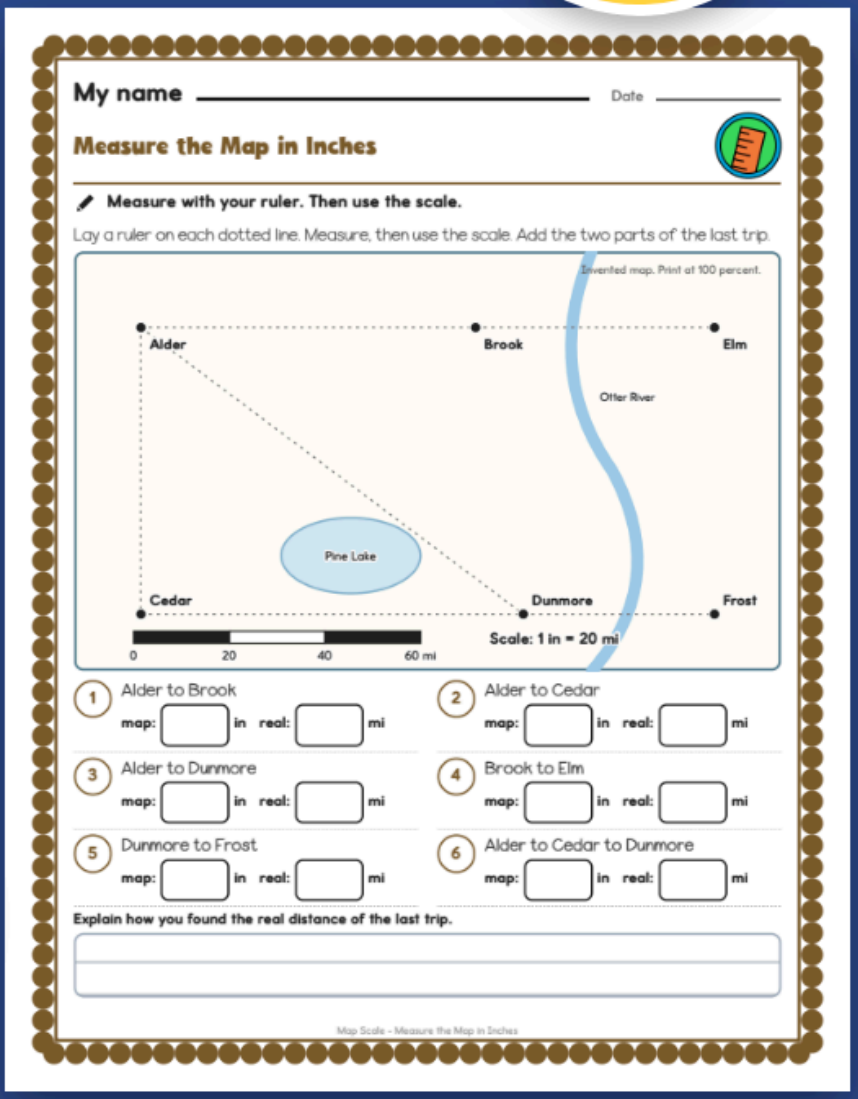
MAP SCALE

Worksheets - Grades 6-8

22 STUDENT PAGES


My name _____ Date _____

Measure the Map in Inches

Measure with your ruler. Then use the scale.

Lay a ruler on each dotted line. Measure, then use the scale. Add the two parts of the last trip.

Alder
Brook
Elm
Otter River
Pine Lake
Cedar
Dunmore
Frost
Scale: 1 in = 20 mi
0 20 40 60 mi

1. Alder to Brook — map: ___ in real: ___ mi
2. Alder to Cedar — map: ___ in real: ___ mi
3. Alder to Dunmore — map: ___ in real: ___ mi
4. Brook to Elm — map: ___ in real: ___ mi
5. Dunmore to Frost — map: ___ in real: ___ mi
6. Alder to Cedar to Dunmore — map: ___ in real: ___ mi

Explain how you found the real distance of the last trip.



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This is a fillable PDF

- Open it in a PDF reader (Adobe Acrobat Reader, Preview, or your browser), click into a line or a box, type, and Save As.
- The name line, every answer box, every ruled work box and every check box on the student pages are type-in fields, and so are the tracker, class grid, team note and family page. You can also print any page and write by hand.
- It works offline. No account, no subscription, no internet connection needed after you download it.

Print at 100 percent

Turn off fit to page and shrink to fit. The ruler and measuring pages (13, 14 and 15) only work at full size. Every student page is black and white inside a colored border, so it still reads when copied in black and white.

Student work

A filled-in tracker, class grid or team note carries a real student's name. Keep it in the data folder, and use a first name only on any page that leaves your hands.

Need help?

If a field will not behave or a page will not print the way you expect, use Ask a Question on the product page. Every question is read, and a fix ships as a free update.

