

Shadow length data

Suggested: Years 3-5 | Pupil page

Name: _____ Date: _____

Read a small table, compare values and identify limits of the evidence.

Invented observations of one fixed model post: 09:00 - 48 cm; 11:00 - 30 cm; 13:00 - 22 cm; 15:00 - 37 cm.
Measurements are sample data. Do not look directly at the Sun in any practical follow-up.

1. At which recorded time was the shadow shortest?

2. How much shorter was it at 11:00 than at 09:00?

3. Describe the pattern across the four recorded times.

4. Can we tell the exact shadow length at 12:00 from this table? Explain.

5. Name one condition to keep the same when comparing measurements.

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Learning focus

Read a small table, compare values and identify limits of the evidence.

Model and use

Compare two adjacent entries and say both the direction of change and its size.

Read or explore the example together. Let the learner try the task using an accessible response method, then discuss the reasoning. Use the check below to decide whether to revisit a step.

Answers / review criteria

1. 13:00.
2. 18 cm.
3. It decreases from 48 to 30 to 22 cm, then increases to 37 cm.
4. No. 12:00 was not recorded; an estimate should be labelled an estimate.
5. Examples: same post, same position and ground surface, same measurement method. The table alone does not prove a cause.

Support

Use strips representing the four lengths and provide the times as labels.

Challenge

Sketch a time-versus-length graph and mark where a line suggests, rather than records, a value.

What to look for

Can the learner distinguish a measured value from an interpolation?

Print page 1 for the activity; keep page 2 for teaching. Suggested age ranges are selection aids, not curriculum alignment claims. Responses may be spoken, drawn, pointed to, typed or recorded through the learner's usual communication method.