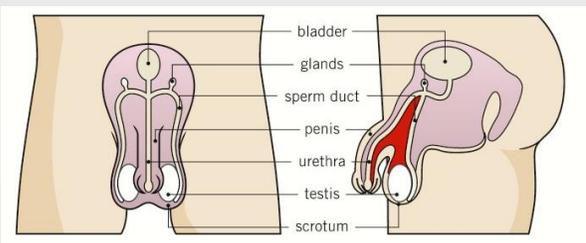
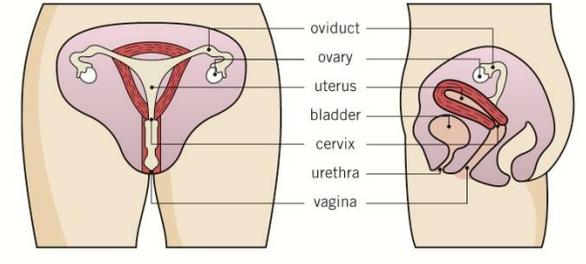


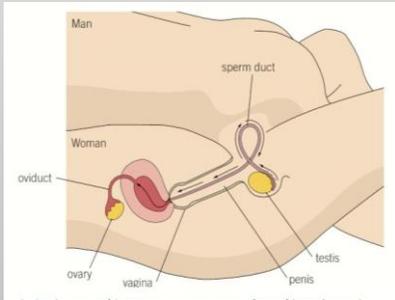
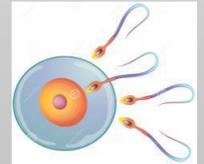
Human reproductive systems and Fertilisation



The testes produce millions of male gametes (sex cells) called sperm. The sperm pass through sperm ducts, and mix with fluids produced by the glands. The penis passes urine and semen out of the male's body. The urethra is the tube which carries the urine or semen.



Each ovary is connected to the uterus by an oviduct, sometimes known as the fallopian tube. Every month, an egg develops, becomes mature and is released from an ovary. The uterus is where a baby develops until its birth. The cervix is a ring of muscle at the lower end of the uterus. It keeps the baby in place while the woman is pregnant. The vagina leads from the cervix to the outside of the woman's body.



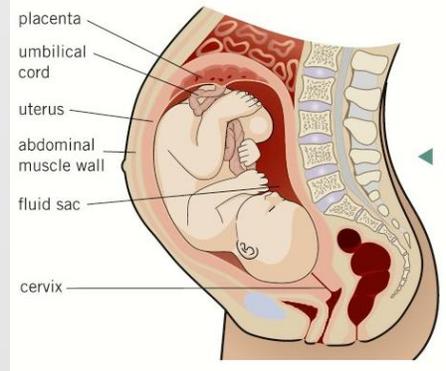
Fertilisation is when a sperm cell and ovum fuse. Sperm cells are released into the female reproductive system during sexual intercourse (ejaculation). Only one sperm cell breaks through the cell membrane and enters the ovum.

Pregnancy and Birth

The foetus relies upon its mother as it develops.

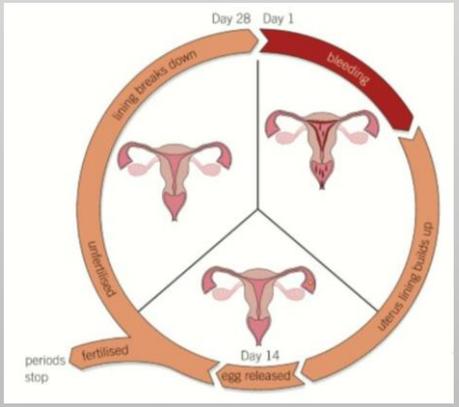
Protection against knocks and bumps.

- Oxygen
 - Nutrients (food & Water)
- The placenta is an organ responsible for providing oxygen and nutrients, and removing waste substances. It grows into the wall of the uterus and is joined by the foetus by the umbilical cord.
- Oxygen and nutrients diffuse from mother to foetus.
 - Carbon dioxide and other waste substances diffuse across the placenta from foetus to mother.

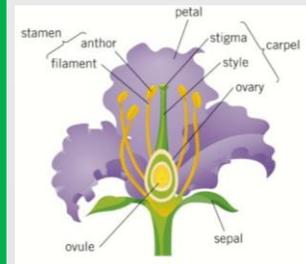


Growing up

Boys	Girls	Boys and Girls
Grow facial hair ✓	Ovaries release egg cells ✓	Emotional changes ✓
Sperm produced ✓	Hips widen ✓	Growth spurt ✓
Voice breaks ✓	Periods start ✓	Grow pubic hair ✓
	Breasts develop ✓	



Flowers



Inside the flower there are both male and female parts.

The **stamen** is the male reproductive part – it contains:

- **anther** – produces **pollen**, the male gamete
- **filament** – holds up the anther.

The **carpel** is the female reproductive part – it contains:

- **stigma** – this is sticky to 'catch' grains of pollen
- **style** – holds up the stigma
- **ovary** – contains **ovules**, the female gamete.

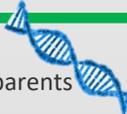
Seed Dispersal

Seeds are dispersed away from each other and from the parent plant. This is so they have space to grow and do not compete for resources such as nutrients. The main methods are: WIND, ANIMAL, WATER and EXPLOSIVE.



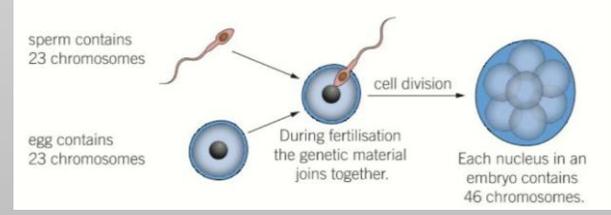
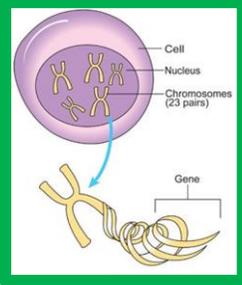
Variation and DNA

- **inherited variations** are characteristics inherited from parents
- **environmental variations** are variations caused by the surroundings
- many variations are affected by both inherited and environmental factors.



Genetics:

DNA is found in the nuclei of cells and organized into chromosomes. This genetic information is passed from one generation to the next. The genetic information itself is contained in a complex molecule called DNA.



DNA molecules contain two strands. The strands are twisted around each other to form a double helix.