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PREVIEW

Preview · Bright Path Sped

How To Read a Page

The parts of a student page, then the page types in the order they come.

The parts of a page

- **The answer box.** A bordered box for a letter or a number. Click it to type, or print and write in it.
- **The ruled work box.** Lines 0.34 inch apart. A short answer, a main idea box and a work space each get a box that fills the space. It types and prints.
- **The check box.** True or false, map 1 or map 2, yes or not yet: click or mark one.
- **The scale bar.** A black and white bar split into equal segments, with the marks labeled in miles or kilometers.
- **The measuring maps.** Invented towns drawn at full size, so a real ruler can be laid along each dotted line. The towns sit on whole and half marks, so measurements land on clean numbers.
- **The cut line.** Six pieces in a 3 by 2 grid, each 2.4 by 1.25 inches, edge to edge: one cut across and two down.

Page type	What it looks like	What the student does
Before You Read, Words to Know	2 pages, 12 items	True or false on the big idea, match eight words to their meanings.
4 Readings	8 checks	Read beside a figure, write the main idea, answer two checks with a letter.
Scale bars and rulers	3 pages, 24 items	Read what a segment stands for, count segments, read inch and centimeter rulers.
Measure and convert	5 pages, 40 items	Measure two drawn maps, multiply, divide and find the scale.
Word problems, compare, sort	3 pages, 20 items	Solve scale problems; choose the larger-scale map.
Quiz and Cut and Paste	12 quiz items, 12 pieces	A two-part quiz and two cut-and-paste mats.

Untimed, unscored on the page

No student page has a timer or a score on it. The keys and the tracker are for you. The answer keys are on pages 27 to 31.

A short account, not a full textbook

Each reading is a summary in plain words. It is not a complete map skills course, and it is not tied to any particular standard. Add your own textbook or a real map for more depth.

Printing and the type-in fields

Every page prints clean in black and white. The name line, every answer box, every ruled box and every check box are type-in fields in any PDF reader: click one, type, then save. This is a fillable PDF, not a slideshow or a word-processor file.

Open answers

The main idea boxes, the explanation boxes and the map-choice page are open. The keys give a sample and what to look for. Accept any answer that is true to the readings and explains its reason.

PREVIEW

Preview - Bright Path Sped

My name _____ Date _____

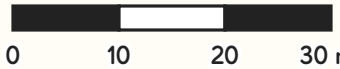


Before You Read

Read the big idea. Then check true or false.

A map cannot be as big as a town. A mapmaker shrinks it, and the scale tells you how to get the real size back.

The word	A map scale tells how a distance on a map matches a real distance on the ground.
The idea	A map shrinks every distance by the same amount. The scale tells you how much.
The tools	Use a scale bar or a ruler. Multiply to find the real distance.



A scale bar. Each segment is 10 miles.

Try it. Is each sentence true or false?

1. A map scale tells how a distance on the map matches a distance on the ground. ☐ true ☐ false

2. A scale bar is a short line on a map that is marked in miles or kilometers. ☐ true ☐ false

3. Every map in the world uses the same scale. ☐ true ☐ false

4. To change a map distance to a real distance, you add the scale. ☐ true ☐ false

In your own words: what is a map scale?

PREVIEW

Preview - Bright Path Sped

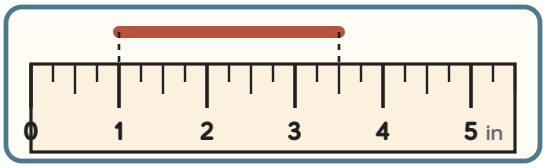
My name _____ Date _____

Reading: Measure With a Ruler

Read the page. Write the main idea. Then answer.

How do I measure a map distance?

To find a real distance, first measure on the map. Lay the edge of a ruler along the line between two places. Put the zero mark on the first place and read the number at the second place. If you start at a mark other than zero, subtract the smaller number from the larger one. An inch ruler has marks for halves and quarters, and a centimeter ruler has small marks for tenths of a centimeter, called millimeters. Always write the unit with your answer. Then use the scale to change your measurement into a real distance. If a printed map is shrunk or stretched when it is copied, a ruler gives a wrong answer, but the scale bar shrinks or stretches with the map, so it still works.



The line runs from 1 to 3 1/2 inches.

Main idea: What is this page about?

Fact: Write one fact from the reading that you want to remember.

Check what you read. Write the letter in the box.

