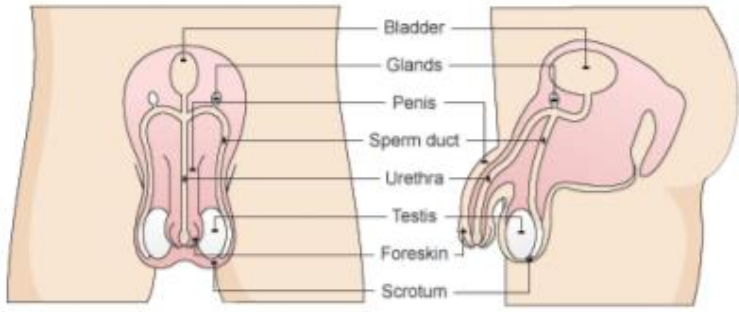




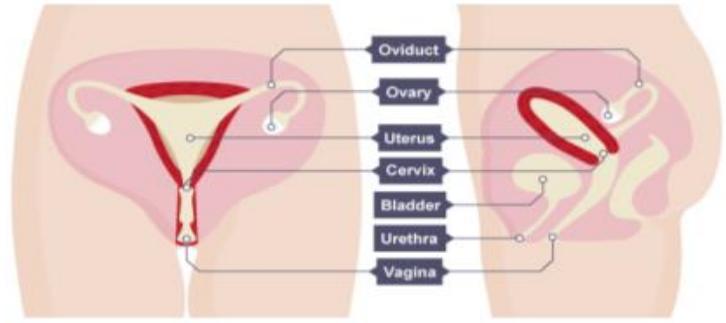
Year 7 Reproduction and inheritance

Keyword	Definition
Penis	A male organ which passes urine and semen out of the body
Testes	The organ which produces sperm cells.
Glands	An organ that produces a useful chemical or hormone for the body.
Sperm duct	Sperm cells pass through the sperm ducts and mix with fluid produced by the glands to produce semen.
Urethra	A tube inside the penis which can carry urine or semen.
Vagina	A muscular tube that runs from the cervix to the outside of the female body and where the penis is inserted during sexual intercourse.
Cervix	A ring of muscle at the end of the uterus that keeps the baby in place during pregnancy.
Ovaries	The organ which produces egg cells.
Oviducts	Tubes which connect the ovaries to the uterus and through which the egg cells will travel.
Uterus	A muscular bag where the baby develops.
Ovulation	When a mature egg is released from the ovary.
Fertilisation	When an egg cell meets and joins with a sperm cell inside the oviduct.
Placenta	An organ which provides the developing baby with oxygen and nutrients and removes waste products.
Umbilical cord	The cord which joins the placenta to the fetus
Embryo / Fetus	A developing baby inside the uterus and different stages (embryo until 8 weeks)
Pollen grain	The male gamete (sex cell) of a plant.
Ovule	The female gamete of a plant.
Pollination	When pollen grains move from the anther of one flower to the stigma of another flower.
DNA	A chemical which carries genetic information of an organism within the nucleus.
Gene	A short section of DNA which carries genetic information for a characteristic e.g. hair colour.
Chromosome	A coiled strand of DNA within the nucleus.
Species	A group of organisms which can interbreed to produce fertile offspring.
Variation	The differences of characteristics between species and between individuals of the same species.

The male reproductive system



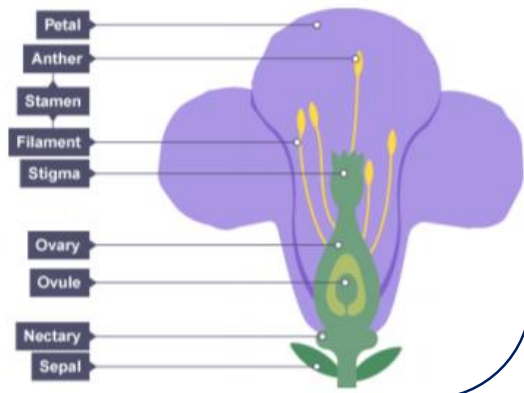
The female reproductive system



Plant reproduction

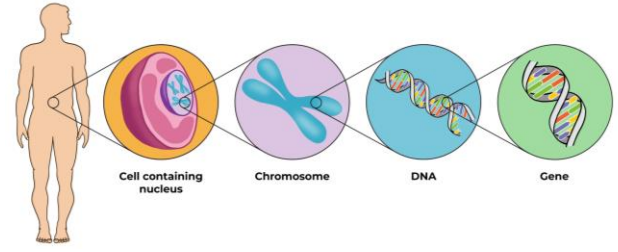
The flower is the reproductive organ and the anther and the ovary produce the gametes. Plants reproduce by pollination which is usually carried out by wind or insects such as bees.

The nucleus of the pollen grain joins with the nucleus of the ovule during fertilisation. After this, the female parts of the flower develop into fruit including seeds. Seeds contain the embryo and food source from which the new plant will grow.

