Module 8 notes

True breeding. If an organism has certain characteristic that is always passed on to it's offspring we say this organism bred true with respect to that characteristic

Allele. One of a pair of genes that occupies the same position on homologous chromosomes

Genotype. The two letter set that represents the alleles an organism possess for a certain trait

Phenotype. The observable expression of an organism's genes

Homozygous genotype. A genotype in which both alleles are identical

Heterozygous Genotype. A genotype in which the alleles are different

Dominant Allele. An allele that will determine the phenotype if just one is present

Recessive allele. An allele that will not determine the phenotype unless the genotype is homozygous

Pedigree. A diagram that follows a phenotype through several generations

Monohybrid cross. A cross between two individuals concentrating on only one definable trait

Dihybrid cross. A cross between two individuals concentrating on two definable traits

Autosomes. Chromosomes that do not determine the sex of an individual

Sex chromosomes. Chromosomes that determine the sex of an individual

Antigen. A protein that, when introduced into the blood, triggers the production of antibody

Autosomal inheritance. Inheritance of a genetic trait not on a sex chromosome

Genetic disease carrier. A person who is heterozygous in a recessive genetic disorder

Sex linked inheritance. Inheritance of a genetic trait located on the sex chromosomes

Change in chromosome structure. A radical chemical change in one or more alleles

Change in chromosome number. A situation in which a chromosome loses or gains genes during meiosis

Gregor mendel’s four principles of genetics

1. The traits of an organism are determined by its genes
2. each organism has two alleles that make up the genotype for a given trait
3. In sexual reproduction each parent contributes ONLY ONE of its alleles to its offspring
3. In each genotype there is a dominant allele. If it exists it exists in an organism the phenotype is determined by that allele