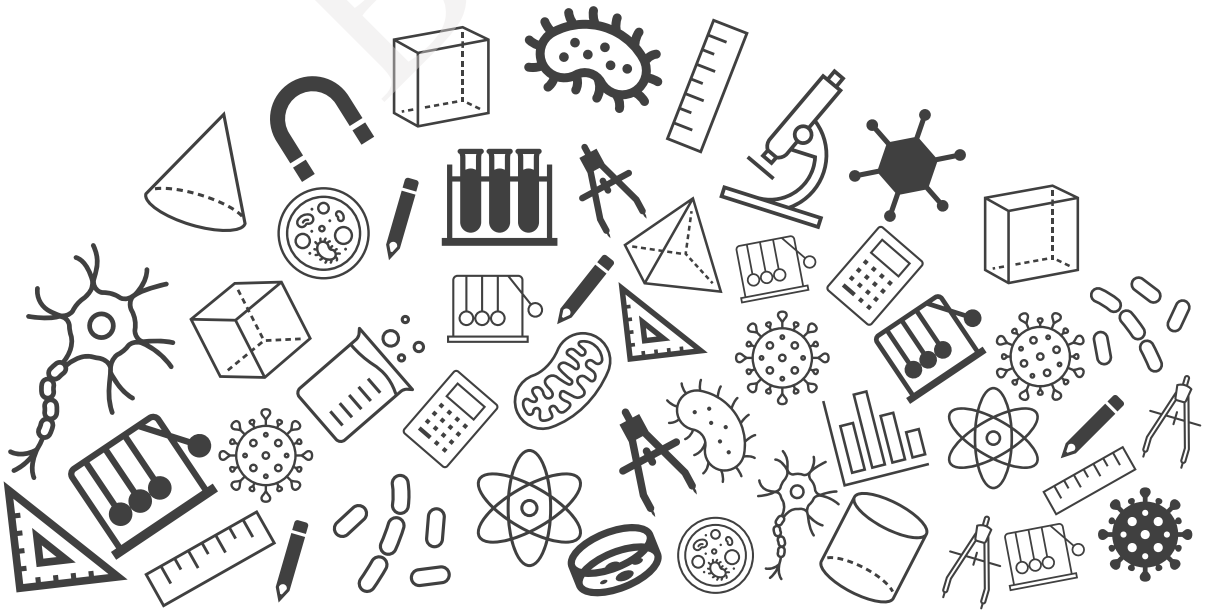
Grade 08
Chapter Notes



BYJU'S Classes

Class Notes

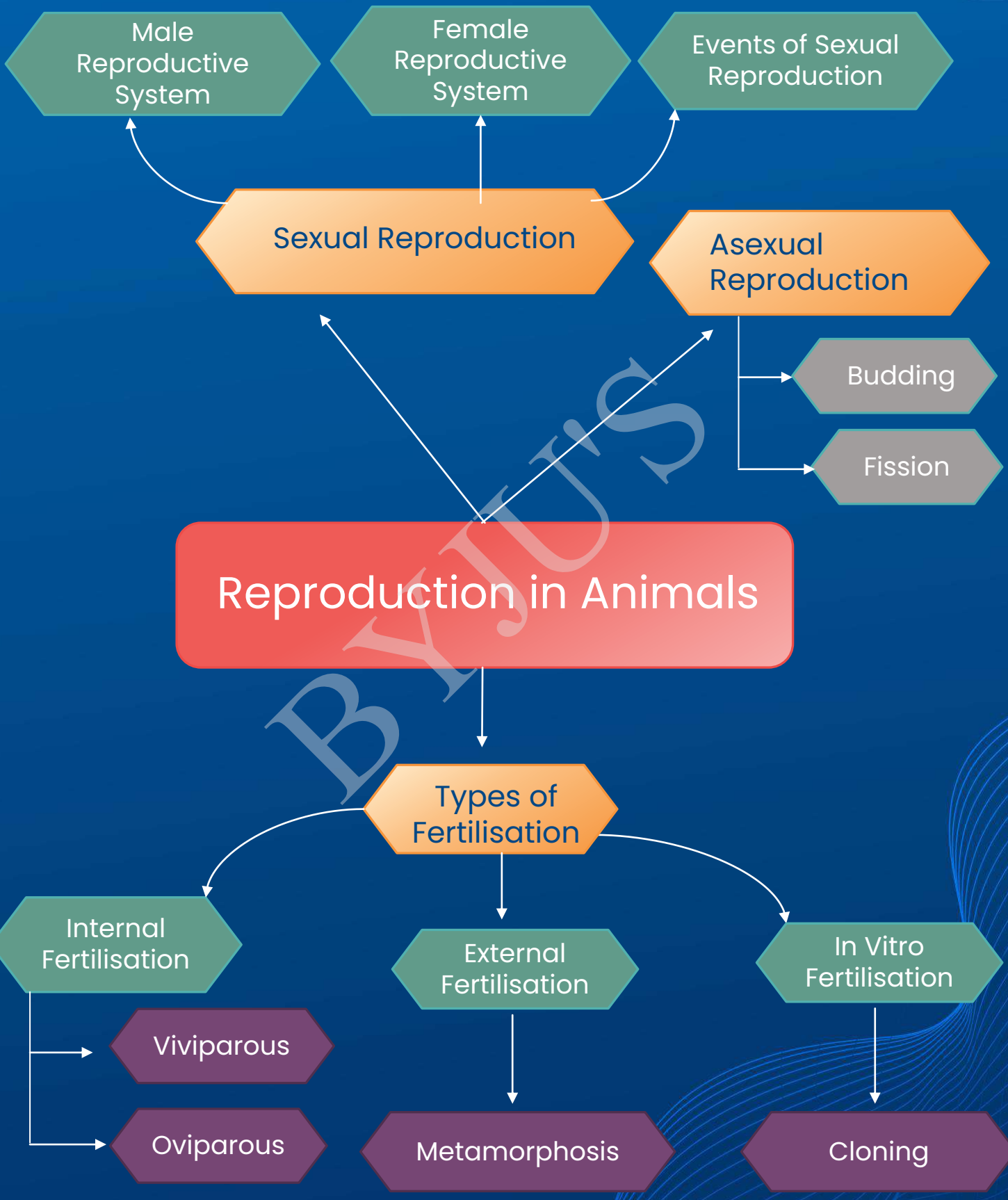
Reproduction in Animals

Grade 8

Topics to be Covered

1. Reproduction
   - 1.1 Asexual reproduction
   - 1.2 Sexual reproduction
2. Asexual Reproduction
   - 2.1 Fission
   - 2.2 Budding
3. Sexual Reproduction
   - 3.1 Male Reproductive System
   - 3.2 Female Reproductive System
   - 3.3 Events in Sexual Reproduction
4. Types of Fertilisation
   - 4.1 Internal Fertilisation
   - 4.2 External Fertilisation
   - 4.3 In Vitro Fertilisation

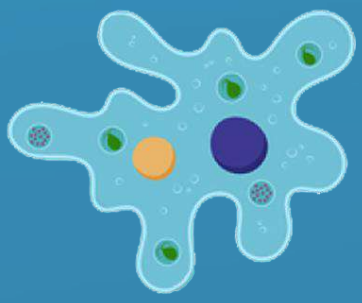
Mind Map



1. Reproduction

- The process in which organisms produce young ones of their own kind is known as reproduction.
- Reproduction ensures continuation of species.

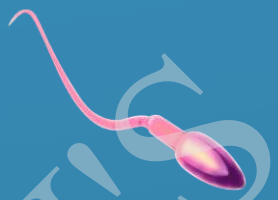
Asexual Reproduction



Amoeba

Hydra

Sexual Reproduction



Sperm

Ovum

1.1 Asexual Reproduction

- Involves only one parent.
- Gametes are not formed.
- Fertilisation doesn't occur.

