

THE DNA SHOAH PROJECT

VOCABULARY SHEET

Allele- A variant form of a gene or genetic marker

Autosome- Any nuclear chromosome other than a sex-determining chromosome; a chromosome that is neither an X nor a Y chromosome

Chromosome- Bundles of tightly coiled DNA. Most human cells (not egg and sperm cells) have 23 chromosome pairs (22 pairs of autosomes and one pair of sex chromosomes) contained within the nucleus. One member of each pair is inherited from the mother, the other from the father.

Diploid- Cell having two copies of each chromosome

Extraction (DNA)- Isolating DNA from the cell.

Gene- Region of DNA known to code for a function

Genetic Marker- A DNA sequence known to have a variable site, but not necessarily a gene

Genome- Entirety of an organisms hereditary information

Haploid- Cell having a single copy of each chromosome

Heterozygous- Characterized by two different alleles for the same gene or marker

Homozygous- Having two identical alleles of a given gene or marker

Locus- (plural loci) Location of a genetic marker or gene within the DNA

Mitochondrion- (plural mitochondria) – Energy producing organelle, contains Mitochondrial DN A

Polymerase Chain Reaction- Technique to amplify or copy a sequence of DNA, millions or billions of copies may be generated by this reaction.

Recombination- The process by which a strand of genetic material is broken and then joined to a different DNA molecule. In eukaryotes recombination commonly occurs during meiosis as chromosomal crossover between paired chromosomes. This process leads to offspring having different combinations of genes from their parents

Short Tandem Repeat-STR- A genetic marker which is a repeating motif of DNA such as (CAT)(CAT)(CAT). These occur in succession and can be counted to determine an allelic value. They are particularly useful in forensic applications.

X and Y Chromosomes- Chromosomes that determine gender. Females have two X chromosomes while males have one X and one Y. Since the Y Chromosome is unmatched (singular), it does not recombine with the X and is passed down intact from father to son.

