12 Respiration and energy – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	**Write it 3 times** (English)		
Respiration			
energy			
muscle			
proteins			
cell division			
active transport			
temperature			
Aerobic respiration			
oxygen			
glucose			

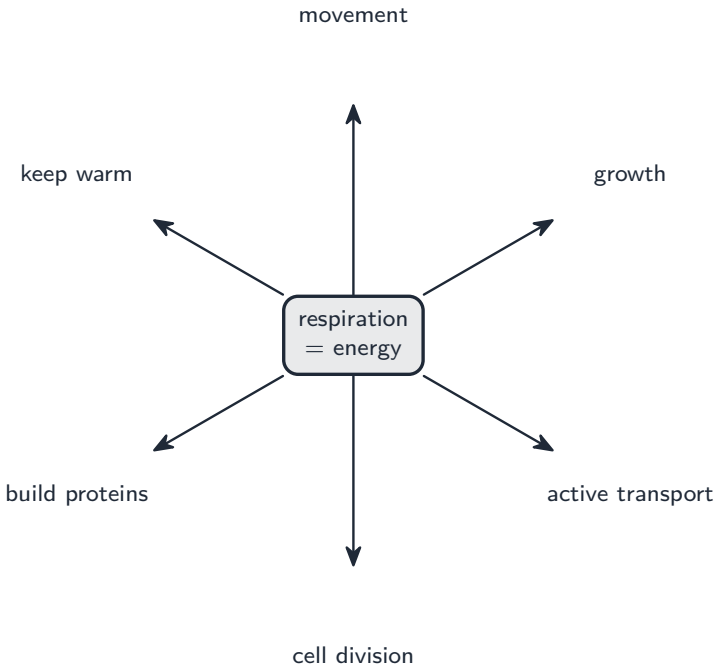
Recall

Respiration is the release of **energy** from food. It happens in **every** living cell, all the time. (It is **not** the same as breathing.)

New ideas

Read these first, then do the Practice.

■ 1 What the energy is for



Cells use the energy for **muscle** contraction, building **proteins**, **cell division**, **active transport**, growth, and keeping a steady body **temperature**.

■ 2 Aerobic respiration

Aerobic respiration uses **oxygen** to break down **glucose**, releasing a **lot** of energy:

glucose + oxygen → carbon dioxide + water

Watch out: respiration releases energy *inside cells* – it is **not** the same as breathing (which just moves air). **Aerobic** respiration uses oxygen and releases a **lot** of energy: glucose + oxygen → carbon dioxide + water.

Practice

Try these in order.

12.1 What is *respiration*? [1]

12.2 Give two jobs the body uses respiration energy for. [2]

12.3 Is respiration the same as breathing? [1]

12.4 Write the word equation for aerobic respiration. [2]

12.5 Which gas does aerobic respiration use? [1]

12.6 Challenge. A muscle cell and a root cell both respire all the time. Suggest one use of the energy in each. [2]