Life Science: Biology

Released form evidence

January 2026 moved through twins, an invasive aquatic plant, pest management and honeybees. Seven of ten clusters contained the word model or models. June averaged seven model-cued clusters; August averaged 7.5. Graph cues varied more across these small groups.

One January and five total forms. Two June 2026 items received universal credit and are excluded from topic occurrence counts. They remain visible as printed records. Cluster word cues include directions and questions.

Eligible public forms • January 1 / June 2 / August 2

Worked responses and follow-up questions

1 Which way did carbon move?

Net uptake is consistent with photosynthesis exceeding respiration. CO_2 fell 80 ppm in the plant chamber while the comparison stayed constant. Some carbon could enter sugars and then plant tissue. The data measure net exchange.

If the student says respiration stopped, ask whether both processes could occur during a net decrease.

2 A model with a missing arrow

Decomposers obtain matter and energy from dead organisms. Respiration releases CO_2, which plants can incorporate. Energy enters as light and leaves as heat. Carbon atoms can cycle among organisms, air and soil.

If energy is drawn from decomposers back to the Sun, ask what leaves as thermal energy.

3 Trace an inherited difference

AA, Aa, Aa, aa. Probability of aa is 1/4 per seed. Four independent offspring can yield other counts. The probability describes many events and does not set a four-seed quota.

If two symbols are assigned from one parent, trace one allele from each.

Average clusters with an explicit word cue per released form

Feature	January	June	August
model	7.00	7.00	7.50
graph	6.00	5.50	2.00
diagram	3.00	4.50	2.50

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

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4 Explain selection with a counterexample

If dark insects are less visible on dark bark, they may leave more surviving offspring, increasing the trait frequency. Compare predation or reproductive success by color in both settings. Frequency data alone cannot rule out migration or chance.

If individuals change color because they need to, ask whose offspring become more common.

5 Test a feedback model

Higher temperature triggers increased heat loss, reducing temperature and reducing the original stimulus. The downward trend is consistent with negative feedback, although exercise stopping also matters. The response should weaken near baseline.

If the loop keeps increasing heat loss forever, ask how the signal changes as temperature returns.

6 Separate association and mechanism

Reduced light could limit photosynthesis and growth. The lower-light pools also had less growth. Compare similar plants under controlled light levels while keeping nutrients and temperature constant. The pond comparison alone cannot isolate the mechanism.

If “floating plants kill everything” appears, ask which organisms and outcomes were actually measured.

Released practice for each week

Week 1 2026-01 • Q1 • Two Kinds of Twins (Q1–5)
Question booklet **Official mapping / guide**

Week 2 2026-06 • Q10 • Green and Black Frogs (Q10–14)
Question booklet **Official mapping / guide**

Week 3 2026-08 • Q45 • The Permafrost Problem (Q45–48)
Question booklet **Official mapping / guide**