Physical Science: Physics

Released form evidence

The single public form included pendulum motion, heat exchange, helmet design, cell-phone optics and voice recognition. It had ten clusters, 31 selected responses and 19 constructed responses. Nine clusters contained an explicit diagram cue.

Only June 2026 is available in the corpus. The August schedule supplied no same-design form. January will be the first winter test, so all month comparisons are unestimated.

Eligible public forms • January 0 / June 1 / August 0

Worked responses and follow-up questions

1 Two force curves, one change in motion

Both impulses are 7.2 N·s. The longer pulse has half the force for twice the time. Equal impulses imply equal magnitudes of momentum change; the simplified result supports reducing peak force by extending contact time.

If the taller pulse is assigned greater impulse, draw both rectangles and label width and height.

2 Where the energy went

0.8 J is outside the listed mechanical-energy terms. Thermal energy in wheels or track, sound, or unmeasured rotation could contribute. Measure rotational speed or compare runs with changed friction before assigning the difference to a single mechanism.

If “energy disappeared” appears, expand the system and ask what was measured.

3 Use evidence from a wave

Wavelengths are 0.68 m and 0.34 m. Doubling frequency halves wavelength. Measure sound-pressure amplitude or intensity under comparable conditions to investigate loudness; frequency alone does not establish it.

If “higher pitch means louder” appears, ask which quantity determines cycles per second.

Average clusters with an explicit word cue per released form

Feature	January	June	August
diagram	—	9.00	—
model	—	7.00	—
graph	—	5.00	—

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

Official design or administration guidance

Physical Science: Physics

4 Test a lens claim

Magnitude 15/30 = 0.5. Image height 2 cm and inverted. A real image can be projected onto a screen without a second imaging device.

If magnification is 2, compare whether the image distance is larger or smaller than the object distance.

5 Read electrical power as evidence

Inputs are 60 J and 42 J. The revision draws less energy, but efficiency requires useful output relative to input. Measure the same intended output, such as delivered light energy, for both trials.

If lower input is called higher efficiency, ask whether the second device could simply do less useful work.

6 Choose a design under two constraints

A and B both give 7.2 N·s. A meets both limits, including the 0.08 s maximum. B exceeds the force limit. Repeat A at varied incoming speeds or with measurement uncertainty near the time boundary.

If both are accepted solely on impulse, mark each design against each separate constraint.

Released practice for each week

Week 1 2026-06 • Q1 • Pendulum Motion (Q1–5)
Question booklet **Official mapping / guide**

Week 2 2026-06 • Q11 • Heat Exchange (Q11–14)
Question booklet **Official mapping / guide**

Week 3 2026-06 • Q46 • Charged Drops (Q46–50)
Question booklet **Official mapping / guide**