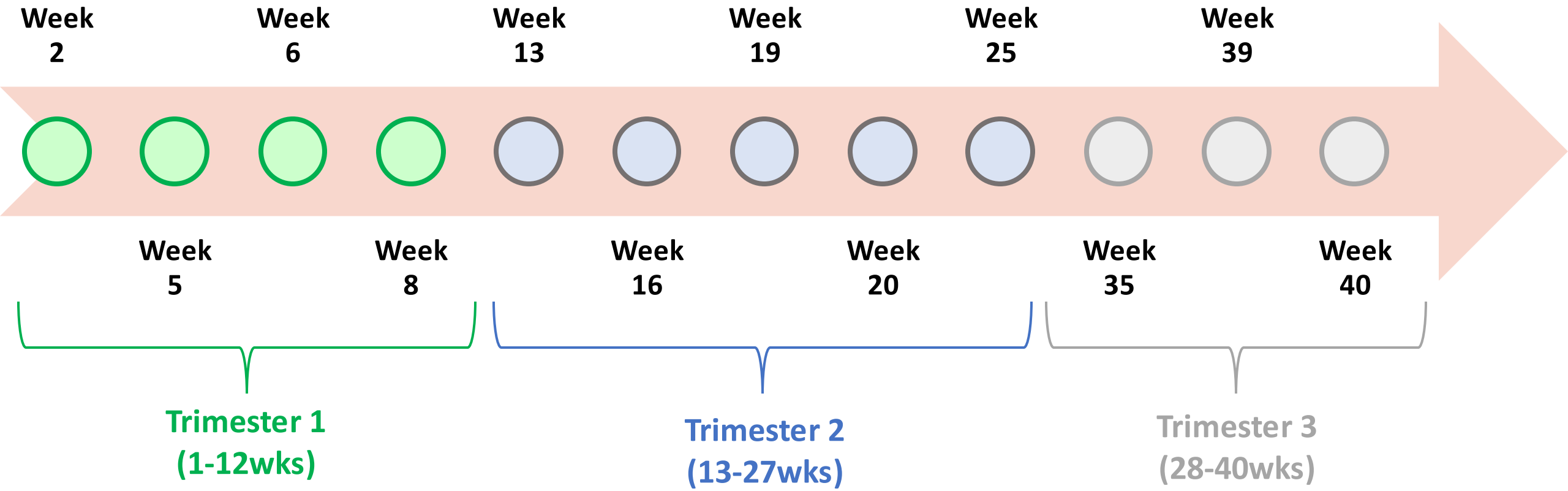
https://www.youtube.com/watch?v=XEfnq4Q4bfk

Pregnancy

The length of a human pregnancy is **9 months** (40wks).

Pregnancy is split into **trimesters** (groups of 3 months)

