GRADE 4 LEARNING PACK

Data & Chance Investigation

Pose a question, collect/display data, interpret results and describe simple chance using evidence.

LEARN • PRACTISE • CREATE • REFLECT

Original BrightPencil Kids resource - adult-led where appropriate

A4 edition • 12 purposeful pages • review copy

Print. Learn. Grow.

FOR PARENTS & TEACHERS

Grown-up guide

Learning objective

Pose a question, collect/display data, interpret results and describe simple chance using evidence.

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.

STUDY

Learn the idea

1 **Data are collected to answer questions.**

2 **Display choices should match the data and make comparison clear.**

3 **Chance language can be tested through repeated trials, and actual results may differ from predictions.**

Talk about it

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

PRACTISE

Guided practice

Challenge 1

Turn a topic into a measurable survey question.

Challenge 2

Create a frequency table from sample responses.

PRACTISE

Build the skill

Challenge 3

Read a bar chart and write two evidence-based statements.

Challenge 4

Predict outcomes of 20 coin flips, then compare with a sample result.

PRACTISE

Independent thinking

Challenge 5

Explain why a small sample may not represent everyone.

APPLY

Try it beyond the page

Real-world / hands-on connection

Collect a small, non-sensitive class/family data set such as favourite fruit or book genre and display it clearly.

Before you finish

What did you notice?

What evidence, object or example helped you?

What would you change if you tried again?

CREATE

Create something

Your project

Design a simple chance experiment with prediction, 20 trials, tally and conclusion.

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

CHALLENGE

Think deeper

1. Why label graph axes?

2. Can experimental results differ from expected outcomes?

3. What is a sample?

REVIEW

Quick review

1. **In one sentence, explain the big idea of “Data & Chance Investigation”.**

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.**

FOR GROWN-UPS

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

So readers know what quantities/categories are shown.

2. Suggested response

Yes.

3. Suggested response

A subset of a larger group or set of possible observations.

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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