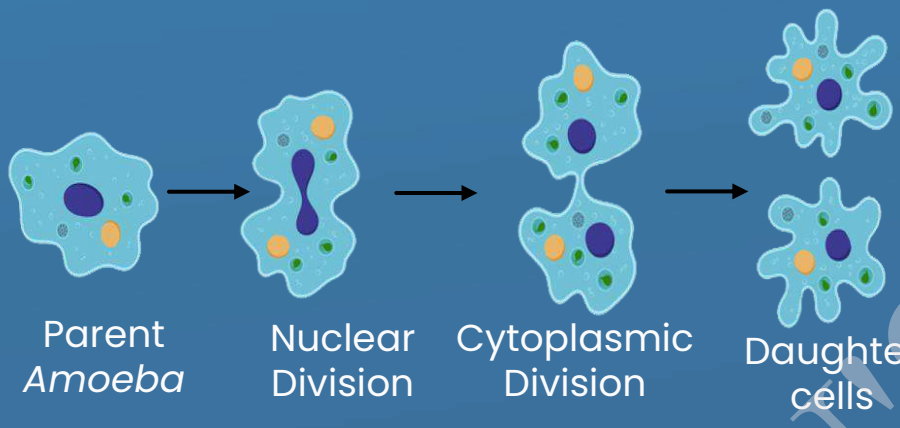
1.2 Sexual Reproduction

- Involves both the parents.
- Gametes are formed.
- Fertilisation occurs.

2. Asexual Reproduction

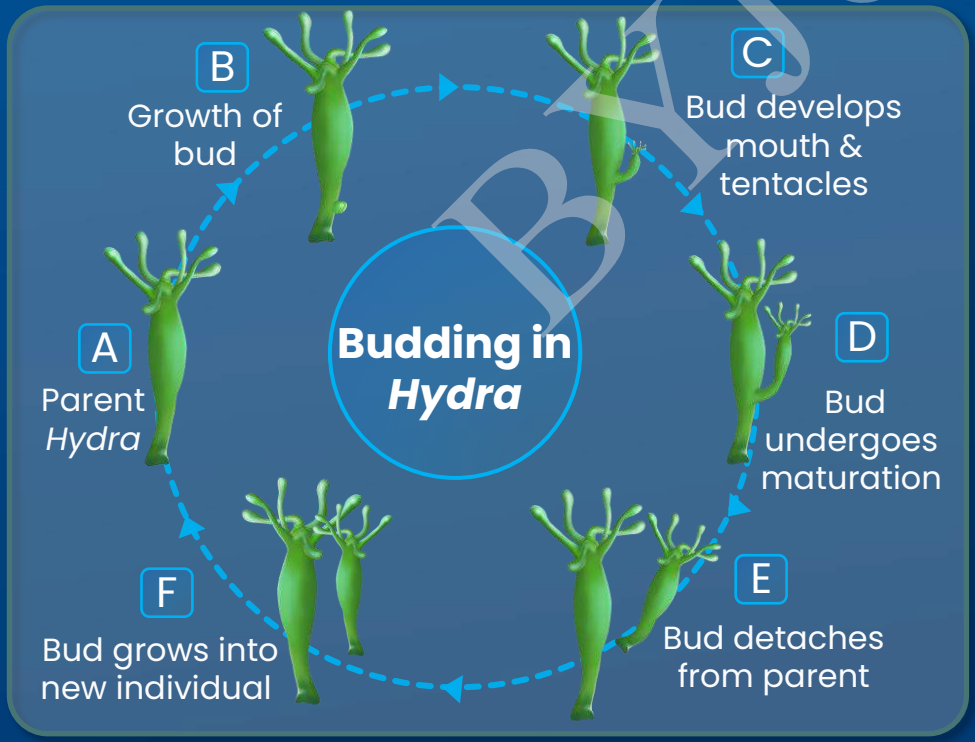
The two types of asexual reproduction that we have studied is fission in *Amoeba* and budding in *Hydra*.