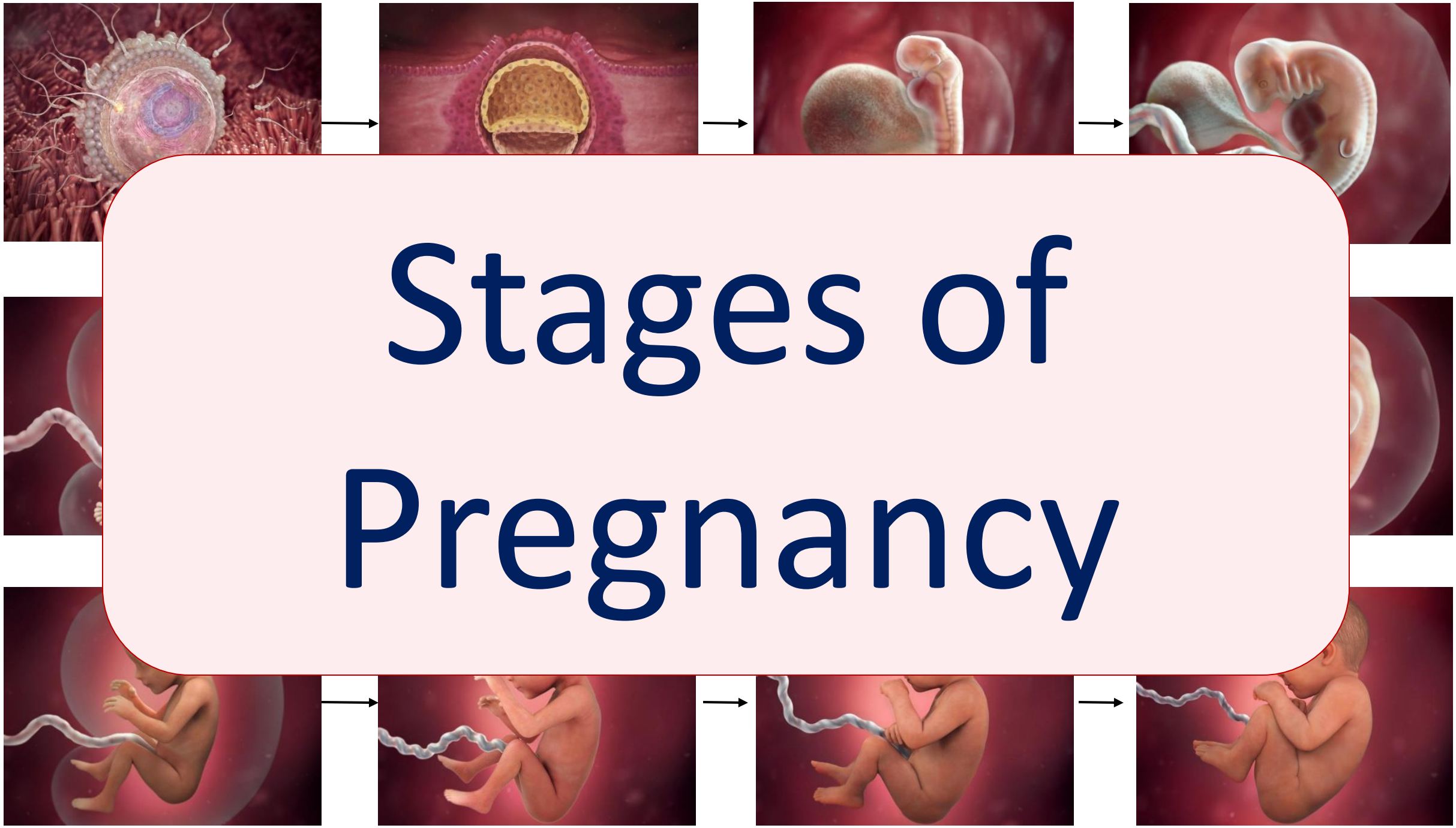
Stages in Pregnancy



Pregnancy