1. A line runs from the 2 inch mark to the 5 inch mark of a ruler. How long is it? ☐
   - **A** 7 inches
   - **B** 3 inches
   - **C** 5 inches

2. Why does the scale bar still work after a map is copied smaller? ☐
   - **A** It is always exactly one inch long
   - **B** It is printed in black ink
   - **C** It shrinks along with the map

PREVIEW

Preview - Bright Path Shed

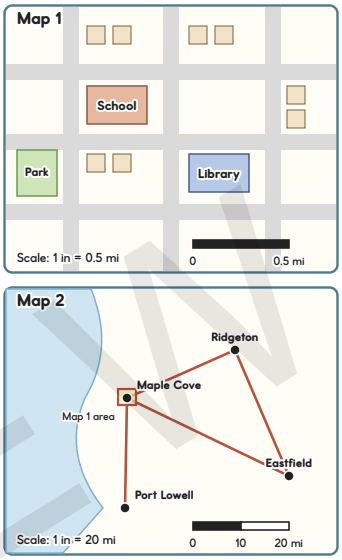
My name _____ Date _____

Reading: Large-Scale and Small-Scale Maps

Read the page. Write the main idea. Then answer.

Which map should I use?

Maps of the same place can have different scales. A large-scale map shows a small area, such as one town, with a lot of detail. You can see single streets and buildings. Its scale might be 1 inch = 0.5 mile. A small-scale map shows a large area, such as a whole state, with less detail. Only the big cities and highways fit. Its scale might be 1 inch = 40 miles. A way to remember: the number of miles for one inch is small on a large-scale map and big on a small-scale map. Choose the map for the job. Use a large-scale map to walk across a park, and use a small-scale map to plan a long drive.



Map 1: large-scale. Map 2: small-scale.

Main idea: What is this page about?

Fact: Write one fact from the reading that you want to remember.

Check what you read. Write the letter in the box.

1. Which kind of map shows a small area with a lot of detail?
   - **A** A small-scale map
   - **B** A map with no scale
   - **C** A large-scale map

2. A hiker wants to walk across a town park. Which scale fits best?
   - **A** 1 inch = 0.5 mile
   - **B** 1 inch = 100 miles
   - **C** 1 inch = 40 miles

PREVIEW

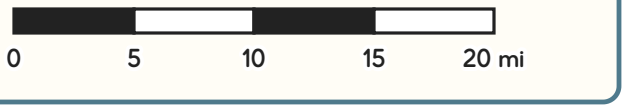
My name _____ Date _____

Read the Scale Bar

Read each scale bar. Write what it stands for.

A scale bar is split into equal segments. Find what one segment stands for. Then find what the whole bar stands for. When only the ends are labeled, divide the total by the number of segments.

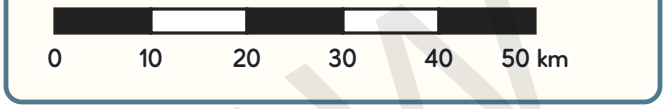
1 **Every mark is labeled.**



One segment stands for: ☐ mi

The whole bar stands for: ☐ mi

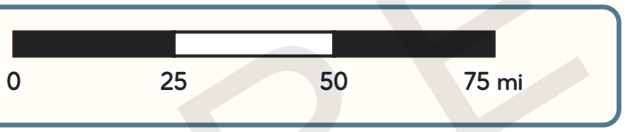
2 **Every mark is labeled.**



One segment stands for: ☐ km

The whole bar stands for: ☐ km

3 **Every mark is labeled.**



One segment stands for: ☐ mi

The whole bar stands for: ☐ mi

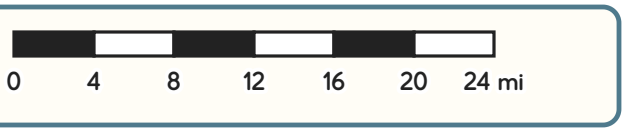
4 **Only the ends are labeled.**



One segment stands for: ☐ km

The whole bar stands for: ☐ km

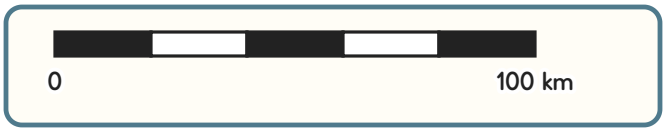
5 **Every mark is labeled.**



One segment stands for: ☐ mi

The whole bar stands for: ☐ mi

6 **Only the ends are labeled.**



One segment stands for: ☐ km

The whole bar stands for: ☐ km

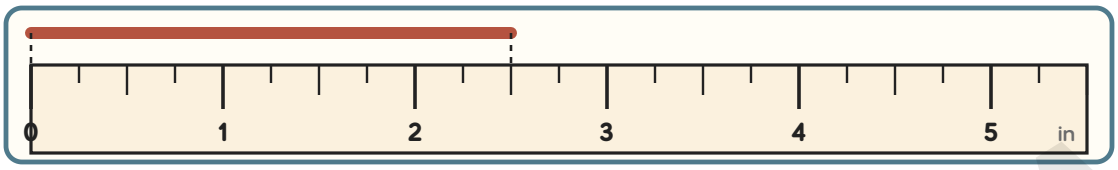
PREVIEW

My name _____ Date _____

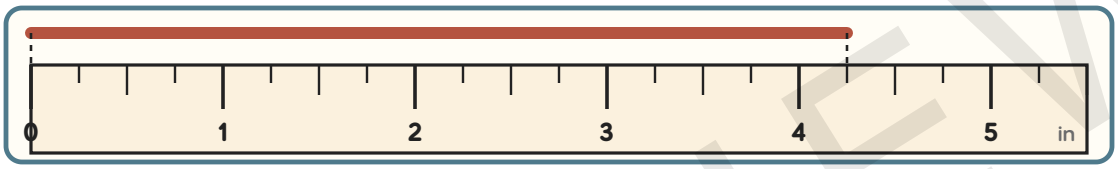
Read the Ruler

Read the ruler. Write the length of the line.