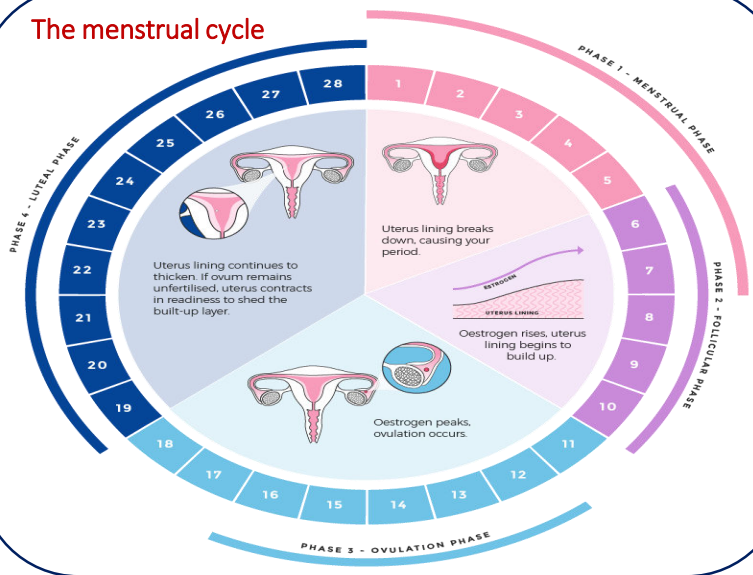


Inside the nucleus

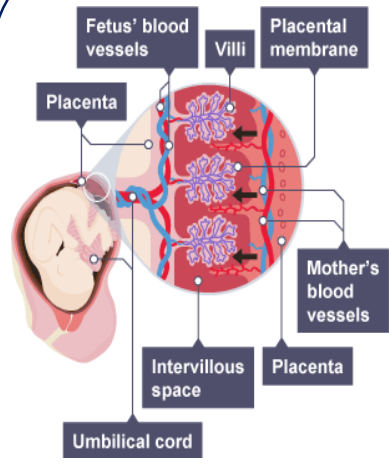
Genetic information is found within the chromosomes inside the nucleus in every cell of our body.



The menstrual cycle



Fetal development



The foetus relies on its mother for nutrients and oxygen via the placenta and protection via the amniotic sac and fluid.

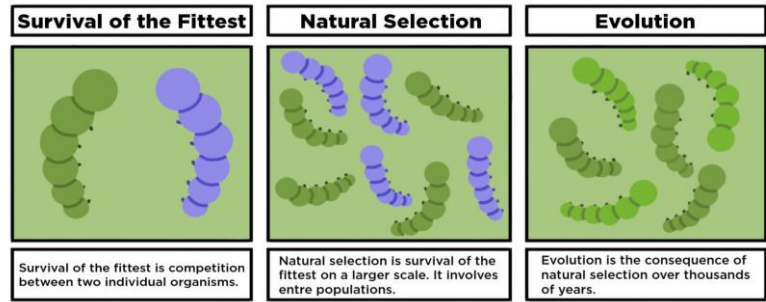
The placenta grows into the wall of the uterus and is joined to the foetus by the umbilical cord.

The mother's blood does not mix with the blood of the foetus, but the placenta lets substances such as oxygen, carbon dioxide and waste substances pass between the two

Competition and Natural Selection

Animals compete for food, water, space and mates. Plants compete for light, water, space and minerals. Variation means some organisms compete more successfully, and go on to reproduce, which is called natural selection.

Natural selection is a mechanism of evolution. It ensures that only the traits that help a species survive and reproduce get passed on to future generations.



If a species is unable to compete successfully for resources, then it may become extinct.

Useful YouTube links:



[Human reproduction](#)



[Plant reproduction](#)



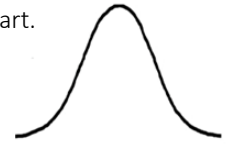
[Inheritance](#)

Skills:

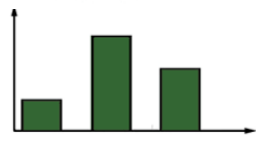
- Practical:** Identifying variables
- Application:** Using hazards symbols, identifying hazards and risks.
- Maths:** Calculating averages, drawing scales and plotting points.
- Analysis:** Analyse information and ideas to develop experimental procedures.
- Extended response:** Identifying trends in data and writing conclusions.

Variation

Variation can be inherited within DNA or caused by the environment. It can either be continuous such as height, or discontinuous such as eye colour. Continuous data is represented as a line graph and discontinuous as a bar chart.



- Continuous Variation**
 - No distinct categories
 - Tends to be quantitative
 - Controlled by a lot of genes
 - Strongly influenced by the environment



- Discontinuous Variation**
 - Distinct categories
 - Tends to be qualitative
 - Controlled by a few genes
 - Unaffected by the environment