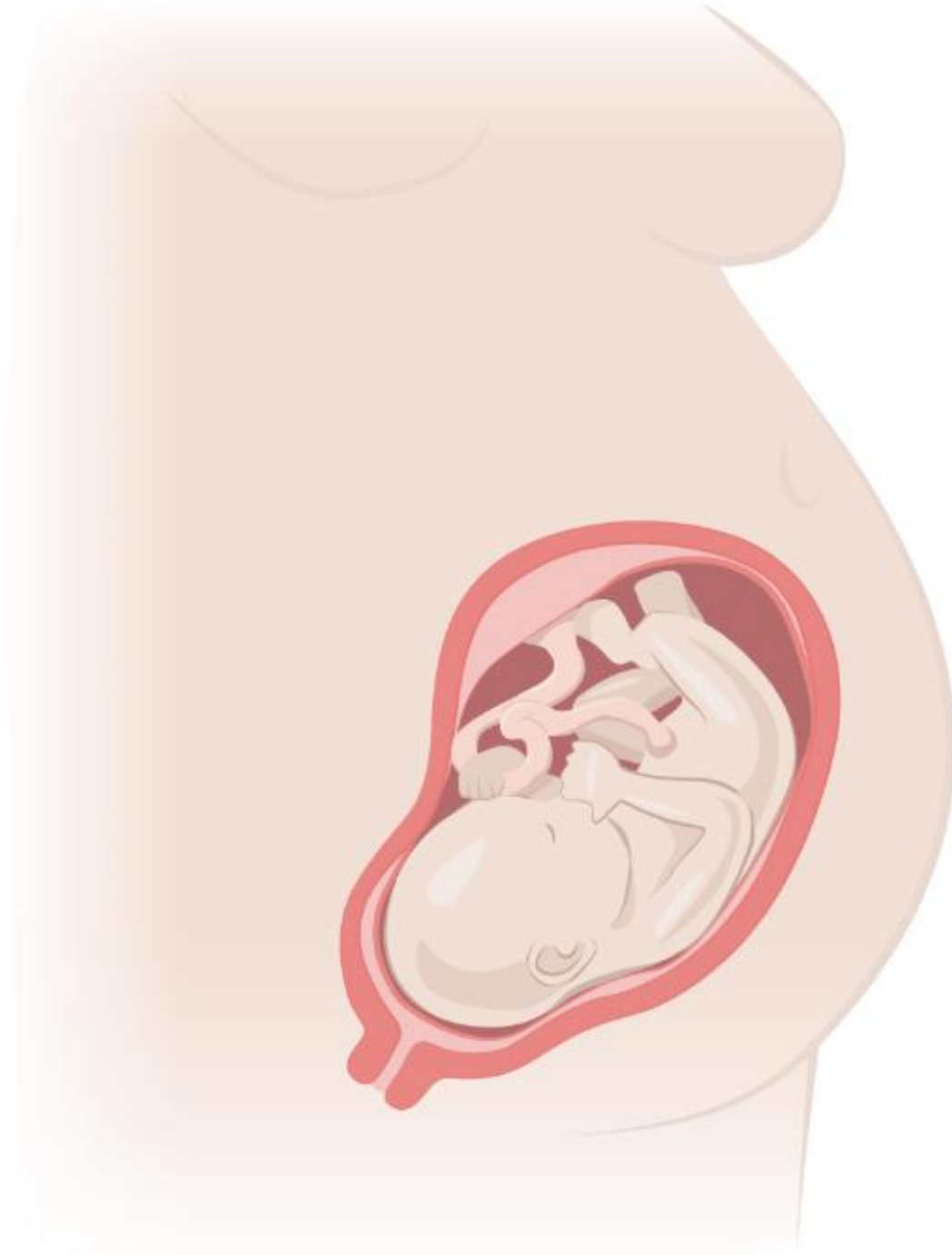
After the ball of cells has **implanted** into the wall of the