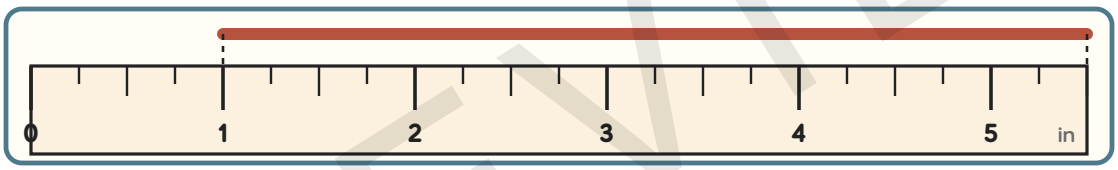
The orange line sits above each ruler. Find where it starts and where it ends. Subtract if it does not start at 0. Use a fraction or a decimal for the inch rulers, such as 2 1/2 or 2.5.

1 

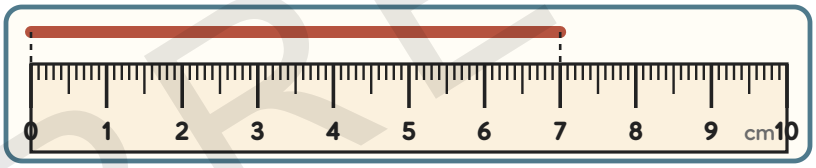
_____ in

2 

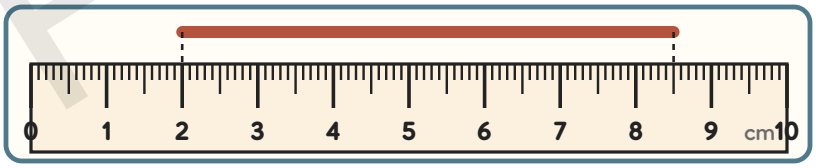
_____ in

3 

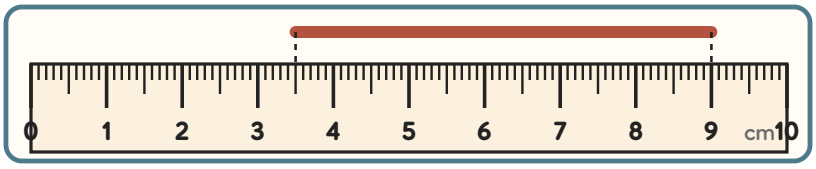
_____ in

4 

_____ cm

5 

_____ cm

6 

_____ cm

A line starts at 1 in and ends at 3 in. How long is it? Explain.

