

Male reproductive system	Female reproductive system	Fertilisation	Gestation and birth	Puberty	Menstrual cycle	Inheritance and DNA	Variation
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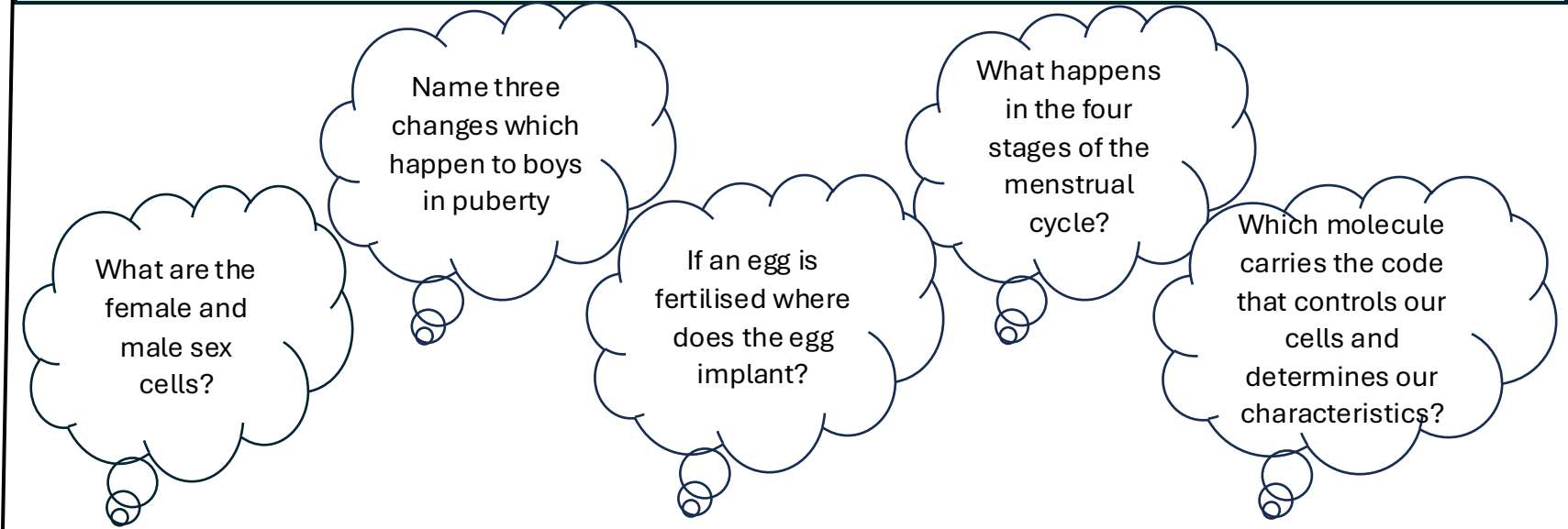
## Key Words

Key Word	Definition
<b>Fertilisation</b>	Joining of a nucleus from a male and female sex cell
<b>Gamete</b>	The male gamete (sex cell) in animals is a sperm, the female an egg.
<b>Ovary</b>	Organ which contains eggs
<b>Testicle</b>	Organ where sperm are produced
<b>Uterus or womb</b>	Where a baby develops in a pregnant woman
<b>Ovulation</b>	Release of an egg cell during the menstrual cycle, which may be met by a sperm
<b>Menstruation</b>	Loss of the lining of the uterus during the menstrual cycle
<b>Foetus</b>	The developing baby during pregnancy
<b>Placenta</b>	Organ that provides the foetus with oxygen and nutrients and removes waste substances
<b>Infertility</b>	Inability to achieve pregnancy after regular unprotected sex

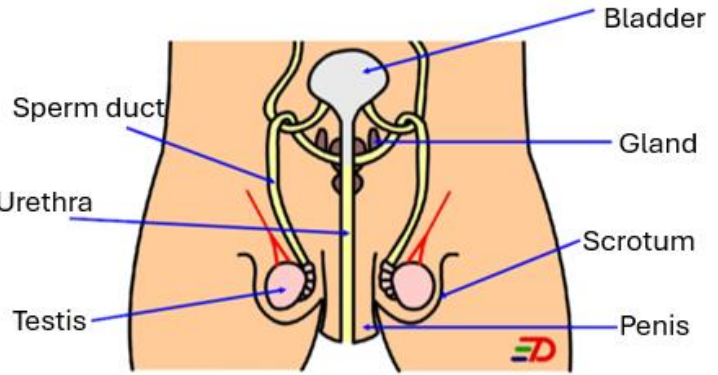
## Misconceptions

Fertilisation happens in the uterus	Fertilisation can happen at any time	Variation is only inherited	Puberty happens to everyone at the same time	The mothers and the embryos blood mix in the placenta
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## Key questions

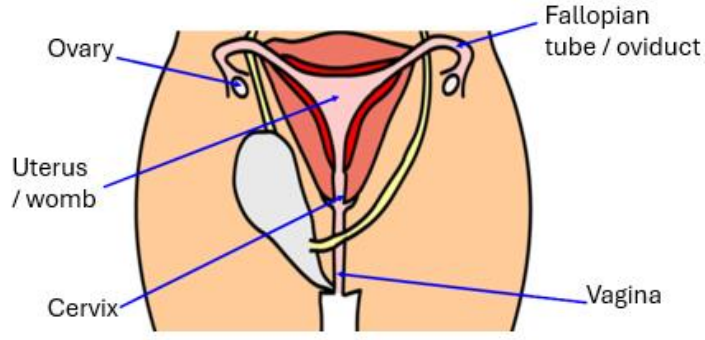


**Male reproductive system**



Part	Function
Testis	Produce sperm.
Scrotum	Bag of skin that holds the testes.
Penis	Organ where sperm and urine leave the man's body.
Glands	Add liquid to sperm to make semen.
Urethra	The tube that carries urine and semen out of the body.
Sperm duct	Carries sperm from the testes.
Bladder	Stores urine.