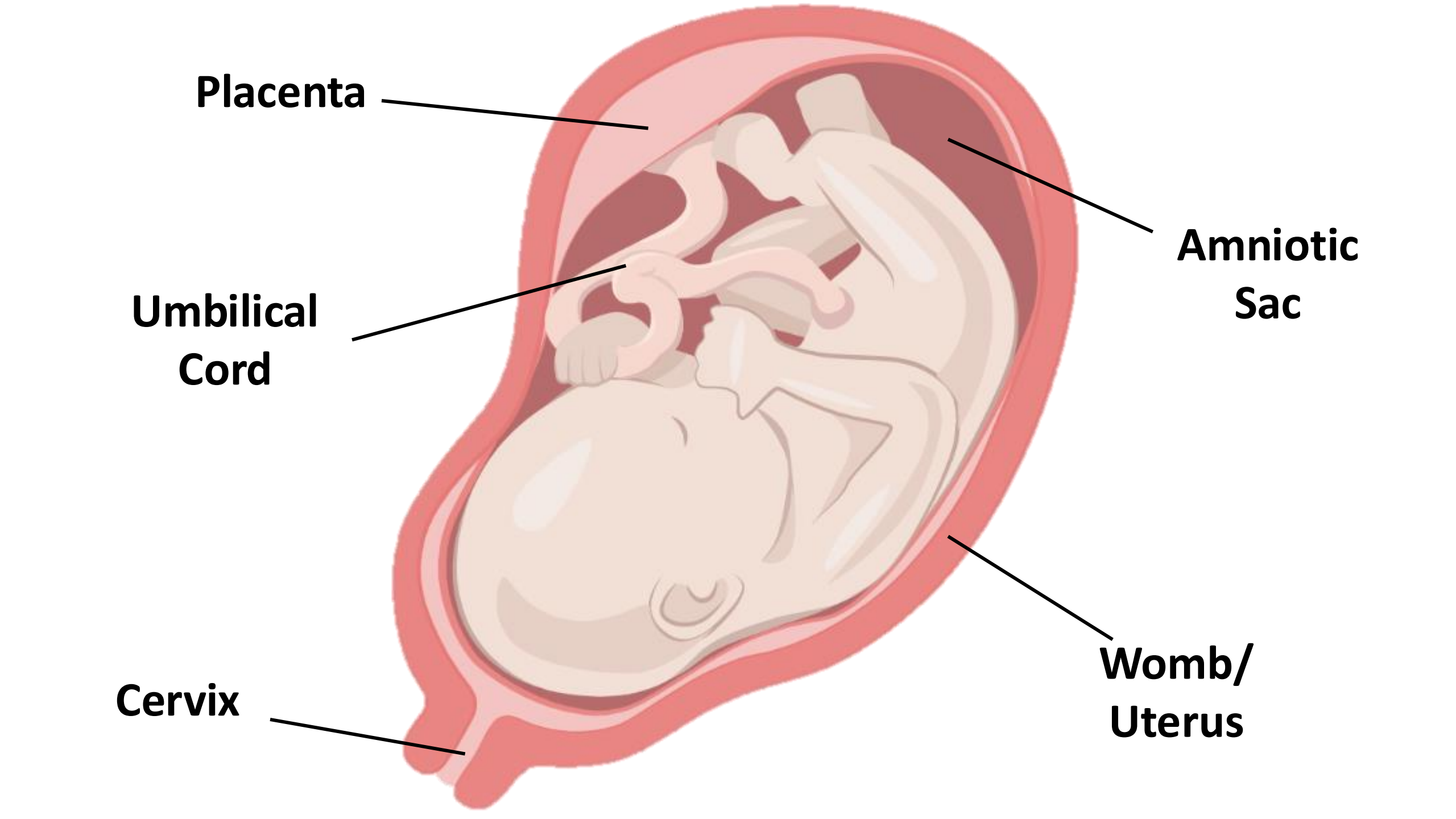
womb, it will start to develop by **week 2**.

