Biology

X Y chromosomes

- Humans have 23 pairs of chromosomes in each body cell
- 22 pairs are the normal body characteristics
- 23rd pair is the sex chromosomes it will decide whether it is male or female
- Femaleb has XX chromosomes
- Male = XY
- The Y chromosome is smaller than the X chromosome

Male and female
XY is male Y makes male feature
XX is female and makes female features

Other combinations are some people can have x y y, x x y. XXX but only you need to remember is about female and male

Genetic diagrams (sex determination)

Genetic diagrams show the chance of a baby boy or girl

Steps

- put one parents gametes at the top
- put the other parents gametes its down the side

- fill in the boxes

Types of genetic diagrams

there are two types of genetic diagrams

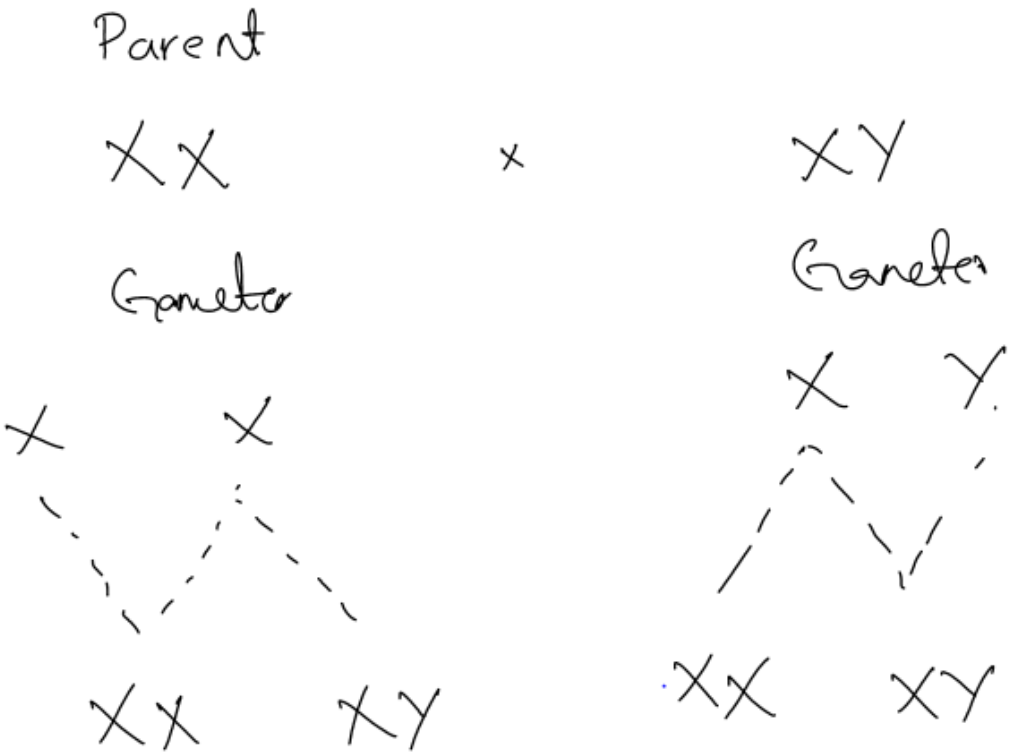
- Punnett square
- full diagram

Type 1 punnet square

- Gamete shown on top and side
- fill boxes

Type 2 full diagram

- Parents at the top
- gamets in the middle
- lines crossing
- offspring genotypes at the bottom



genes and characteristics

- It control characteristic such as hair eye colour etc
- control one characteristics or many
- example of characteristics controlled by one gene is mouse fur colour
- red green colour blindness

Alleles

- Jeans have different versions that are called alleles
- alleles are written as letters
- you have two alleles for each gene one from each parent

Homozygous and heterozygous

homozygous has two same allele like CC , cc

Hetrozygouse have two different alleles Cc

Dominant and recessive alleles

Recessive

- Recessive alleles are shown by small letters
- only show if both alleles are recessive

Dominant alleles

- they are shown by capital letter
- shows it affects even if only one is present

Recessive must be cc

dominant can be Cc , CC

Genetic diagram example hamster
On notes

Family trees show how characteristics are passed on
Cystic fibrosis example

- it is caused by recessive alleles
- many people carry it but do not have it

Inherited distorted cystic Fibrosis

- It is caused by recessive Allele
- affect the cell membrane
- it causes thick mucus in lungs and pancreas
- in one in 25 peoples are the carrier
- child affected only if both parents carry the allele
- if both parents are carier one in four chance of disorder