**Genetics (17 terms)**

**\*allele –** an alternative form of a gene ex. purple flower or white flower \* Defined in evolution unit \*

**codominance**  - phenotypes of both alleles in an heterozygous individual are expressed fully and equally

ex. blood type IAIB  - has AB blood (both A protein and B protein are expressed)

**dominant –** phenotype of one allele is completely expressed in a homozygous dominant or heterozygous

genotype, represented by a capital letter ex. T = tall :so TT and Tt would be tall

**genetics -**  scientific study of inheritance

**genotype –** genetic composition of an organism, what alleles it has for a trait (letter combination) ex. Tt

**heterozygous** – individual who has 2 *different* alleles for a trait

**homozygous**  - individual who has 2 of the *same* alleles for a trait

**incomplete dominance –** two different alleles that are neither dominant or recessive, resulting phenotype is a

blend of the two traits Ex. R = red R’ = white :so RR’ would be pink

**multiple alleles –** more than 2 forms of a gene controlling the expression of a trait

Ex. human blood type has 3 alleles IA , IB, i

**nondisjunction –** where sister chromatids do not separate during mitosis or meiois, results in a cell with an

extra or a missing chromosome Ex. Down’s syndrome , trisomy 21 (has 3 #21)

**pedigree –** diagram that shows the occurrence of a trait over several generations of a family

**phenotype –**observable expression of a genotype, what it looks like Ex. Tt would be tall

**polygenic trait –** trait where phenotype is controlled by 2 or more genes at different places on different

chromosomes Ex. eye color – controlled for by 3 pairs of alleles AaBbCc

**Punnett square –** diagram that predicts the outcome of a genetic crosp

**recessive –** phenotype of 1 allele is only expressed when the genotype is homozygous, represented by lower

case letter Ex. t = short : so tt would be short

**sex linked trait -**  trait associated with a gene which is carried by either the male or female parent

ex. colorblindness, hemophilia

**test cross –** crossing an individual of an unknown genotype with a homozygous recessive individual to

determine the unknown genotype