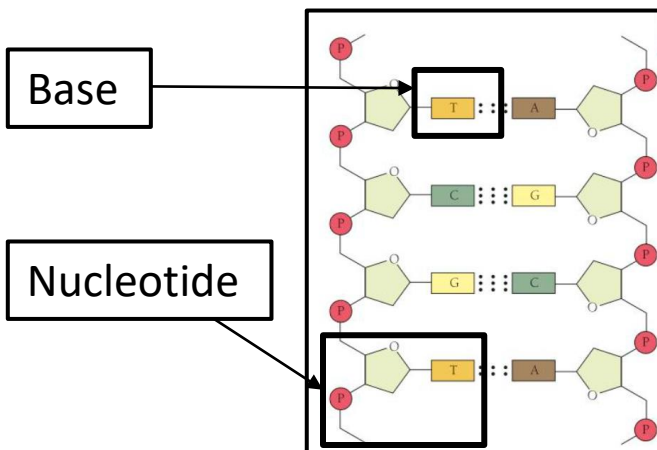


1. Advantages of reproduction (TRIPLE ONLY)

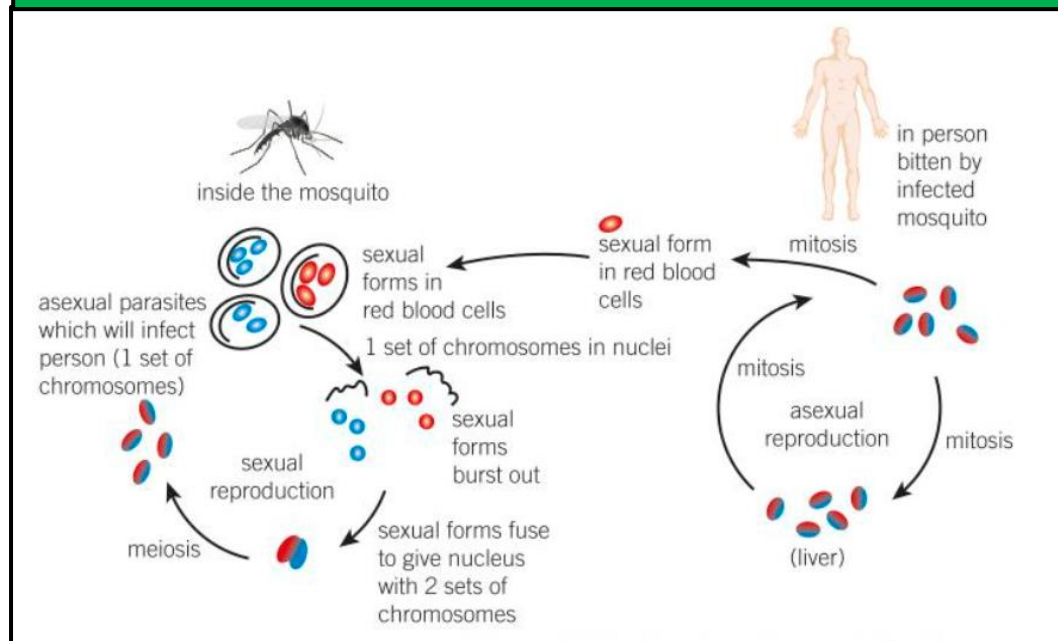
Advantages sexual	Advantages asexual
Causes variation	Only needs 1 parent
If environment changes natural selection can occur	Energy and time efficient (fast)
Humans can selectively breed organisms for beneficial characteristics	Lots of offspring can be produced when conditions are good
Organisms that can use both	Malaria, Fungi, Plants

3. DNA structure (TRIPLE ONLY)

Nucleotide	The monomer of DNA. Consists of a sugar, phosphate and a base
Base	One of 4 different chemicals that make the triplet code. A G T C
Triplet code	3 bases in a row give a code for a specific amino acid



2. Life cycle of the mosquito



4. Protein synthesis and gene expression (HT TRIPLE ONLY)

Pairing of nucleotide bases	A → T T → A G → C C → G
Transcription	When the DNA is read and converted into messenger RNA (mRNA.)
Translation	When the mRNA is read by ribosomes and used to build the amino acid sequence .
Transfer RNA (tRNA)	Carries the correct amino acid to the ribosome for the mRNA triplet code.
Coding DNA	DNA which codes for a protein, a gene.
Non-coding DNA	DNA which does not code for a protein. Can be involved in turning on or off genes.
Mutation	A change to the DNA sequence. Most are harmless but some can stop proteins working correctly