2.1 Fission



Amoeba reproduces by dividing itself into two daughter cells.

2.2 Budding

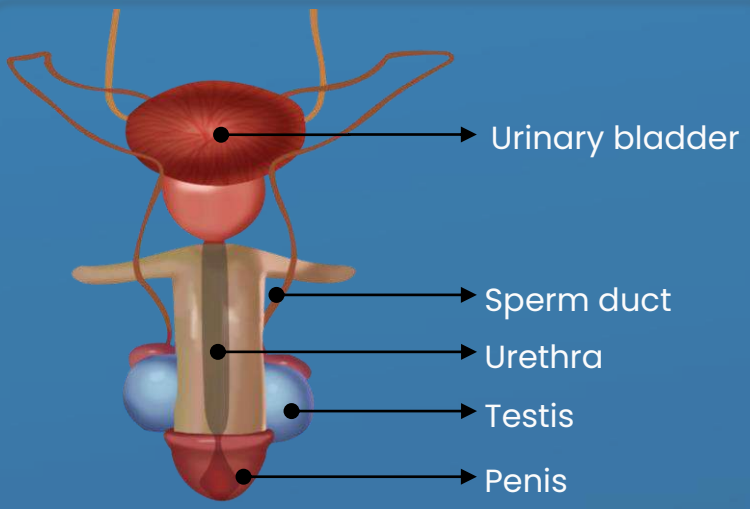


In *Hydra*, new individuals develop from buds.

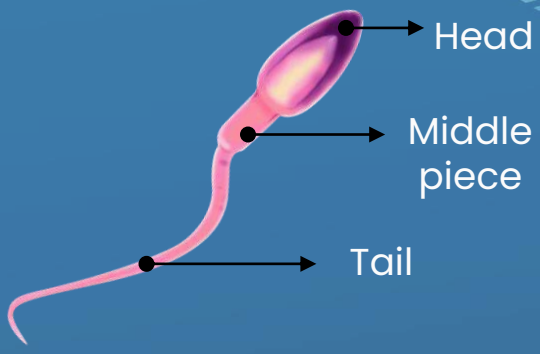
3. Sexual Reproduction

Reproduction resulting from the fusion of male and female gametes is called sexual reproduction.

3.1 Male Reproductive System



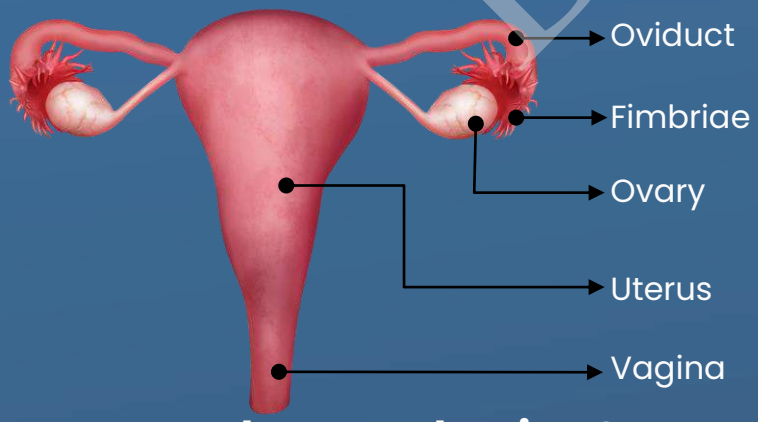
Male Reproductive System



Structure of Sperm

- The male reproductive system includes a pair of testes, sperm ducts and a penis. The male reproductive system is responsible for producing sperms.
- Sperm contains head, middle piece and tail. Genetic material is present in the head, mitochondria in the middle piece provides energy and the tail helps in movement.