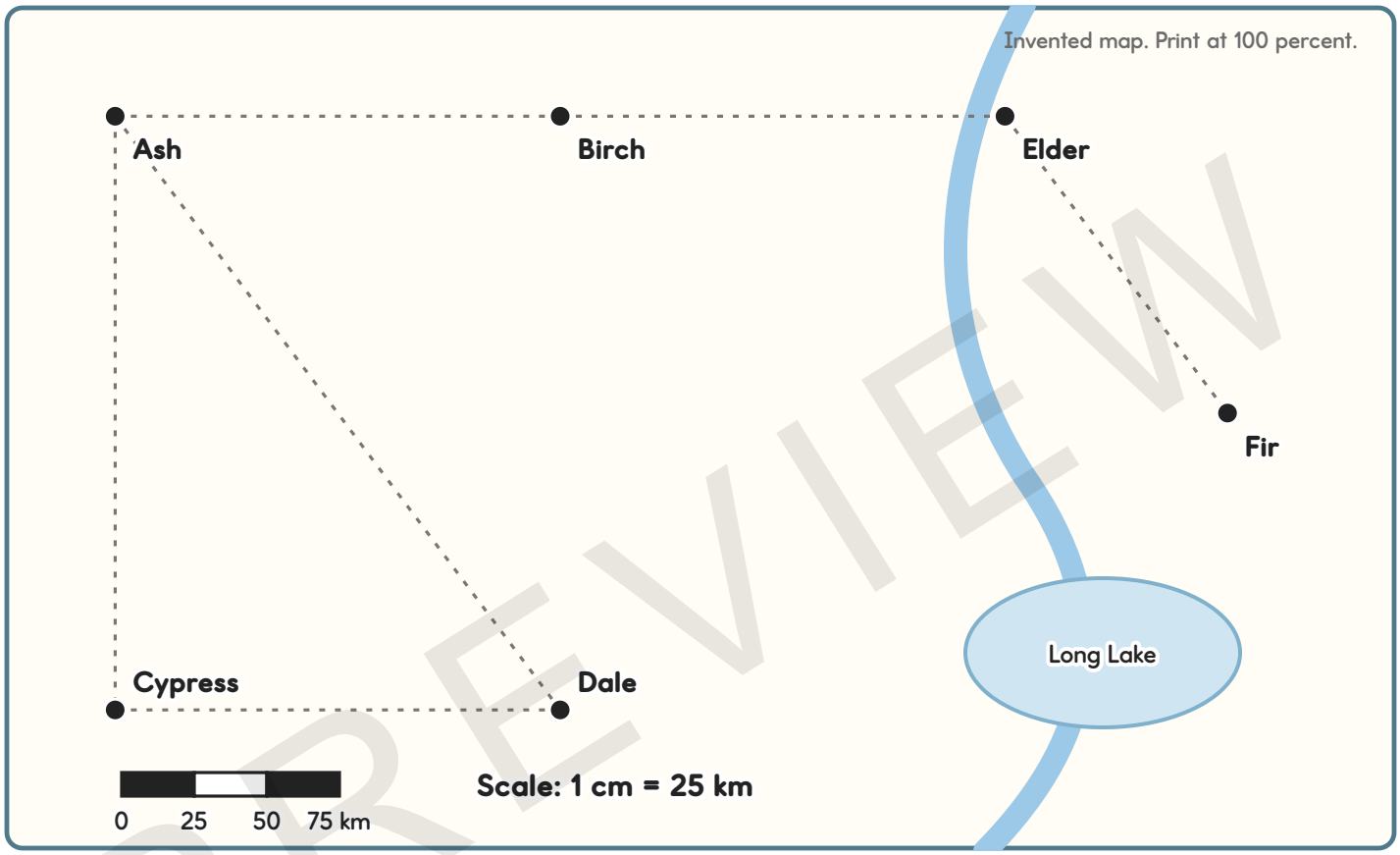
PREVIEW

My name _____ Date _____

Measure the Map in Centimeters

Measure with your ruler. Then use the scale.

Lay a ruler on each dotted line. Measure, then use the scale. Add the two parts of the last trip.



1. Ash to Birch
   map: ____ **cm** **real:** ____ **km**

2. Ash to Cypress
   map: ____ **cm** **real:** ____ **km**

3. Ash to Dale
   map: ____ **cm** **real:** ____ **km**

4. Elder to Fir
   map: ____ **cm** **real:** ____ **km**

5. Birch to Elder
   map: ____ **cm** **real:** ____ **km**

6. Ash to Cypress to Dale
   map: ____ **cm** **real:** ____ **km**

Explain how you found the real distance of the last trip.

PREVIEW

Preview Math Worksheet

My name _____ Date _____

Real Distance and Finding the Scale

Divide to find the map distance, or the scale.

To go from real life to the map, divide. To find the scale, divide the real distance by the map distance.

Find the map distance.

1. Scale: 1 in = 20 mi — Real: 80 mi — **Map:** ____ **in**
2. Scale: 1 in = 50 mi — Real: 175 mi — **Map:** ____ **in**
3. Scale: 1 cm = 10 km — Real: 90 km — **Map:** ____ **cm**
4. Scale: 1 in = 30 mi — Real: 150 mi — **Map:** ____ **in**

Find the scale.

5. 3 in on the map = 60 mi in real life — **1 in =** ____ **mi**
6. 5 cm on the map = 100 km in real life — **1 cm =** ____ **km**
7. 4 in on the map = 100 mi in real life — **1 in =** ____ **mi**
8. 2 cm on the map = 30 km in real life — **1 cm =** ____ **km**

How can you check a scale you found?

