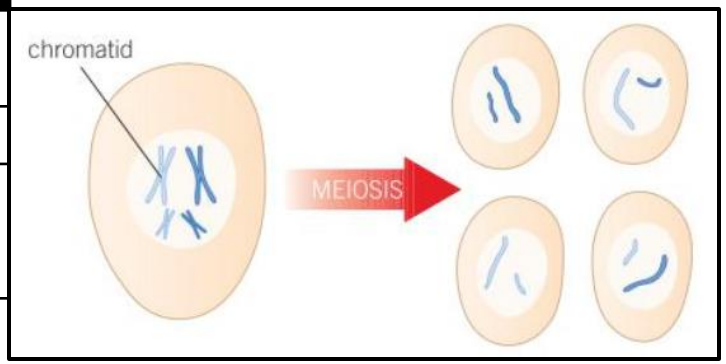
Biology B13: Reproduction

1.Keywords	
Mitosis	A type of cell division which creates two identical daughter cells.
Meiosis	A type of cell division the create 4 unique gametes.
Gametes	Sex cells eg sperm + egg and pollen + ovum.
Sexual reproduction	Reproduction involving the fusion of gametes. Makes unique offspring that resemble both parents.
Asexual reproduction	Reproduction involving only one parent. No gametes fuse. Offspring are identical to parent.
DNA	A polymer made of 2 strands forming a double helix. Contains the instructions for an organism.
Chromosomes	Long strands of DNA found in the nucleus. Humans have 23 pairs.
Gene	A section of DNA which codes for a protein.
Genome	All the genes of an organism.

2. Meiosis
1. <u>DNA replication</u>**:** chromosome number doubles
2. <u>Cell divides</u>**:** two cells now
3. <u>Those cells divide</u>**:** four gametes now with half the number of chromosomes



3. Genetic inheritance	
Allele	Different forms of the same gene. eg hair colour
Dominant	When only one copy of the allele is needed to show in the offspring
Recessive	When the allele only shows when there are two copies
Homozygous	Two copies of the same allele
Heterozygous	Two different alleles
Genotype	The set of genes in our DNA
Phenotype	The outward appearance a set of genes displays

4. Inherited disorders	
Inherited disorders	Disorders that are caused by inheriting faulty genes from parents
Polydactyly	A dominant inherited disorder which causes extra fingers or toes to form
Cystic fibrosis	A recessive inherited disorder which causes sticky mucus to block air ways

5. Sex determination	
No of chromosomes in a human	23 pairs (22 normal, 1 pair of sex)
Male	XY (50% chance)
Female	XX (50% chance)
Sperm	Can hold Y or X chromosome so determine gender of embryo