Bridge Sheet — Respiration & ATP Catch-Up

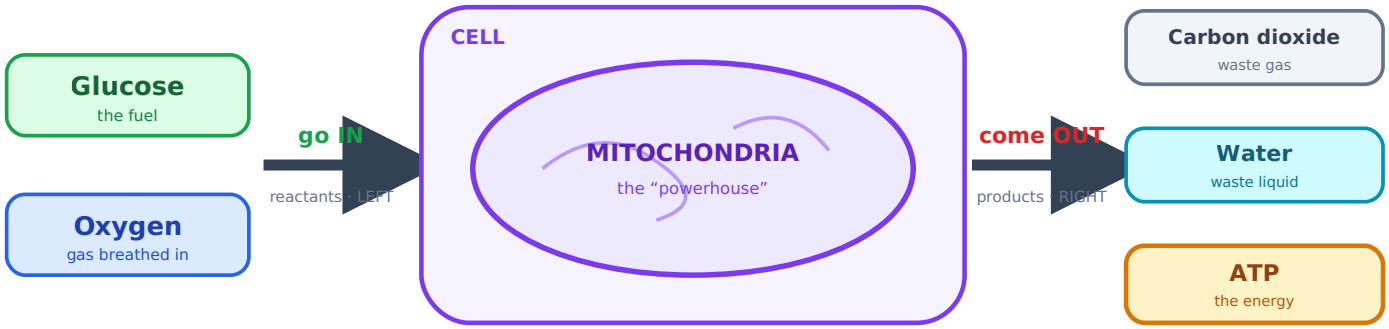
SIDE A · CATCH-UP

Lesson 4: Aerobic Respiration · IGCSE Science (4SS0) · **Missed the last lesson? Start here, then keep this sheet beside you.**

Name: _____ **Class:** _____ **Date:** _____

How to use this (5 minutes): look at the picture, read the labels, then fill the warm-up. When all three boxes are ticked, you are ready for the We Do and your worksheet.

What happens inside a cell — everyone



Aerobic respiration: glucose + oxygen go IN → the mitochondria break glucose down using oxygen → carbon dioxide, water and ATP come OUT.

What is ATP?

ATP is the cell's **energy battery**. Respiration charges it; the cell uses it.

Respiration is NOT breathing

Breathing fills your lungs with air. **Respiration** is the reaction in cells that makes ATP.

Energy is RELEASED, not made. You can't create energy — always say **ATP**.

Aerobic respiration **needs oxygen**. Oxygen breaks glucose down completely, so it releases **lots of ATP**.

Warm-up: fill the gaps — everyone

Word bank: cells · releases · glucose · oxygen · ATP · mitochondria · breathing · released

a) Respiration is a reaction in your _____ that _____ energy.

b) The fuel is _____ and the gas it needs is _____.

c) The energy is carried by _____. d) It mostly happens in the _____.

e) Respiration is **not** the same as _____. f) Energy is _____, not made.

Tick when you can say it out loud: ☐ what respiration is ☐ what ATP is ☐ where it happens

Push yourself — Middle 2–3 — Higher 3–5

Why do **muscle** cells have **more** mitochondria than skin cells? *Start:* "Muscle cells need more energy (ATP), so they need more _____ to release it."

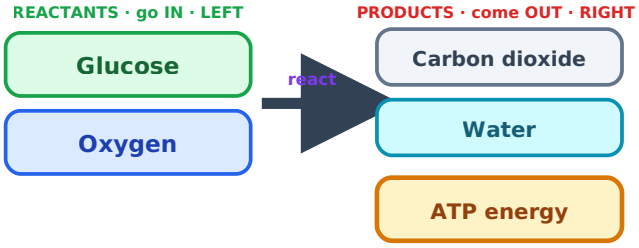
_____

Help Desk — keep this beside you

SIDE B · HELP DESK

Use this while you build the equations (We Do) and do your worksheet. Stuck on the worksheet? Do the **Match & Build** task instead.

The equation = reactants → products



Glucose + Oxygen → Carbon Dioxide + Water (+ ATP)

WORD EQUATION

$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$

SYMBOL EQUATION — always copy the 6s

Sentence stems for your answers

- The reactants are _____ and _____.
- The products are _____ and _____.
- The big 6s mean _____.
- Aerobic respiration releases lots of ATP because oxygen lets glucose _____ (break down completely).

Stuck? Do this instead — Match & Build

support

This still counts as your work. Finish it, then try one question from your worksheet.

1) Match the word to its meaning — write the letter in the box.

Respiration	[ ]	**A** with oxygen
ATP	[ ]	**B** where it happens
Mitochondria	[ ]	**C** releases energy in cells
Aerobic	[ ]	**D** go in (left of arrow)
Reactants	[ ]	**E** the energy molecule
Products	[ ]	**F** come out (right of arrow)

2) Build the word equation

Choose from: Glucose · Oxygen · Carbon Dioxide · Water

write + write → write + write

3) Finish: *Aerobic respiration is*

_____

Coming next lesson

look ahead

Next lesson: **anaerobic respiration** — what happens to glucose when there is **no oxygen**? Find out next time!