

GRADE 5 LEARNING PACK

Map Scale, Coordinates & Multi-Constraint Routes

Use scale, coordinates and multiple constraints to plan and defend a route decision.

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

Use scale, coordinates and multiple constraints to plan and defend a route decision.

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 Scale converts map distance into real distance.

2 Coordinates and grid references make location descriptions precise.

3 Route quality can depend on safety, access, terrain, time and purpose - not distance alone.

Talk about it

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

Build a clear model or organiser that shows: Scale converts map distance into real distance.

Use supplied evidence to test this idea: Coordinates and grid references make location descriptions precise.

Compare two cases and explain where this principle matters: Route quality can depend on safety, access, terrain, time and purpose - not distance alone.

Find one weak claim or assumption and revise it so it matches the evidence.

Write a short conclusion that states evidence, limitation and next question.

Try it beyond the page

Real-world / hands-on connection

Compare two adult-selected public routes without using a home address.

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

Design a fictional regional map with scale, coordinates, key and three routes for different users.

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

CHALLENGE

Think deeper

1. If 4 cm represents 6 km, what does 10 cm represent?

2. Why can the shortest route be unsuitable?

3. What makes a route justification strong?

Quick review

1. In one sentence, explain the big idea of “Map Scale, Coordinates & Multi-Constraint Routes”.

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

15 km.

2. Suggested response

Other constraints such as safety, access or terrain may matter more.

3. Suggested response

It links accurate map evidence to the stated need.

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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