OCR (A) Biology GCSE

B1.2 - What happens in cells?

Flashcards

Describe the structure of DNA

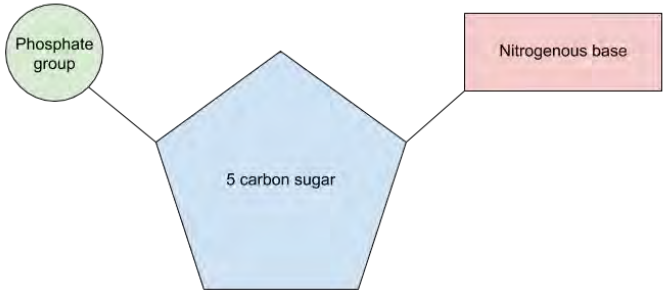
Describe the structure of DNA

- It is a polymer made of many nucleotide monomers
- It is made of 2 strands in the shape of a double helix

Describe the structure of a nucleotide

Describe the structure of a nucleotide

A nucleotide contains a 5 carbon sugar, phosphate group and nitrogenous base



Name the 4 bases in DNA

Name the 4 bases in DNA

Adenine (A), Thymine (T), Cytosine (C) and Guanine (G)

How do the bases in DNA pair up

How do the bases in DNA pair up

Adenine pairs with Thymine (A with T)

Cytosine pairs with Guanine (C with G)

Describe transcription (Higher)

Describe transcription (Higher)

1) DNA unzipped
2) Complementary mRNA nucleotides bind and are joined together
3) mRNA detaches and leaves the nucleus

Describe translation (Higher)

Describe translation (Higher)

1) mRNA travels to a ribosome
2) Carrier molecules carry amino acids to the ribosome based on the mRNA sequence
3) The amino acids are joined together

How does the sequence of DNA affect the protein made in protein synthesis? (Higher)

How does the sequence of DNA affect the protein made in protein synthesis? (Higher)

DNA is a triplet code where 3 bases code for one amino acid and the order of amino acids determine the protein produced

What are enzymes?

What are enzymes?

Enzymes are biological catalysts that speed up the rate of metabolic reactions

Describe the structure of enzymes

Describe the structure of enzymes

Enzymes are proteins that contain an active site that fits a specific substrate

Describe the lock and key hypothesis

Describe the lock and key hypothesis

A substrate that fits the specific active site of the enzyme binds, a reaction occurs (catalysed by the enzyme) and then the products are released

State 4 factors that affect enzyme function

State 4 factors that affect enzyme function

- Temperature
- pH
- Substrate concentration
- Enzyme concentration

Describe the effect of temperature on the rate of an enzyme-controlled reaction

Describe the effect of temperature on the rate of an enzyme-controlled reaction

- As the temperature increases, so does the rate of reaction
- Once the temperature exceeds the optimum, the enzyme denatures and the rate of reaction decreases