WHY GROVE · ANSWER KEY

Cellular respiration worksheet: answers

Part A: Label the diagram

1. Glucose
2. Oxygen
3. Cellular respiration
4. Carbon dioxide
5. Water
6. Energy (ATP)

Part B: Fill in the blanks

1. glucose
2. mitochondria
3. cytoplasm
4. ATP
5. oxygen
6. lactic acid
7. ethanol
8. glycolysis

Part C: Complete the equations

1. glucose + **oxygen** → carbon dioxide + **water** (+ energy)
2. $C_6H_{12}O_6 + \mathbf{6}O_2 \rightarrow \mathbf{6}CO_2 + \mathbf{6}H_2O$
3. glucose → **lactic acid**

Part D: Answer the questions

1. Breathing moves air in and out of the lungs. Cellular respiration is a chemical reaction inside cells that releases energy from glucose.
2. Glycolysis, the link reaction, the Krebs cycle and the electron transport chain.
3. Aerobic respiration breaks glucose down completely to carbon dioxide and water, making about 30 to 32 ATP. Anaerobic respiration only breaks it down partly, leaving energy locked in lactic acid or

ethanol, and makes just 2 ATP.

4. Oxygen is the final electron acceptor. It collects the electrons at the end of the chain and forms water. Without it, the chain stops.
5. To take in extra oxygen, which is used to break down the lactic acid that built up in the muscles during anaerobic respiration.
6. The products of photosynthesis, glucose and oxygen, are the reactants of respiration. The products of respiration, carbon dioxide and water, are the reactants of photosynthesis.

Free from www.whygrove.com/cellular-respiration-worksheet