OCR (A) Biology GCSE

B1.3 - Respiration

Flashcards

What is the purpose of respiration?

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To produce energy in the form of ATP from larger molecules (like sugars)

What type of reaction is respiration?

What type of reaction is respiration?

Respiration is an exothermic reaction

When does aerobic respiration take place?

When does aerobic respiration take place?

When there is plenty of oxygen available

What is the word equation for aerobic respiration?

What is the word equation for aerobic respiration?

Glucose + Oxygen → Carbon dioxide + Water (+ energy)

What is the symbol equation for aerobic respiration?

What is the symbol equation for aerobic respiration?

$$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O \text{ (+energy)}$$

When does anaerobic respiration take place?

When does anaerobic respiration take place?

When there is no oxygen available

What does anaerobic respiration in animals produce?

What does anaerobic respiration in animals produce?

Lactic acid and energy

What does anaerobic respiration in yeast produce?

What does anaerobic respiration in yeast produce?

Ethanol (alcohol), carbon dioxide and energy

Which type of respiration produces more ATP?

Which type of respiration produces more ATP?

Aerobic respiration which produces 36 ATP compared to anaerobic respiration which produces only 2 ATP

What is the oxygen debt?

What is the oxygen debt?

The extra oxygen that is needed to break down the lactic acid formed in anaerobic respiration

What type of molecules are carbohydrates and proteins?

What type of molecules are carbohydrates and proteins?

They are polymers

What are the monomers that make up proteins?

What are the monomers that make up proteins?

Amino acids

What type of enzymes break down carbohydrates?

What type of enzymes break down carbohydrates?

Carbohydrases

What type of enzymes break down proteins?

What type of enzymes break down proteins?

Proteases

What type of enzymes break down lipids and what are they broken down into?

What type of enzymes break down lipids and what are they broken down into?

Lipids are broken down by lipases into glycerol and fatty acids