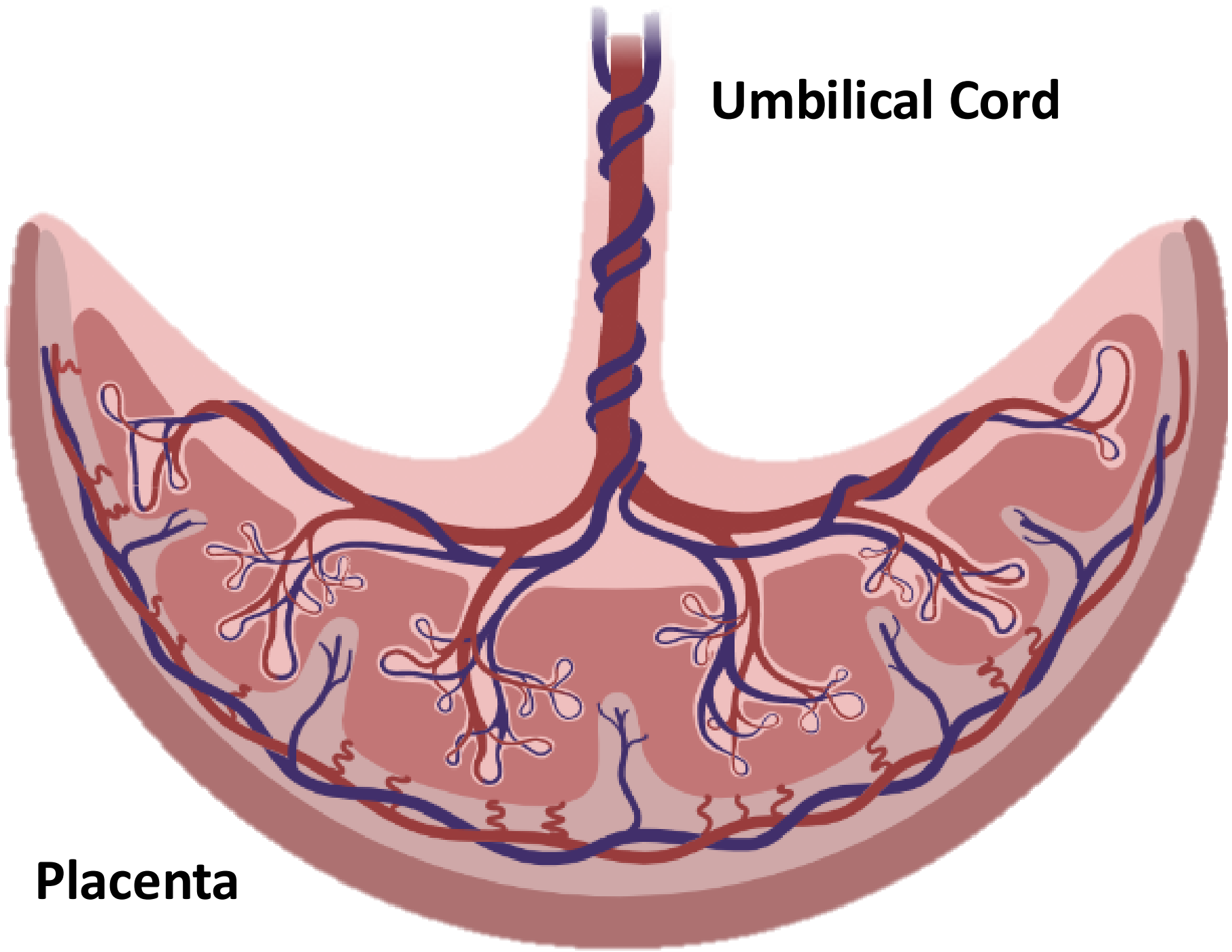


Stages of Pregnancy

Developing Baby




Placenta
Amniotic Sac
Umbilical Cord
Womb/ Uterus
Cervix


Umbilical Cord
Placenta

Amniotic Sac

Developing Baby

Structure	Function
Amniotic Sac	Bag containing fluid that surrounds and protects the baby.
Placenta	Attached to the womb to provide oxygen and nutrients for the baby.
Umbilical Cord	Passes the oxygen and nutrients from the placenta to the baby.

Pregnancy

After **40wks** of development, the baby is now ready for

birth.

https://youtu.be/5XG55QqS_Kw?t=121

I can now…

- ✓ State what the gestation period of a human is.
- ✓ State what is meant by a trimester.
- ✓ Describe structures involved in the developing baby.
- ✓ Explain how the baby gets nutrients and oxygen.

Today's Learning Intention is

To find out about risks to the baby.

By the end of this lesson I will be able to…

- ✓ State what three substances can add risk to a developing baby.
- ✓ Describe what can happen to a baby if exposed to smoking, alcohol and drugs.

6-Jan-26

Risks to the Baby

Risks to the Baby

Harmful chemicals from **smoking**, **alcohol** and certain **drugs** in the mother's bloodstream can be passed onto the baby.

Smoking in pregnancy

Smoking
during pregnancy
causes up to:

2,200 premature births,
5,000 miscarriages and
300 perinatal deaths
every year in the UK.

It also increases the risk of complications in pregnancy and of the child developing a number of conditions later on in life such as:

