

GRADE 1 LEARNING PACK

Inventions & Everyday Problem Solving

Explore how objects are designed to solve problems and improve through testing.

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

Explore how objects are designed to solve problems and improve through testing.

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 An invention or design responds to a need or idea.

2 Designs often change after testing.

3 Simple everyday objects can involve clever engineering.

Talk about it

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

Choose the problem solved by an umbrella, zipper, wheel and pencil sharpener.

Find one feature of a cup that helps it do its job.

Compare two fictional lunchboxes and decide which design suits a rainy trip.

Explain why prototypes can be useful.

Improve a familiar object for a user with a specific need.

Try it beyond the page

Real-world / hands-on connection

Choose one safe everyday object and inspect how its shape/material helps its purpose.

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

Sketch an improved school-bag feature and label the problem it solves.

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

CHALLENGE

Think deeper

1. Why do designers test ideas?

2. What is a prototype?

3. Can an old invention still be useful today?

Quick review

1. In one sentence, explain the big idea of “Inventions & Everyday Problem Solving”.

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

To find problems and improve the design.

2. Suggested response

An early/test version of a design.

3. Suggested response

Yes.

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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