

PUPIL WORKSHEET

Run and judge a fair test

Autumn 1 · Week 5 · Lesson B

Name: _____ Date: _____

Carry out or direct a controlled two-surface comparison, record three trials where practicable and judge whether evidence answers the question.

Use Monday's plan. Compare two surfaces with three releases each if practicable. Choose an actual practical/directing route or the clearly labelled model-data alternative. Keep every original result and label retries separately.

1. Confirm the plan

Question: Does the run-out surface affect stopping distance? Name two available surfaces and check your CHANGE/KEEP/MEASURE plan with the adult before touching the kit.

Plan item	Our agreed choice
Surface A and surface B	
CHANGE	
KEEP THE SAME	
MEASURE, with unit	
My role	

2. Record all three trials

Write, draw, point or dictate as agreed with your teacher.

Release without a push. Measure from the same zero to the same trolley edge after stopping. Repeat the procedure up to three times per surface. If a run was not performed, say so; never enter a made-up zero.

- Original result kept for checking: ____.
- Method issue or uncertainty: ____.
- Separate retry, if performed: ____; reason: ____.

Named surface	Trial 1 / cm	Trial 2 / cm	Trial 3 / cm
A:			
B:			

3. Alternative: model-data analysis

Write, draw, point or dictate as agreed with your teacher.

Use only as an alternative to the practical. The source provides this invented teaching set. Explain what the data show and which controls must be true before trusting the comparison.

- Compare A and B using values: ____.
- Two necessary controls: ____ and ____.
- This is data interpretation rather than a practical I performed because ____.

Model surface	Trial 1 / cm	Trial 2 / cm	Trial 3 / cm
A	48	50	49
B	27	29	28

4. Judge and explain the evidence

Write, draw, point or dictate as agreed with your teacher.

Use actual or clearly labelled model results. Inspect an unusual run; note any specific method issue. Write a conclusion with numbers and one limitation. Optional stretch: calculate a mean only for three comparable numeric values.

- My evidence supports ____ because ____.
- One uncertainty or control to improve: ____.
- Optional mean A: $(\text{ } + \text{ } + \text{ }) \div 3 = \text{ } \text{ cm.}$
- Optional mean B: $(\text{ } + \text{ } + \text{ }) \div 3 = \text{ } \text{ cm.}$

5. Feedback and exit

Write, draw, point or dictate as agreed with your teacher.

Offer the adult one suggestion about testing, waiting or recording, or pass privately. Choose one exit question. Keep your plan with results and conclusion, then return equipment safely.

- What helped, or what could change?
- Supported: how many things did we deliberately change?
- Standard: name one control from today's test.
- Stretch: why are repeats more useful than one result?

CHOOSE A RESPONSE ROUTE

Ways to show your understanding

Choose the route agreed with your teacher. You do not need to complete every route.

Supported

Choose CHANGE/KEEP/MEASURE labels with the adult. Direct three releases on one surface and compare an adult-recorded second surface. Dictate values and one conclusion.

Standard

Plan controls, record up to three trials for each surface in cm and use repeated evidence to answer the question.

Stretch

Explain an unusual result or limitation. Calculate means where appropriate, keep raw data and separate retries, and explain why a mean cannot repair an unfair method.

Keep the plan, all original data, any separate retry and conclusion together. Next current Week 6 explores Earth and the planets.