

Definitions:

- A gene is _____
- A gene locus is _____
- Alleles are _____
- Mutations are _____
- A genome is _____
- An amino acid sequence is _____

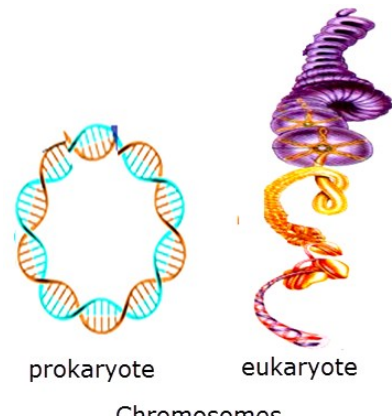
Base substitution mutations - cause sickle cell anaemia

What are the effects of a base substitution on each of the following

DNA	mRNA	amino acid sequence	haemoglobin

How can databases be used by biologists for the following:

- To store the information from the human genome project
- To find specific DNA base sequences
- To help find the function of specific genes
- In the classification of living organisms



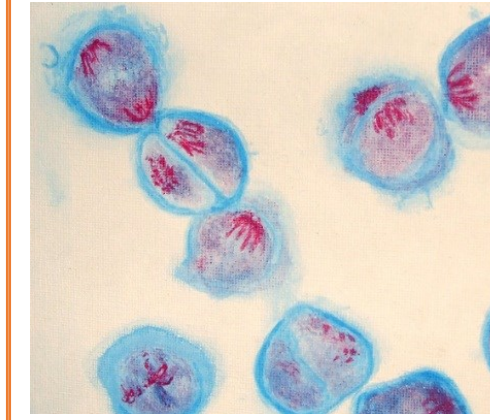
Compare the arrangement of DNA in a prokaryote with that of a eukaryote.



What is the difference between a karyogram and a karyotype?

What are sister chromatids?

& homologous chromosomes?



Meiosis – write 3 words to summarize each phase of meiosis

1. P I
2. M I
3. A I
4. T
5. P II
6. M II
7. A II
8. TII

Mendelian genetics and peas
simple inheritance and punnet grids

Show the cross between two heterozygous plants. Name the

- parental genotypes
- gametes
- offspring genotype
- offspring phenotype

P=purple allele p=white allele			
		P	p
P		PP	Pp
p		Pp	pp

Non-disjunction can cause the condition called _____

To obtain cells for a karyotype analysis using karyograms doctors use these two methods:

_____ & _____

Risks to unborn baby and mother are:

Sex-linked inheritance is when the gene (and it's alleles) are found on the _____

Symbols for alleles for Sex linked haemophilia are _____ (only 3)

Symbols for alleles for red-green colour blindness are _____

Dominant, recessive and co-dominant alleles in ABO blood groups

The allele symbols for ABO blood groups are: _____, _____, _____,

Multiple alleles is when _____

Blood group genotypes can be Group A = _____ or _____ & Group B = _____ or _____

PCR is a technique that can _____

Gel Electrophoresis can separate _____

DNA profiling is _____

Genetically modified organisms (GMOs)

Examples of GMO Bacteria that can be genetically engineered to make a useful product are:

1. _____ to make insulin
2. _____ to make _____

Natural clones occur in many species, examples include;

_____ or identical twins.

Therapeutic cloning is _____

Reproductive cloning by somatic cell transfer is _____

Mutagens & radiation can cause _____

Ethics

Risks of GMO crops _____

Benefits of GMO crops _____

