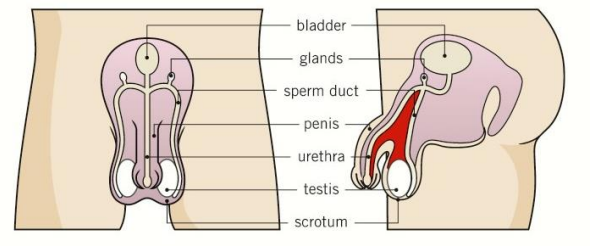


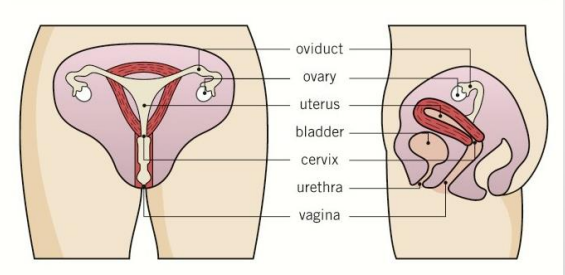
1) Human Reproductive Systems

Male:



- **Testes** – produce male gametes (sex cells) called sperm and testosterone (male sex hormone)
- **Scrotum** – protective skin around the testes
- **Sperm ducts** – take sperm from testes to penis
- **Glands** – produce fluids that contain nutrients. The mixture of sperm and fluids is called semen.
- **Penis** – passes semen and urine out of the body.

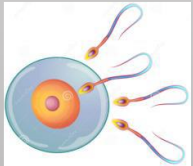
Female:



- **Ovaries** – produce female gametes (sex cells) called eggs or ova and oestrogen (female sex hormone)
- **Oviducts** (also called Fallopian tubes) – takes eggs from the ovary to the uterus
- **Uterus** – where a baby develops until its birth
- **Cervix** – ring of muscle that keeps the baby in place while the woman is pregnant
- **Vagina** – where the penis is inserted during intercourse

2) Fertilisation

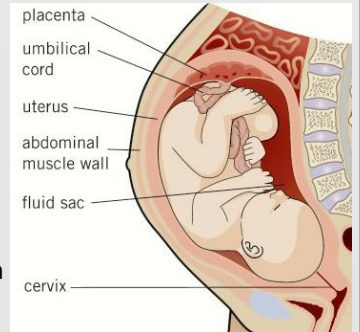
Fertilisation is when a sperm and egg cell fuse. Only one sperm cell breaks through the cell membrane and enters the egg. This usually happens in the oviduct.



3) Pregnancy and Birth

A fertilised egg divides to form a ball of cells called an **embryo**. The embryo attaches to the lining of the uterus. It begins to develop into a **fetus**. Development takes about **40 weeks** and when the fetus is born it is called a baby.

- **Placenta** – where substances are exchanged between mother and fetus e.g. oxygen, nutrients
- **Umbilical cord** – carries the fetus's blood to and from the placenta
- **Fluid sac** – contains **amniotic fluid** that protects the fetus from bumps



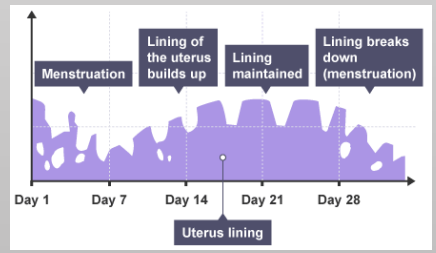
4) Growing Up

Puberty is when reproductive systems start to mature.

Boys	Both	Girls
Grow facial hair	Growth spurt	Hips widen
Voice deepens	Grow pubic hair	Periods start
Shoulders widen	Emotional changes	Breasts develop
Sperm produced		Egg cells released

The Menstrual Cycle:

A cycle of events in the female reproductive system that lasts about **28 days**. The cycle stops while a woman is pregnant.



Day 1 – **menstruation** (period) starts as uterus lining breaks down

Day 14 – **ovulation** happens (an egg is released from ovary)

5) Plant Reproduction

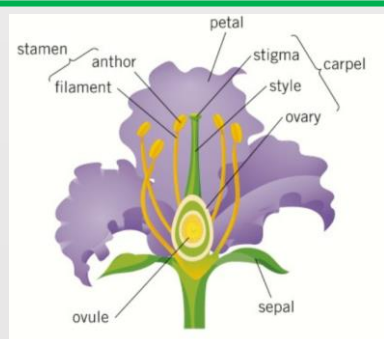
Flowers have male and female parts.

Female part is called **carpel**:

- **Stigma** – traps pollen
- **Style** – holds up the stigma
- **Ovary** – contains ovules
- **Ovules** – female sex cells

Male part is called the **stamen**:

- **Anther** – produces pollen (male sex cells)
- **Filament** – holds up the anther



Petals are brightly coloured and **nectaries** produce a sugary solution to **attract insects**.

6) Pollination

Pollination is when the **pollen** from the **anther** (male part) is **transferred** onto the **stigma** (female part). Pollination can happen by insects or by the wind.

7) Seeds and Fruits

When pollen combines with an ovule in a flower this is called **fertilisation**. The **ovules** become **seeds** and the **ovary** becomes **fruit**.

Seeds are dispersed away from each other so they have space to grow and do not compete for resources such as light and water. Methods of dispersal are: wind, animal, water and explosive.

8) Variation and DNA

Variation is differences between organisms. It can be caused by **genetics** (inherited from parents) e.g. eye colour, blood type. It can also be caused by the **environment** (your surroundings), e.g. language, tattoos. Some features are caused by a mixture of both genetics and environment such as weight and height.

DNA is a chemical that stores your **genetic information**. DNA is stored on **chromosomes** in the **nucleus** of cells. A section of DNA is a **gene** which causes our characteristics.

