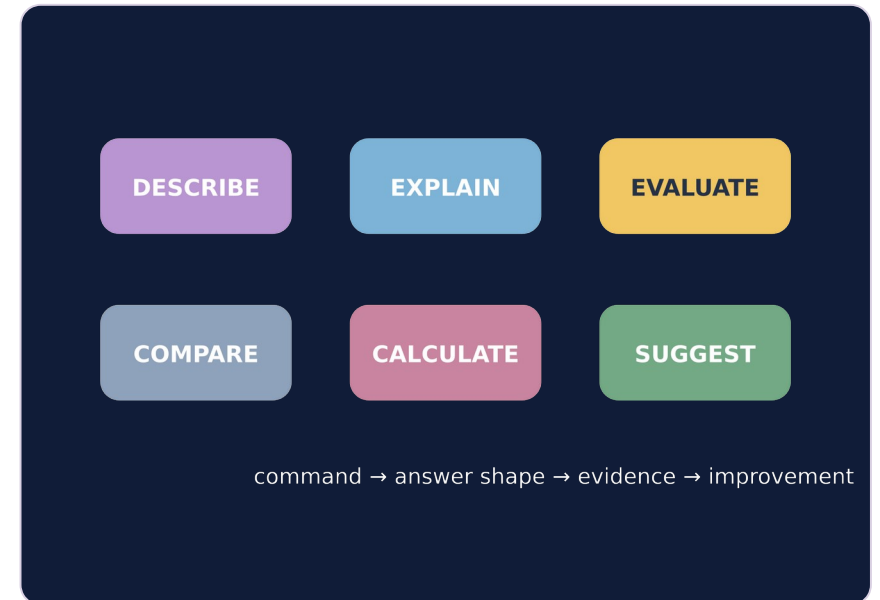


Command words

I can decode a command word, select the required answer shape and improve a **Biology** response.

Notice. Recall. Be ready to explain.

- 1 What does 'describe' ask you to do with data?
- 2 What extra link makes an answer an explanation?



Retrieval answers

Make a prediction

A response says ‘The potato lost mass.’ Which command word could this satisfy most directly: state, explain or evaluate?

A State

B Explain

C Evaluate

Commit, then check

Watch the model

- 1** Underline the command word and identify the answer shape before retrieving content.
- 2** Use the data or context evidence named in the question.
- 3** Add only the reasoning demanded: explanation, comparison, calculation steps or evaluation chain.

Match the answer to the task

Describe State what happens

Explain Say how or why

Calculate Show steps and units

[View labelled diagram](#)

[Optional video](#)

Choose and justify

Which answer best fits 'evaluate the method'?

A The mass decreased.

B Osmosis moved water out.

C Unequal cylinder diameter changes surface area, so concentration is not the only cause; use equal diameters.

D Use potatoes.

Give the deciding clue before checking.

Check the reasoning

Connect the science

State: give a concise fact or value.

Describe: identify a pattern or feature in the evidence.

Explain: link scientific cause to consequence.

Compare: link relevant similarities and differences.

Calculate: show the formula, substitution, working and unit.

Evaluate: judge strengths and limits using evidence. Justify an improvement.

Suggest: propose a scientifically plausible response.

Run a command-word clinic

Sample graph: sucrose $0.2 \rightarrow 0.6 \text{ mol dm}^{-3}$; mass change $+12\% \rightarrow -8\%$. Improve each answer.

- 1 Describe: “The graph changes.”
- 2 Explain: “The alveolar wall is thin.”
- 3 Evaluate: “We should repeat it.”

Reveal shared reasoning

Your independent evidence

Write a first sentence or calculation line for each task:

Describe the osmosis trend; explain thin alveolar walls; compare diffusion and active transport; evaluate uneven blotting; calculate magnification: image 30 mm, actual 75 μm .

Optional support

Describe = say what happens. Explain = say why. Compare = link a similarity or difference. Calculate = show working. Evaluate = judge using evidence.

Make one precise correction to the same work after feedback.

[Open worksheet pages](#)[Model after first attempt](#)

What changed in your thinking?

Which command word most often needs a scientific ‘because’ link, and why?

- 1 Point to one improvement in your work.
- 2 Choose what you want to revisit.
- 3 Tell your teacher; agree the next step together.

Retrieval and prediction check

- 1 State the pattern/features, using relevant values.
- 2 A scientific cause/reason linked to the observed consequence.

State

[Return to Starter](#)

Check the deciding clue

Unequal cylinder diameter changes surface area, so concentration is not the only cause; use equal diameters.

Correct weakness → consequence → improvement chain.

Compare your reason. Correct one step if needed.

[Return to We Do](#)

Our shared reasoning

Describe a numerical pattern.

Explain: thin walls → short diffusion distance → faster exchange.

Evaluate: repeat each concentration to measure spread and calculate a mean; also standardise blotting. Repeats alone do not fix a systematic error.

