

HUMAN REPRODUCTION – THE MIRACLE OF LIFE

Life Sciences

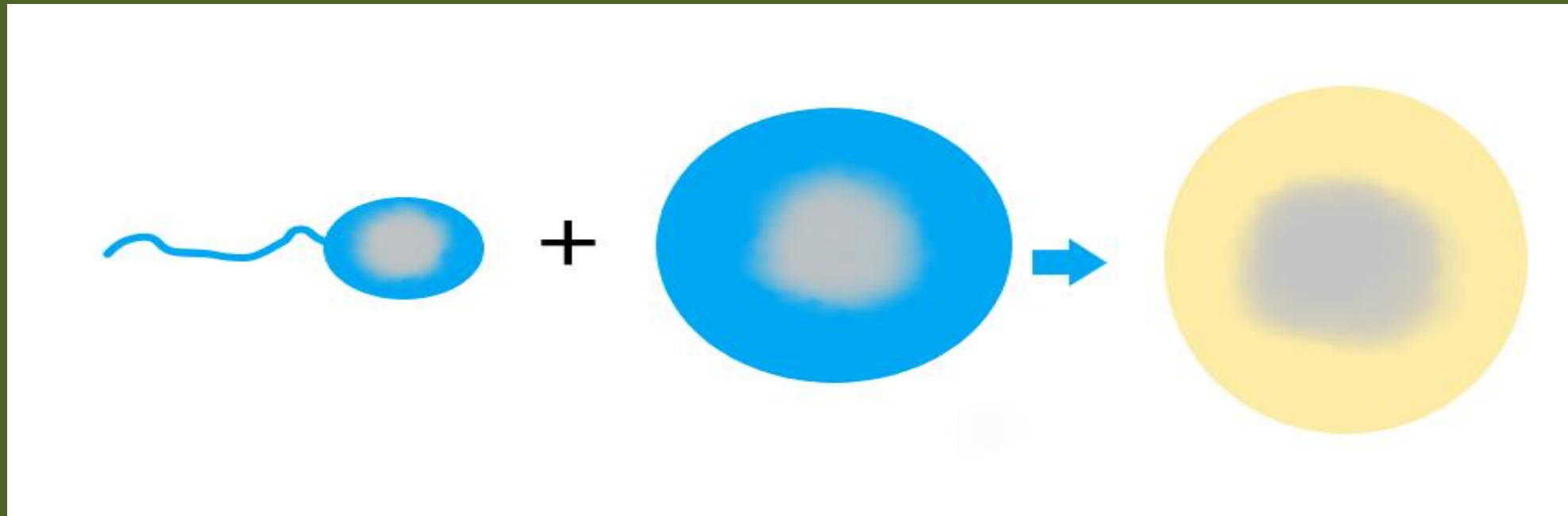
Life Sciences

Key Points: Human Reproduction

- Fertilisation
- Development of the Zygote
- Role of Oestrogen and Progesterone
- Diagram of a Developing Foetus
- Functions of Structures of the Developing Foetus

Life Sciences

Fertilisation



23 Chromosomes + 23 Chromosomes = 46 Chromosomes in Zygote (2n)

Life Sciences

Fertilisation

When the nuclei of a sperm cell and an ovum combine. Each gamete contributes a set of chromosomes (n), the result is a zygote ($2n$).