3.2 Female Reproductive System



Female Reproductive System

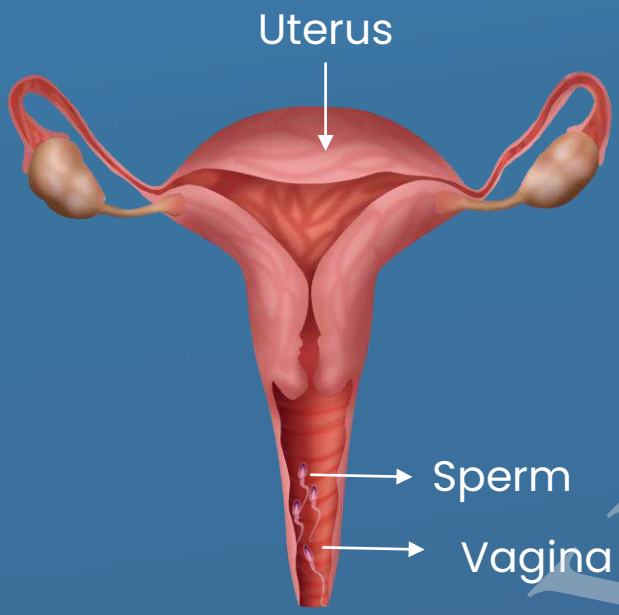
Ovary

- The female reproductive system includes a pair of ovaries, oviducts and a uterus. It is responsible for producing ova/eggs.
- Ova are produced in the ovaries and released alternately every month. Uterus provides site for the embryo development.

4. Events in Sexual Reproduction

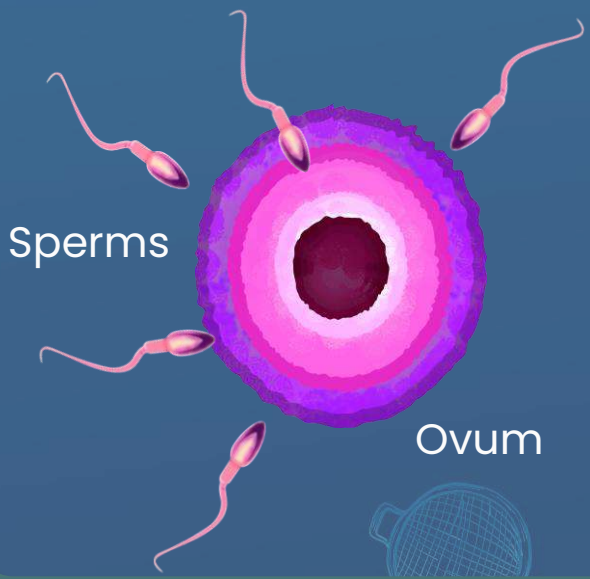
Events of sexual reproduction includes insemination, fertilisation, embryo formation and implantation.

Insemination



Insemination is the deposition of sperms in the vagina.

