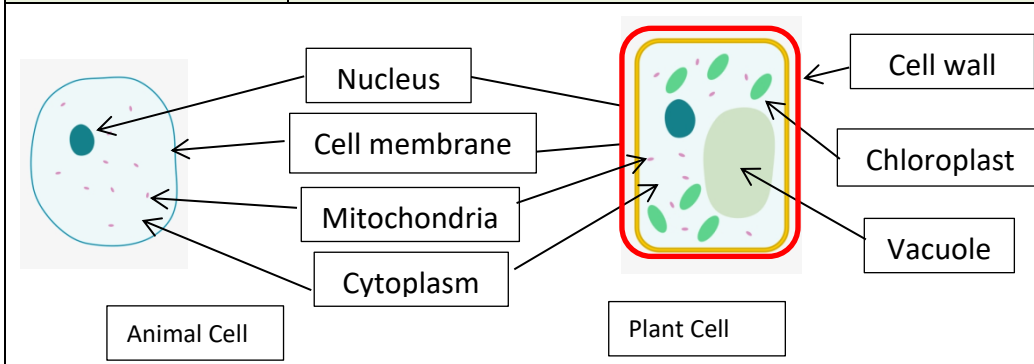


## 1. Cells - Key Words

Organelle	Function
Nucleus	Controls the cell & contains DNA.
Cell membrane	Controls the exchange of substances in and out of the cell.
Mitochondria	Where energy is released from glucose and oxygen through respiration.
Cytoplasm	Where most chemical reactions occur.
Cell wall	Supports the cell.
Chloroplasts	Where photosynthesis occurs.
Vacuole	Contains cell sap.

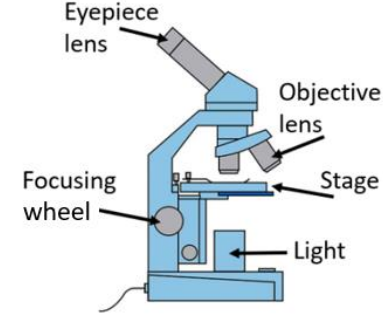


## 2. Microscopy



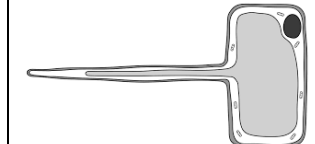
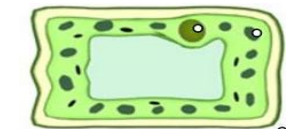
**Magnification** increases the size of an image. For example, if the magnification is 10x that means the image is 10 times bigger than the actual size of the specimen.

**Total magnification =**  
Magnification of the **eye piece lens** x Magnification of the **objective lens**

## 3. Microscopy

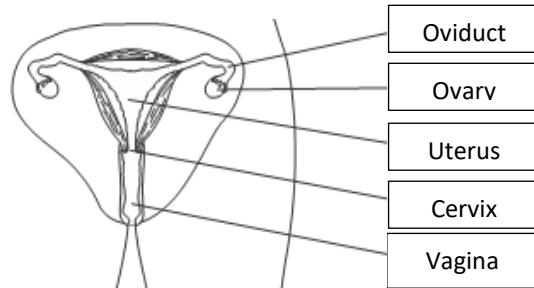
	Part	Function
	Stage	To place specimen slide on.
	Eyepiece lens	Look through here to see the specimen.
	Objective lens	3 lenses with different magnification strengths.
	Focusing Wheel	To make the image clearer.

## 4. Specialised Cells

Cell	Function	Adaptation	
Sperm Cell	To fertilise the egg cell.	-Tail to swim towards the egg. -Head pointed to burrow inside the egg.	
Red Blood Cell	To carry oxygen around the body.	-No nucleus so can squeeze through tiny capillaries. -Contain haemoglobin to join to oxygen.	
Root Hair cell	To absorb water and minerals from the ground.	-large surface area so more water can be absorbed. -No chloroplasts so there is a larger vacuole.	
Palisade cell	To carry out photosynthesis in the plant.	- many chloroplasts to absorb light. -Thin so they can be packed closely together.	

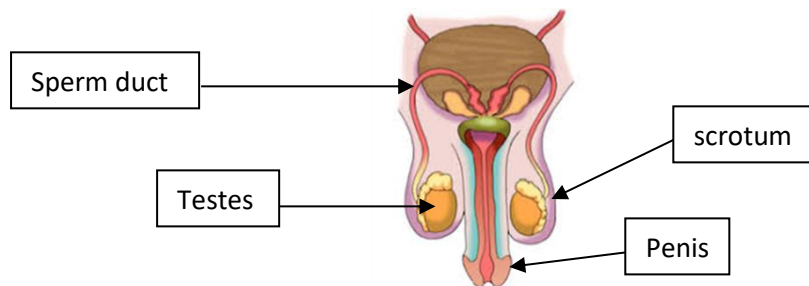
## 5. Reproductive Organs (Female)

Organ	Function
Oviduct	Where fertilisation takes place, sweeps the egg towards the uterus.
Ovary	Stores and matures the egg cells.
Uterus	Where the embryo develops.
Cervix	Ring of muscle that holds baby in place during pregnancy.
Vagina	Where sperm enter the body during sexual intercourse.



## 6. Reproductive Organs (Male)

Organ	Function
Sperm duct	Tube that carries sperm cells from the testes to the penis.
Testis	Site of sperm production.
Scrotum	Skin sack containing the testes.
Penis	Inserted into the vagina to transfer sperm.



## 7. Puberty

This is the period of adolescence when the body changes in preparation for reproduction

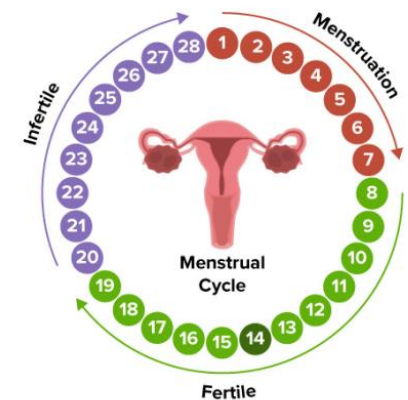
Changes to males	Changes to females
Penis grows larger.	Periods start.
Testes start to produce sperm.	Hips widen.
Chest and back broaden.	Ovaries start to release egg cells.
Hair grow on chest and face.	Breasts develop.

## 8. Menstrual Cycle

Keyword	Meaning
Menstruation	When blood passes out of the vagina, also known as a period.
Ovulation	When a mature egg is released from the ovary.
Fertilisation	When the nuclei of an egg and sperm cell fuse.
Menstrual Cycle	The process of menstruation and ovulation which usually takes 28 days in human females.
Menopause	When a woman stops having periods.

### Menstrual cycle of events

Days	Event
1 – 5	Uterus lining breaks down, period starts.
5 – 14	Uterus lining starts to build up again ready for implantation.
14	Ovulation.
14 – 28	Uterus lining remains thick.
28	If no pregnancy occurs the cycle starts again.



## 9. A Healthy Pregnancy

Lifestyle Factor	Effect on Pregnancy
Smoking	Smoking causes reduces oxygen to the foetus leading to low birth weights, premature births and even death.
Drinking Alcohol	This can affect the brain of the foetus and cause low birth weights, miscarriages and still births.

## 10. Pregnancy

Organ	Function
Placenta	Organ that exchanges substances between the mother's blood and the foetus'.
Foetus	Name for an unborn baby.
Umbilical cord	Transfers products from the mother's blood to the foetus and vice versa.
Amniotic fluid	Fluid surrounding the baby that protects the baby from damage inside the uterus.

