POST-16 CONSERVATION GENETICS

Glossary of key words

Alleles	Different forms of the same gene. Can be dominant or recessive.
Base pairs	Adenine and thymine, guanine and cytosine; paired nucleotides held together by hydrogen bonds.
Chromosome	A strand of tightly coiled DNA. Humans inherit 23 chromosomes from each parent, making 46 in total.
Diploid	A cell with two sets of paired chromosomes.
DNA	**D**eoxyribo**n**ucleic **A**cid. DNA strands carry the genes that control what an organism looks like or how it behaves.
Dominant allele	Represented by a higher case letter (e.g. D). Characteristics will be displayed if the individual is homozygous dominant (DD) or heterozygous (Dd).
Faeces	The scientific term for poo!
Gel electrophoresis	A technique for separating out protein molecules according to their lengths. It involves running an electric current through an agarose gel plate.
Gene	A short section of DNA coding for specific proteins.
Genetic fingerprinting	Also known as DNA profiling. The process of identifying individuals using unique regions of their genome (loci).

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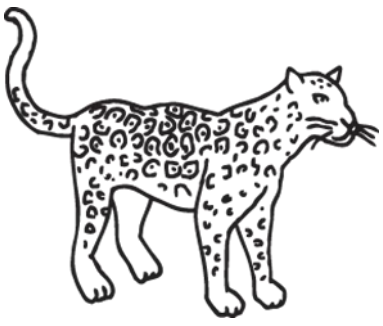
Genome	The complete set of an organism's genetic material**.**
Genotype	The composition of alleles in an individual.
Haploid	A cell with one set of unpaired chromosomes. Gametes (sex cells) are haploid.
Heterozygous	Gene has two different alleles.
Homologous	Chromosomes that are the same size and shape.
Homozygous	Gene has two copies of the same allele (maternal and paternal alleles are the same).
Locus	Plural Loci. A specific location on a particular chromosome. Often used to describe the position of a gene on the chromosome.
Metabarcoding	Using short genetic markers present in the DNA of a specific group of organisms (e.g. mammals) to enable identification of different species.
Microsatellite	Also known as **S**hort **T**andem **R**epeats (STR's). Repeated sections of short DNA sequences (usually only 2-4 base pairs long) which are used as genetic markers.



Mutation	A permanent change to the structure of DNA.
Next Generation Sequencing	Parallel DNA analyses – sequencing lots of samples at once.
PCR	**P**olymerase **C**hain **R**eaction. Amplification (making lots of copies) of a particular DNA region using targeted primers and repeated cycles of DNA replication.
Primers	A small piece of RNA which attaches to the front of the target DNA section, allowing DNA replication to begin.
Recessive allele	Represented by a lower case letter (e.g. d). Characteristics will only be displayed if the individual is homozygous recessive (dd).
RNA	**R**ibo**n**ucleic **A**cid. Similar to DNA, only containing ribose rather than deoxyribose. An important molecule in DNA replication.
VNTR's	**V**ariable **N**umber of **T**andem **R**epeats. Repeated sections of DNA sequences which are used as genetic markers. Includes minisatellites (10-100 base pairs long) and microsatellites (2-4 base pairs long).