[Return to shared task](#)

Compare after your first attempt

Describe: percentage change becomes less positive and then negative as concentration increases. Explain: a thin alveolar wall shortens diffusion distance, so oxygen reaches blood faster. Compare: both processes can move substances across membranes, whereas only active transport can move against a gradient using cellular energy. Evaluate: inconsistent blotting leaves different surface solution masses; standardise the blotting method and time. Calculate: $30\text{ mm} = 30,000\text{ }\mu\text{m}$; magnification $= 30,000 \div 75 = \times 400$.

Use the model to improve your explanation in your own words.

[Return to independent task](#)

Your lesson resources

Worksheet pages are stored inside this PowerPoint.

[Worksheet · page 1](#)[Worksheet · page 2](#)[Standard PDF](#)[Supported PDF](#)[Depth PDF](#)[Editable Word worksheet](#)[Open online lesson / model](#)

Named files are in this week's folder. Online lesson and video need internet.

[Optional concept video](#)

Worksheet · page 1

Use your printed copy.
Keep the first attempt.

MADE BY MATT / LAUNCH SCIENCE

W7L2 | Command-word clinic

Wednesday | 09:30–10:10 | Explore | Editable pupil sheet

Name: _____ Date: _____

Core first. Write, speak, point or dictate your own words. Keep the first attempt so you can improve it.

Optional support: Describe = say what happens. Explain = say why. Compare = link a similarity or difference. Calculate = show working. Evaluate = judge using evidence.

Work together

Identify the command word before you answer.

1. **Describe:** concentration rises from 0.2 to 0.6 mol dm⁻³ while mean mass change falls from +12% to -8%. State the pattern.

2. **Explain:** “The alveolar wall is thin.” Add the missing mechanism and consequence.

Return to task

Worksheet · page 2

Continuation is optional.
Improve the same work.

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W7L2 | Continue and improve

Use after the core questions when directed

3. Calculate: image length is 30 mm and actual length is 75 μm .

4. Evaluate: “We should repeat it.” Make this a specific, justified improvement to the potato investigation.

Optional transfer

Compare is not two unrelated lists. Write one linked transport comparison.

Depth: name an assumption or limit, then say what evidence would strengthen your answer.

Improve the same work

One correction I made, and why:

My request for next time: _____

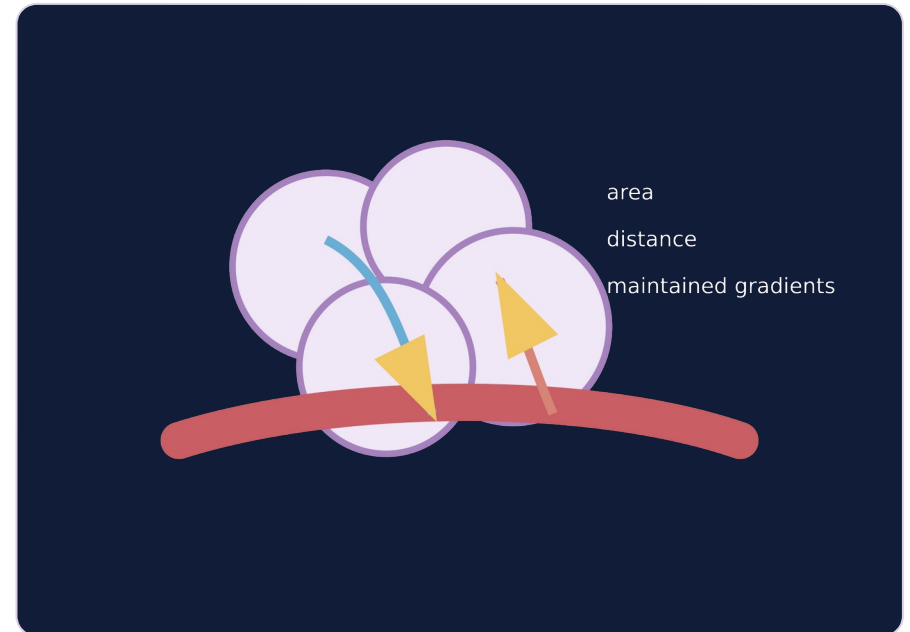
Return to task

Watch, pause and explain

Gas exchange in the lungs

How does a thin wall help oxygen move into the blood?

[Play freesciencelessons video](#)



No connection? Use the still model and explain the same question.

Look closely at the model

The command word decides the answer

► **DESCRIBE**

what happens

'it gains mass'

► **EXPLAIN**

why — because...

'because water moves in by osmosis'

► **CALCULATE**

number + working + unit

'60 ÷ 0.15 = ×400'

► **COMPARE**

similarities AND differences

'both cross the membrane, but...'

A model illustration: use the stated data for calculations.

[Return to I Do](#)