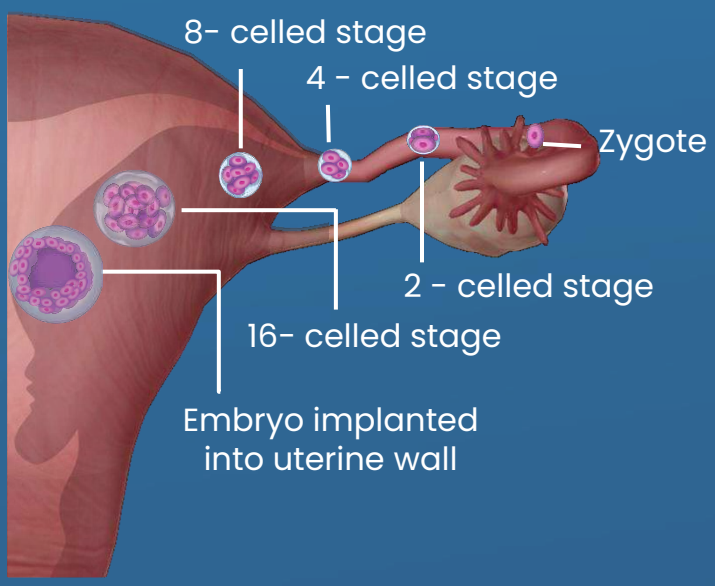
Fertilisation



- The fusion of ovum and sperm is called fertilisation. The fertilised egg is called a zygote.
- Zygote develops into an embryo, which grows into a young one.

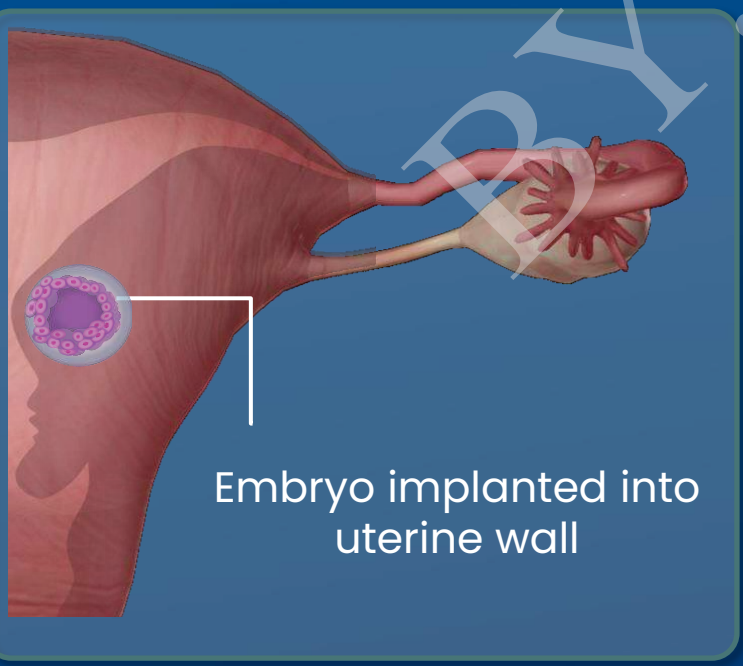
4. Events in Sexual Reproduction

Embryo formation



Zygote undergoes divisions to form two cells which further undergoes multiple divisions to form sixteen cells and finally to thirty two - celled stage called blastocyst.

Implantation



The blastocyst gets embedded in the wall of the uterus by the process called implantation.

The cells continue to grows and the internal organs also start developing. The stage of the embryo in which all the body parts are identifiable is called foetus.

4. Types of Fertilisation

Fertilisation is of two types: External fertilisation and Internal fertilisation.

4.1 Internal Fertilisation

Fertilisation that takes place inside the female body is called internal fertilisation. Example: Human beings, hens, cows etc.

Viviparous

Oviparous

Viviparous Animals

- They give birth to their young ones.
- Internal fertilisation occurs.
- Growth and development of zygote occurs inside the female body.

