

Investigate the pendulum period

Ages 15-16 · Suggested 55-minute lesson · Standard and Short at 15°

Before sharing access

- Check Standard and Short at 15°. The public demo does not include the full comparison.
- Try playback and the measurement method on the network your class will use.
- Read the instructor guide and keep pre-class measurements as labelled backup data.

Lesson structure

10 min · Prediction and design

What changes? What stays the same? Collect an individual prediction.

15 min · Observation

Assign navigation, reading and recording. Check the count before repeating.

14 min · Recording and calculation

Keep times, oscillation counts and method. Compare means and spread.

9 min · Graphing

Use Standard and Short as labels if you do not have verified lengths.

7 min · Conclusion

Cite both means, explain the comparison and acknowledge a limitation.

Questions to support the investigation

- Show me one complete oscillation. Where do you start and finish?
- Is the difference between configurations larger than the spread of your readings?
- What does this comparison support? What does it not yet establish?

$T = (\text{end time} - \text{start time}) / \text{complete oscillations}$. If playback is interrupted, discard that timing. Moving a can changes mass distribution; it is not an isolated test of mass.

Activity and instructor guide:

teach.labsland.com/en/lessons/pendulum-inquiry-en/