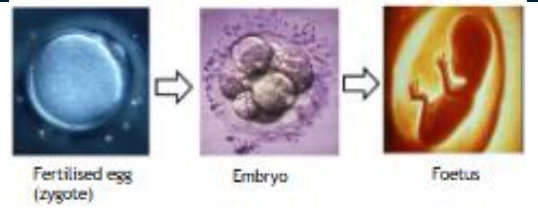
**Female reproductive system**



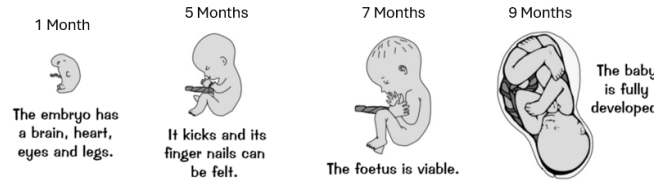
Part	Function
Cervix	Opening of the uterus.
Vagina	Receives the sperm from the penis.
Fallopian tube	Carries the egg from the ovary to the uterus.
Uterus	Where the baby develops.
Ovary	Where the eggs are made.

**Gestation and birth**

After fertilization and implantation a human embryo takes 9 months (40 weeks) to develop in the uterus.



The foetus develops in an amniotic sac with amniotic fluid for protection. The foetus gets its food, oxygen and removes its waste from the mother through the placenta and umbilical cord.



After 9 month of gestation the baby is ready to be born which requires three stages.

- Stage 1 – Dilation – the cervix dilates to 10cm
- Stage 2 – Birth – the muscles in the uterus contracts pushing the baby out of the birth canal through the cervix and out of the vagina
- Stage 3 – Afterbirth – The placenta is pushed out of the vagina

**Fertilisation**

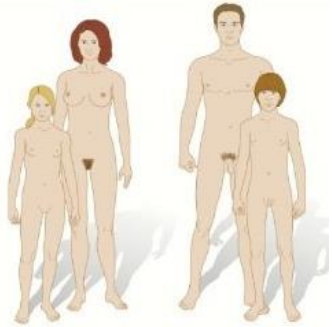
Fertilisation is when the nucleus of an egg and sperm cell fuse.

Sexual reproduction in humans requires several processes to happen:

1. Gametes need to be made.
2. Sperm needs to be transferred into the female.
3. The nuclei of the sperm and egg cell need to fuse.
4. The fertilised egg (zygote) divides to form an embryo
5. The embryo implants into the uterus wall.

**Puberty**

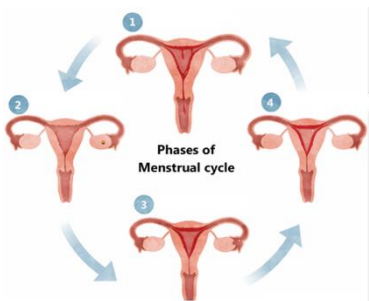
Changes in puberty can be classed as emotional (managing feelings) and physical (changes to the body).



Changes which occur in a girl's body	Changes which occur in a boy's body
Breasts develop	Pubic hair grows around the penis
Pubic hair grows around the vagina	Voice breaks – gets deeper
Ovaries start to release egg cells	Testes and penis get bigger
Periods start	Testes start to produce sperm
Hips widen	Shoulders widen
Ovaries produce female sex hormones	Hair grows on face, chest, legs, and underarms
	Testes start to make male sex hormones
	Body gets more muscular

**Menstrual cycle**

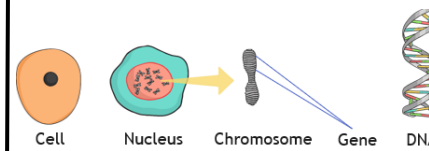
Menstrual cycle is a change that happens in the female reproductive system to prepare for pregnancy. The cycle lasts approximately 28 days. There are four stages:



- Stage 1 (day 1-5): If the egg isn't fertilised the women bleeds for 2-5 days to shed the uterus lining.
- Stage 2 (day 6-13): The uterus lining starts to regrow
- Stage 3 (day 14): The ovary releases an egg, this is called ovulation
- Stage 4 (day 15-28): The uterus lining starts to thicken for a potential pregnancy

**Inheritance and DNA**

DNA molecules carry the code that controls cells and determines our characteristics, it is found in the nucleus of all our cells.



DNA is passed on from parents to their offspring.

A long length of DNA makes a single gene which controls a certain characteristic.

DNA is passed on from parents to their offspring. A long length of DNA makes a single gene which controls a certain characteristic. The genes are located on a chromosomes and every human cell contains 23 pairs of chromosomes inside the nucleus.

**Variation**

Variation is the differences in characteristics in a species.

Variation can be caused by two factors:

- Inherited factors – Features in your genes passed on from parents
  - Environmental – Features that are affected by the surroundings (lifestyle, diet etc)
- Some features are both environmental and inherited (height, weight)

Characteristics that show continuous data should be plotted on a histogram and characteristics which are discontinuous should be plotted on a bar chart.