PREVIEW

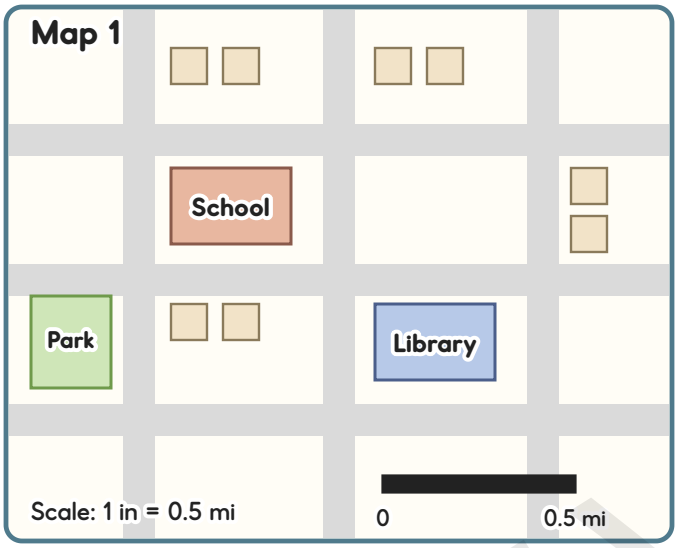
Preview - Bright Path Shed

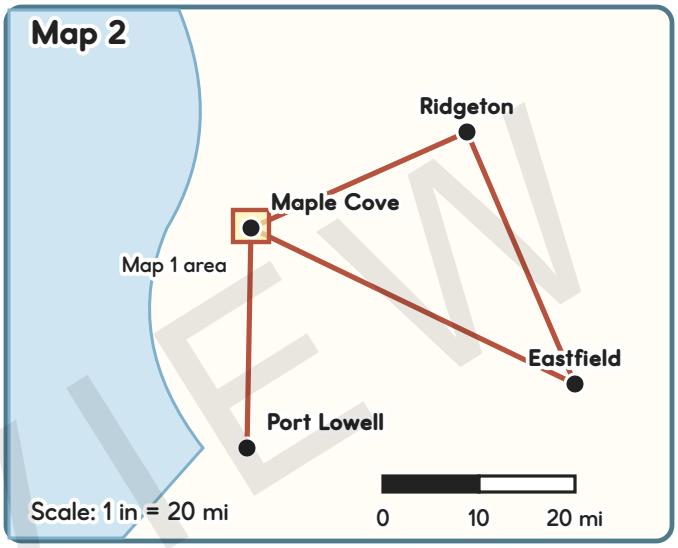
My name _____ Date _____

Two Maps, Two Scales

Look at both maps. Check one map for each question.

Both maps show the same town, Maple Cove. The red box on Map 2 marks the area Map 1 covers (not drawn to exact size). The town is invented.





1	Which map shows the school and the library?	☐ Map 1	☐ Map 2
2	Which map shows more land?	☐ Map 1	☐ Map 2
3	Which map has the larger scale?	☐ Map 1	☐ Map 2
4	Which map would you use to walk from the school to the library?	☐ Map 1	☐ Map 2
5	Which map would you use to plan a drive between three towns?	☐ Map 1	☐ Map 2
6	Which map shows less detail?	☐ Map 1	☐ Map 2

What can Map 1 show that Map 2 cannot?

PREVIEW

Preview - Bright Path Sped

My name _____ Date _____

Quiz, Part A

Read each one. Write the letter of the best answer.

Write the letter of the best answer in the box.

1. A scale bar is marked 0, 10, 20 and 30 miles. How many miles does one segment stand for?
   - **A** 3 miles
   - **B** 10 miles
   - **C** 30 miles

2. The scale is 1 in = 40 mi. About how far is 3 in on the map?
   - **A** 43 miles
   - **B** 120 miles
   - **C** 13 miles

3. Which scale belongs to a large-scale map?
   - **A** 1 inch = 100 miles
   - **B** 1 inch = 500 miles
   - **C** 1 inch = 1 mile

4. A map shows a whole state on one page. Is it likely large-scale or small-scale?
   - **A** Small-scale
   - **B** Large-scale
   - **C** Neither one

5. What does the scale 1 : 50,000 mean?
   - **A** The map is 50,000 inches wide
   - **B** 1 unit on the map is 50,000 of the same unit on the ground
   - **C** The trip is 50,000 miles

6. A line on a map measures 6 cm and the scale is 1 cm = 10 km. How long is it in real life?
   - **A** 60 km
   - **B** 16 km
   - **C** 6 km

PREVIEW

Preview - Bright Path Sped

My name _____ Date _____

Cut and Paste: Distances

Cut out the six pieces. Paste each one in the right box.

The scale is 1 in = 20 mi. Find the real distance for each piece. Paste it in the box with that distance.

60 mi	90 mi	30 mi

120 mi	50 mi	150 mi

Cut on the dashed lines: six pieces, one cut across and two cuts down.

6 in on the map	3 in on the map	7.5 in on the map
1.5 in on the map	2.5 in on the map	4.5 in on the map

Pick one piece. Show how you found its real distance.

PREVIEW

My name _____ Date _____

Check My Own Work

Check your own work. Mark yes or not yet.

1	I can tell what a map scale shows.	☐ yes	☐ not yet
2	I can find what one segment of a scale bar stands for.	☐ yes	☐ not yet
3	I can read a length on an inch ruler and a centimeter ruler.	☐ yes	☐ not yet
4	I can change a map distance to a real distance.	☐ yes	☐ not yet
5	I can change a real distance to a map distance.	☐ yes	☐ not yet
6	I can find the scale when I know both distances.	☐ yes	☐ not yet
7	I can tell a large-scale map from a small-scale map.	☐ yes	☐ not yet
8	I can pick the right map for a job.	☐ yes	☐ not yet

The skill I understand best is...