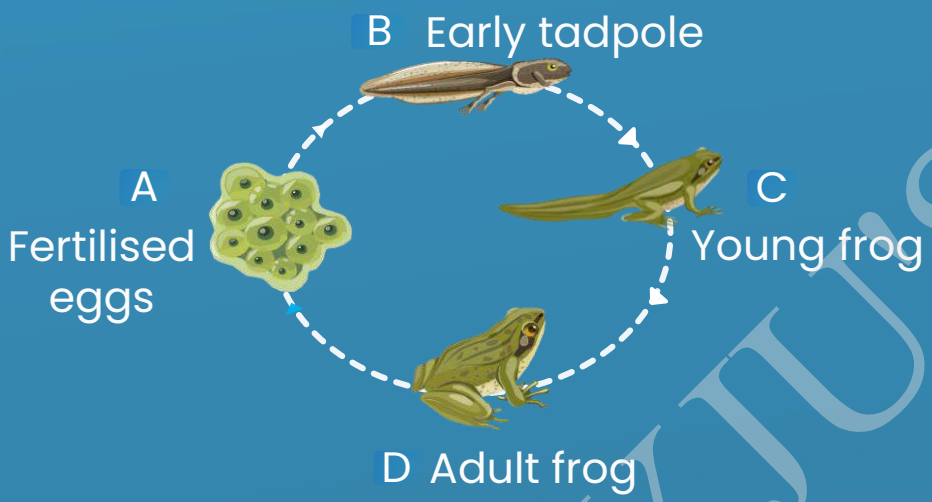
Oviparous Animals

- Animals that lay eggs are called oviparous animals.
- Internal fertilisation occurs.
- Provides sufficient warmth to the developing embryo.

4.2 External Fertilisation

Fertilisation that takes place outside the female body is called external fertilisation. Example: frog, fish, starfish.

Metamorphosis

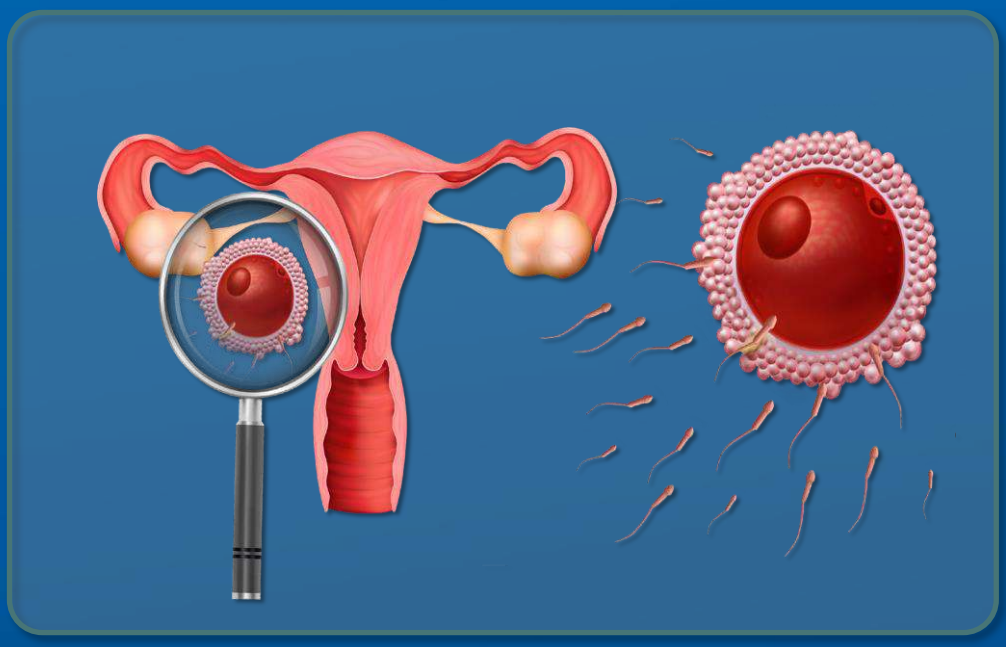


Transformation of a larva into an adult through a series of continuous changes is called metamorphosis.

- Fertilisation is external in frogs. The fertilised eggs hatch into tadpoles which are almost fish-like.

- The tadpoles eventually transform into young frogs which still have tails attached to them. The tail disappears eventually and the young frog now transforms into an adult frog.

4.3 In Vitro Fertilisation



Artificial method of fertilisation of egg and sperm cells outside the body. Babies born through this technique are called test tube babies.

Cloning

- Production of an exact copy of a cell, any other living part, or a complete organism. First performed by Ian Wilmut.
- First mammal to be cloned was a sheep named Dolly. Dolly was born on 5th July 1996. Dolly was cloned using the process of nuclear transfer