

GRADE 2 LEARNING PACK

Forces: Push, Pull, Friction & Ramps

Investigate how pushes, pulls, surfaces and slopes affect movement.

LEARN • PRACTISE • CREATE • REFLECT

Original BrightPencil Kids resource - adult-led where appropriate

A4 edition • 12 purposeful pages • review copy

Print. Learn. Grow.

Grown-up guide

Learning objective

Investigate how pushes, pulls, surfaces and slopes affect movement.

Use this pack well

- Model the first example aloud, then let the learner try.
- Ask “How do you know?” more often than “Are you finished?”.
- Use real objects, talk, movement or observation when the activity suggests it.
- Stop or shorten the session if attention or enjoyment drops.
- Open-ended pages can have many successful answers.

Quality note

This resource was written originally for BrightPencil Kids. Curriculum sources informed scope and progression only; no third-party worksheet or story text is reproduced.

Learn the idea

1 Forces can change motion.

2 Friction resists motion between surfaces.

3 Changing ramp height can change how an object moves.

Talk about it

Explain one idea in your own words. Give an example from real life, a drawing or an object if that helps.

Classify actions as push/pull/both.

Compare toy movement on smooth and rough surfaces.

Predict then test a toy car on two ramp heights.

Identify what should stay the same in a ramp comparison.

Explain one useful and one unwanted example of friction.

Try it beyond the page

Real-world / hands-on connection

Use a small toy and safe ramp with adult supervision; keep the release point consistent.

Before you finish

What did you notice?

What evidence, object or example helped you?

What would you change if you tried again?

Create something

Your project

Create a ramp-test results page with drawing, prediction, evidence and conclusion.

Use this space for planning, drawing, mapping, designing or notes.

CHALLENGE

Think deeper

1. What does friction often do to motion?

2. Why keep the same toy in both tests?

3. Can friction be useful?

Quick review

1. In one sentence, explain the big idea of “Forces: Push, Pull, Friction & Ramps”.

2. Draw or write one example that shows you understand.

3. Choose one activity from this pack and explain the strategy you used.

4. Write one question you still have.

Answer & discussion notes

Use these as guidance, not scripts. Open questions can have different successful responses when the reasoning is sensible and evidence-based.

1. Suggested response

It resists/slows relative motion.

2. Suggested response

For a clearer comparison.

3. Suggested response

Yes, e.g. grip/braking/walking.

Review before publication

Check age fit, factual accuracy, clarity, accessibility, rights provenance and whether the activity works in practice. This file remains a review copy until those checks are signed off.

FINISH

My learning reflection

I finished this BrightPencil learning pack.

One thing I understand better now:

A strategy that helped me:

Something I created or noticed:

My next small question or goal:

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