One thing I still want to know is...

PREVIEW

Answer Key: Scale Bars, Rulers, Measuring

Scale bar pages, the ruler page and the two measuring maps.

Read the Scale Bar page 11

#	One segment	Whole bar
1	5 mi	20 mi
2	10 km	50 km
3	25 mi	75 mi
4	50 km	200 km
5	4 mi	24 mi
6	20 km	100 km

Use the Scale Bar page 12

Road	Segments	Length
Road A	2 segments	40 km
Road B	3.5 segments	70 km
Road C	5 segments	100 km
Road D	1.5 segments	30 km
Road E	4 segments	80 km
Road F	2.5 segments	50 km

Read the Ruler page 13

#	Line runs	Length
1	0 to 2.5 in	2.5 in
2	0 to 4.25 in	4.25 in
3	1 to 5.5 in	4.5 in
4	0 to 7 cm	7 cm
5	2 to 8.5 cm	6.5 cm
6	3.5 to 9 cm	5.5 cm

Measure the Map in Inches page 14

#	Towns	Map	Real
1	Alder to Brook	3.5 in	70 mi
2	Alder to Cedar	3 in	60 mi
3	Alder to Dunmore	5 in	100 mi
4	Brook to Elm	2.5 in	50 mi
5	Dunmore to Frost	2 in	40 mi
6	Alder to Cedar to Dunmore	7 in	140 mi

Measure the Map in Centimeters page 15

#	Towns	Map	Real
1	Ash to Birch	6 cm	150 km
2	Ash to Cypress	8 cm	200 km
3	Ash to Dale	10 cm	250 km
4	Elder to Fir	5 cm	125 km
5	Birch to Elder	6 cm	150 km
6	Ash to Cypress to Dale	14 cm	350 km

How the numbers were checked

Each town sits at a point set in code, so every distance on the measuring maps is a whole, half or quarter unit (the diagonal ones are 3-4-5 triangles). The real distance is the map distance times the scale. A ruler reading within about 1/16 inch or 1 millimeter is fine.

PREVIEW

Answer Key: Comparing Maps

Two Maps, Two Scales, Large-Scale or Small-Scale?, and the map-choice page. The explanations are samples.

Two Maps, Two Scales page 19

#	Starts with	Answer
1	Which map shows the school and the …	Map 1
2	Which map shows more land?	Map 2
3	Which map has the larger scale?	Map 1
4	Which map would you use to walk …	Map 1
5	Which map would you use to plan …	Map 2
6	Which map shows less detail?	Map 2

Why the larger scale is the first map

On Map 1, 1 inch stands for only 0.5 mile, so a short walk fills the page with streets. On Map 2, 1 inch stands for 20 miles, so the whole town is a dot. The smaller number of miles per inch is the larger scale.

Large-Scale or Small-Scale? page 20

#	Scales (A | B)	Larger scale
1	1 in = 1 mi | 1 in = 100 mi	map A
2	1 in = 50 mi | 1 in = 5 mi	map B
3	1 cm = 100 m | 1 cm = 10 km	map A
4	1: 24,000 | 1: 250,000	map A
5	1: 1,000,000 | 1: 50,000	map B
6	1 in = 200 mi | 1 in = 20 mi	map B
7	1 cm = 5 km | 1 cm = 500 m	map B
8	1 in = 10 mi | 1 in = 0.25 mi	map B

Sample: Claim, Evidence, Reasoning (page 21)

- **Claim:** Map 1 is the better choice for the walk.
- **Evidence:** Map 1 has a scale of 1 in = 0.5 mi, and it shows single streets, the school and the library. Map 2 has a scale of 1 in = 20 mi, and it shows only towns and highways.
- **Reasoning:** The walk is short and the group needs streets. A large-scale map shows a small area in more detail, so Map 1 helps them find the way. Map 2 shows a large area with less detail, so it fits the bus trip.

Using the sample answers

- Accept any answer that is true to the readings, in the student's own words.
- Look for a fact from the maps (what each one shows, its scale) and a reason that goes with it.
- A one-word answer can be a start: ask "How do you know?" and have the student add the reason.

PREVIEW

Map Scale Tracker

One student, every scored page. Filled example: page 36.

Student _____ Teacher _____ Month _____

Page	Page type and set	Items	Right	Date	Notes
5	Before You Read	4			
6	Reading: What a Scale Tells You	2			
7	Reading: Measure With a Ruler	2			
8	Reading: Change Map Distance to Real Distance	2			
9	Reading: Large-Scale and Small-Scale Maps	2			
10	Words to Know	8			
11	Read the Scale Bar	12			
12	Use the Scale Bar	6			
13	Read the Ruler	6			
14	Measure the Map in Inches	12			
15	Measure the Map in Centimeters	12			
16	Map Distance to Real Distance	8			
17	Real Distance and Finding the Scale	8			
18	Scale Word Problems	6			
19	Two Maps, Two Scales	6			
20	Large-Scale or Small-Scale?	8			
22	Quiz, Part A	6			
23	Quiz, Part B	6			
24	Cut and Paste: Distances	6			
25	Cut and Paste: Words	6			

PREVIEW

How to fill this in

Write how many items the student got right with no prompt, and the date. A blank means not tried yet, never wrong. There are 128 items on the 20 scored pages. Answer keys: pages 27 to 31. Filled example: page 36.

