

12 Respiration and energy — Part 1

— Answers

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Work through these after trying the questions yourself.

12.1 The release of energy from food (glucose), in every living cell.

12.2 Any two of: muscle contraction; building proteins; cell division; active transport; growth; keeping warm.

12.3 No — breathing moves air, while respiration releases energy inside cells.

12.4 glucose + oxygen → carbon dioxide + water.

12.5 Oxygen.

12.6 The **muscle** cell uses the energy for **contraction** (movement); the **root** cell uses it for **active transport** of mineral ions (or for growth). (Any sensible use for each.)