Life Sciences



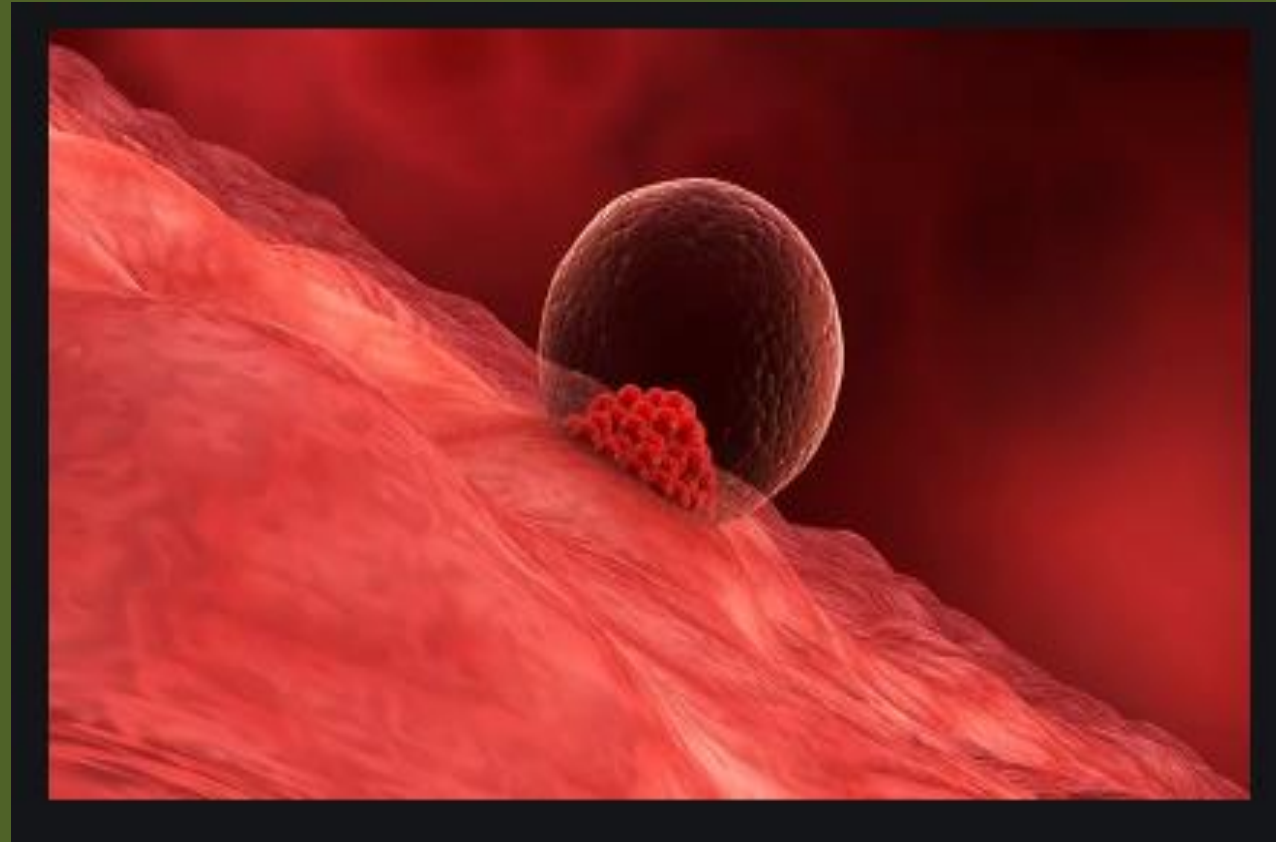
Morula

Blastula and Blastocyst

Embryo

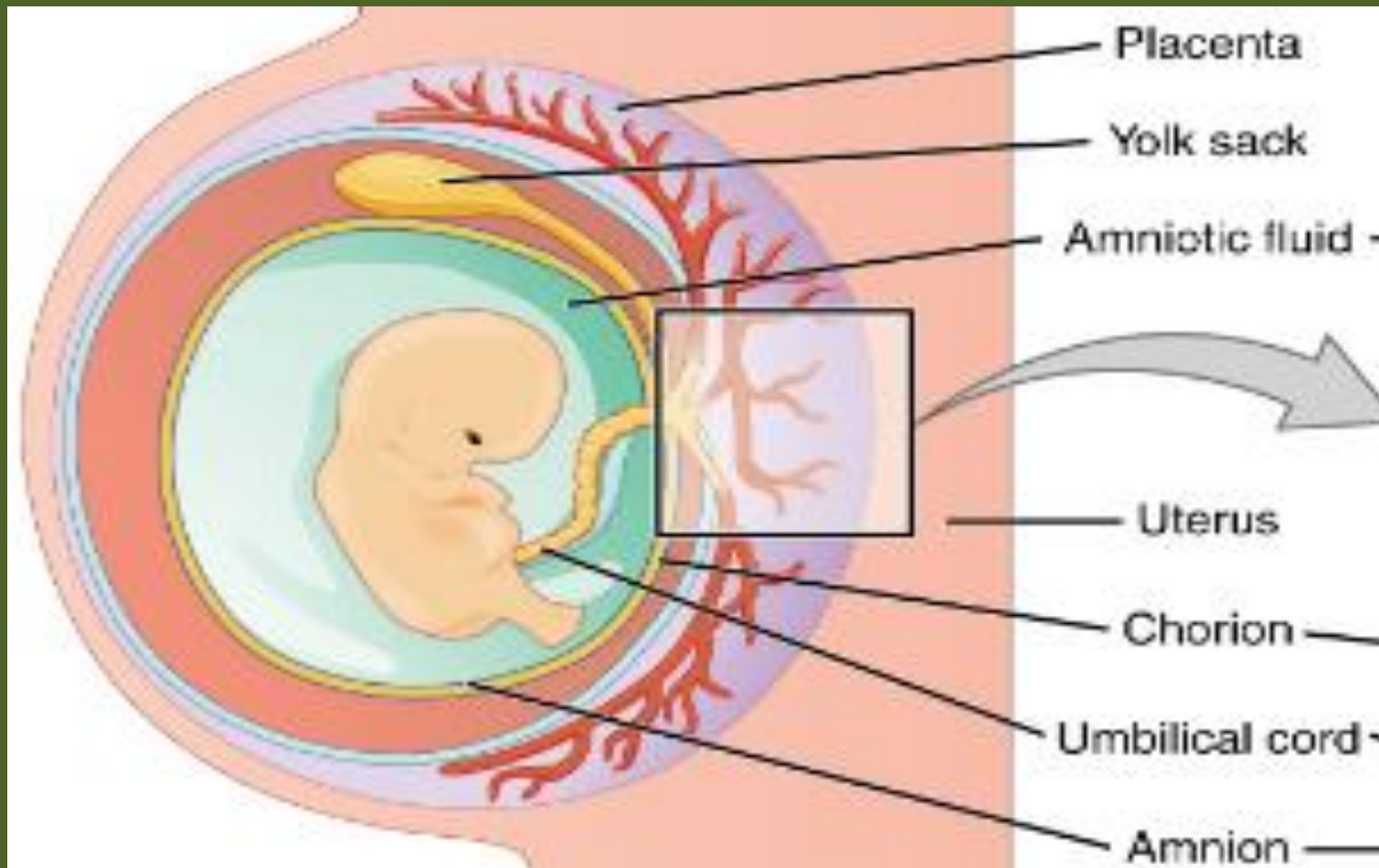
Life Sciences

Implantation



Life Sciences

Developing Foetus



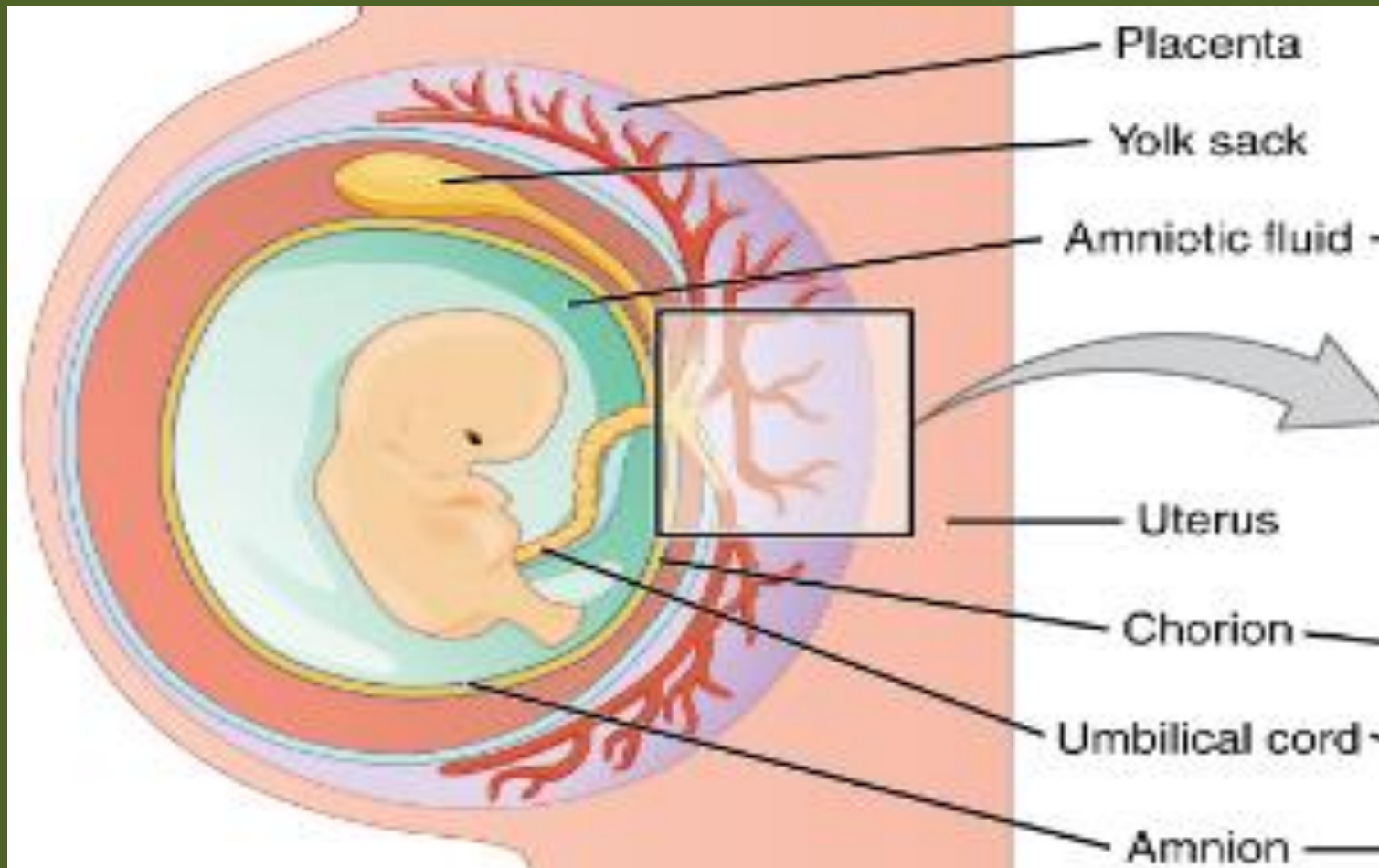
Life Sciences

What are the following?

- Chorion
- Chorionic villi
- Amnion
- Umbilical cord
- Placenta

Life Sciences

Developing Foetus



Life Sciences

What are the functions of the following?

- Chorion
- Chorionic villi
- Amnion
- Umbilical cord
- Placenta

Life Sciences

Foetus at 20 Weeks



Life Sciences

Functions of The Chorion

- Plays a Role in Gases Exchange between Mother and Foetus
- Development of the Placenta
- Eliminates Foetal Waste

Life Sciences

Foetus at 36 weeks



Life Sciences

Amniotic Fluid



Life Sciences

Functions of Amniotic Fluid

- Prevents dehydration
- Protects the foetus against physical injury, acting as a shock absorber.
- Prevents extreme temperature changes.

Life Sciences

The Placenta



Life Sciences

Functions of the Placenta

- Gases exchange between mother and foetus.
- Nutrients diffuse from mother's blood to foetus.
- Micro-filter to prevent viruses in mother's blood to enter the foetus.
- Allows antibodies from mother to foetus.
- Produces Progesterone.

Life Sciences

The role of Oestrogen during Pregnancy

- Causes the uterus to grow.
- Triggers the development of the foetus' organs.
- Stimulates the development of the placenta.
- Regulates other female hormones.

Life Sciences

The role of Progesterone during Pregnancy

- Maintains the endometrium.
- Causes an increase in blood flow to the uterus.
- Prevents further ovulation during pregnancy.

Life Sciences

Key Points: Human Reproduction

- Fertilisation
- Development of the Zygote
- Role of Oestrogen and Progesterone
- Diagram of a Developing Foetus
- Functions of Structures of the Developing Foetus

Life Sciences