This month we are working on (your own standard or wording)

Team Note

Use this page between team meetings or when a student moves classes, to hand off what changed without writing a note from scratch. Everything below is observable, with a blank for the number or the wording your team already uses.

Student _____ Team member _____ Date _____

Page type	Covered since last note (Y/N)	Items right	Still blank
Basics and words			
Readings			
Scale bars and rulers			
Measure and convert			
Compare maps			
Quiz			
Cut and paste			

What I saw (observable, not a conclusion)

- Found what one segment of a scale bar stands for on ___ of ___ bars (pages 11, 12).
- Read ___ of ___ ruler lengths (page 13): started at 0 / needed a reminder to subtract.
- Changed map distance to real distance on ___ of ___ items (pages 16, 17): multiplied / needed a model.
- Chose the larger-scale map on ___ of ___ pairs (page 20): yes / no / with a reminder.

Next step

- Next page or set: ___, because ___ (what you saw).
- What to try in another class or at home: ___.
- What to keep doing because it is working: ___.
- Anything for the team meeting to decide: ___ (this page records what happened, never a label or a plan).

Summary, in one or two sentences, for whoever reads this next

A filled-in line, for reference

"Matched 6 of 8 words on Words to Know with no prompt on 9/29. Next step: practice ratio scale and scale bar with a labeled map." That is the level of detail this page is built for. It matches the filled example on page 36.

PREVIEW

Dana's Tracker (Invented Student)

Dana R. is invented; nothing on this page describes a real student. The blank tracker is on page 32.

Student: Dana R. (an invented student)

Teacher: Mr. Chen (invented)

Month: September to October

Page	Page type and set	Items	Right	Date	Notes
5	Before You Read	4	4	9/22	-
6	Reading: What a Scale Tells You	2	2	9/24	-
7	Reading: Measure With a Ruler	2	-	-	-
8	Reading: Change Map Distance to Real Distance	2	1	9/25	Added instead of multiplied
9	Reading: Large-Scale and Small-Scale Maps	2	-	-	-
10	Words to Know	8	6	9/29	Mixed up ratio scale and scale bar
11	Read the Scale Bar	12	10	10/1	Read one segment as the whole bar
12	Use the Scale Bar	6	-	-	-
13	Read the Ruler	6	5	10/3	Did not subtract from the starting mark
14	Measure the Map in Inches	12	-	-	-
15	Measure the Map in Centimeters	12	-	-	-
16	Map Distance to Real Distance	8	-	-	-
17	Real Distance and Finding the Scale	8	-	-	-
18	Scale Word Problems	6	-	-	-
19	Two Maps, Two Scales	6	-	-	-
20	Large-Scale or Small-Scale?	8	-	-	-
22	Quiz, Part A	6	-	-	-
23	Quiz, Part B	6	-	-	-
24	Cut and Paste: Distances	6	-	-	-
25	Cut and Paste: Words	6	-	-	-

PREVIEW

How to read it

Dana R. has done **6 of 20** scored pages and got **28 of 34** items right with no prompt. **2** pages were all right and **4** carry a note. Every number comes from the table.

What the table points to

The lowest page is Reading: Change Map Distance to Real Distance (1 of 2). That is where the next practice goes. The 14 pages left blank are not tried yet, never wrong.

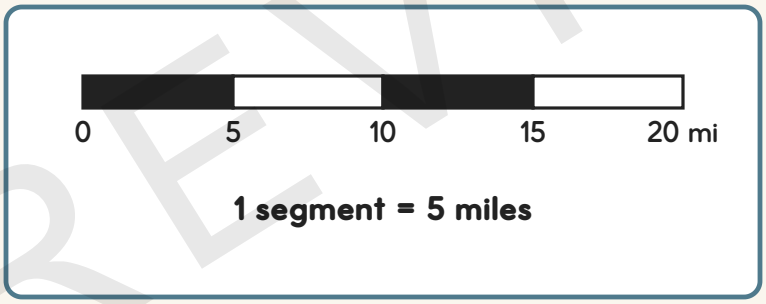
Binder Cover

Slide this into the front of a binder. Type a name in the two fields or write it by hand. The divider tabs and a spine label to cut out are on the next page (page 39).

Map Skills

MAP SCALE

Readings, Measuring and Practice



Scale bar | **Ruler** | **Convert** | **Compare**

Teacher _____

Class or student _____

PREVIEW