

Alternative forms of agene	Form of producing offspring without involving sex producing identical offspring	Area where chromatids remain joined until nuclear division	Involved in cell division, in animals it produces spindle fibres
Allele	Asexual	Centromere	Centriole
The points on chromatids where the homologous chromosomes cross	The two strands of a replicated chromosome	Thread-like structure within a cell nucleus made of DNA that contains genes	Exchanging of parts of chromatids during meiosis
Chiasmata	Chromatids	Chromosomes	Crossing-over
Cell containing double set of chromosomes (2n)	Deoxyribonucleic acid, makes up chromosomes and codes for proteins	An allele that if present is always expressed phenotypically	The change in the allele frequency of a population
Diploid	DNA	Dominant	Evolution
Change in allele frequencies when a new population arises from only a few colonising individuals	Sex cells – egg or sperm	The unit of inheritance, a length of DNA that codes for a protein	Loss or change in the frequency of an allele in a small population due to chance alone
Founder effect	Gametes	Gene	Genetic drift

Altering the genetic make-up of an organism	Genetic make-up of an individual eg. Bb	Having only one set of chromosomes, all chromosomes different (n)	Having different forms of an allele e.g. Bb
Genetic engineering	Genotype	Haploid	Heterozygous
Pairs of chromosomes having the same genes	Having the same alleles e.g. BB or bb	Each pair of homologous chromosomes are sorted independently of the other pairs during meiosis which greatly increases variation	Cell division that produces sex cells
Homologous pairs	Homozygous	Independent assortment	Meiosis
Cell division that produces cells exactly the same as the original cell	Alternation of the sequence of bases on the DNA. This produces new genetic information and maybe new phenotypes	Building blocks of DNA, made up of a phosphate, sugar and base	Physical expressing of gene or genes
Mitosis	Mutation	Nucleotide	Phenotype
If present the gene/allele is only expressed phenotypically when homozygous	The gametes produced as a result of crossing- over	Chromosomes involved in the determination of sex of the organism	Genes that are located on the sex chromosome, usually the X
Recessive	Recombinant	Sex chromosomes	Sex linked

Mating involving an unknown genotype with the homozygous recessive e.g. hh	Fertilised egg	During cell division chromosomes are not pulled correctly to the poles resulting in incorrect chromosome numbers	A map of sorted chromosomes used to detect nondisjunction or sex of the child
Test cross	Zygote	Nondisjunction	Karyogram
The total alleles within a population	The separation or segregation of the homologous pairs during metaphase I, so the gametes only have one of each pair	The selection of individuals based on their fitness to survive and then breed	A sex-linked disease where the blood cells are unable to clot
Gene pool	Chromosome segregation	Natural selection	Haemophilia
Offspring show a genotype where neither allele is dominant eg. Pink flowers	The passing on of genetic information from one generation to the next	Offspring show a genotype where both alleles are expressed e.g. Roan cattle	A gene that if lacking results in the organism not existing. Ratio of punnet square is 2:1 not the normal 3:1
Incomplete dominance	Inheritance	Co-dominance	Lethal gene
An allele where more than two forms can fit at a locus on a chromosome e.g. A, B, AB and O blood types	In humans XX = female XY = male	Another word for a genetic feature	Recovery of population after a catastrophic event. After squashing through bottleneck, the population has less variation
Multiple alleles	Sex determination	Trait	Bottleneck effect

✦ No Brain Too Small ✦