premature birth

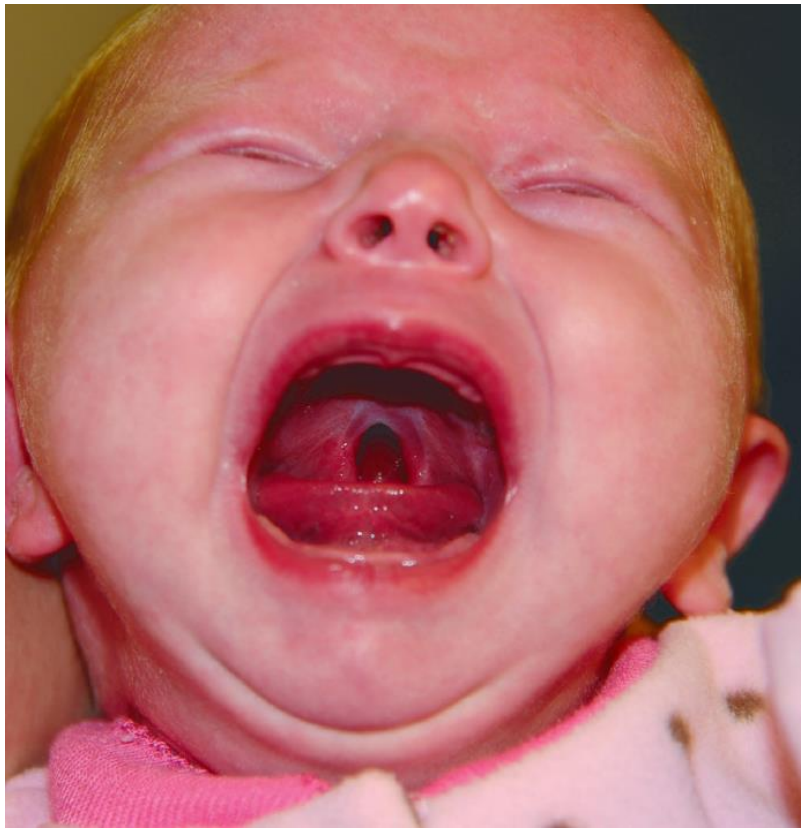
low birth weight

problems of ear, nose and throat

respiratory conditions

obesity

diabetes


Smoking

Risks of Drinking While Pregnant

Low birth weight

Preterm delivery

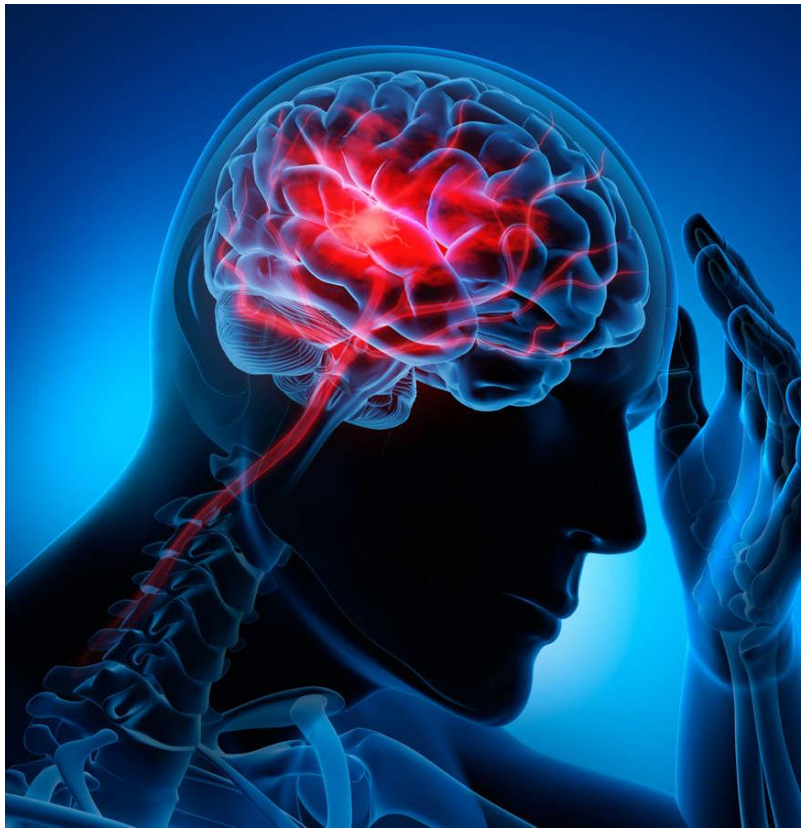
Birth defects (including facial deformities)

Fetal alcohol spectrum disorder (FASD)

Developmental delays and long-term cognitive disabilities

verywell

Alcohol


Drugs

Risks to the Baby

Chemical	Problems to the Baby
Smoking	Heart issues and cleft palate/lip
Alcohol	Vision and hearing problems and issues with heart and kidneys.
Drugs	Addicted to drugs, low brain development and low birth weight.

I can now…

- ✓ State what three substances can add risk to a developing baby.
- ✓ Describe what can happen to a baby if exposed to smoking, alcohol and drugs.