

Paddling the River

Teacher's Guide



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Line Masters

This Teacher's Guide includes access to modifiable and PDF line masters.

To access these Mathology Little Book Line Masters, please log in at Pearson Places, www.pearsonplaces.com.au and select the Mathology Little Books icon. The Line Masters can be found in the 'Explore Resources' section.

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Mathology Little Books

This series recognizes that children's understanding of maths concepts develops over time, and so the series allows you to choose the book that best matches a child's or group's level of mathematical understanding. The books engage children at just the right level in a wide range of mathematical ideas, thinking, and activities in a variety of real world and imaginary contexts.

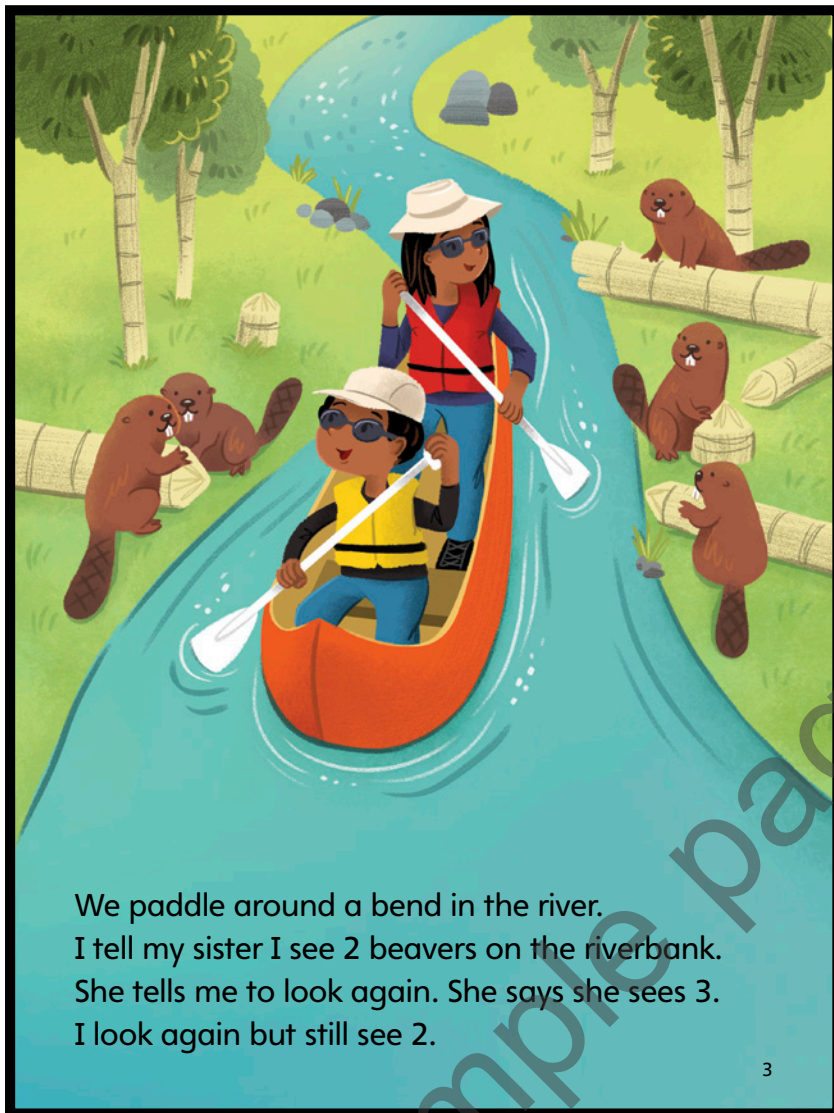
Paddling the River engages children in conversations, investigations, and activities that help to develop their understanding of the big maths idea that "Numbers are related in many ways."*

Big Idea: Numbers are related in many ways

(Compare, order and count. Read, write and model numbers)

	KEY MATHS FOCUS	MATHS SKILLS	STRATEGIES	ADDITIONAL FOCUS
	Compare quantities to 10 Count sets to 10	1-1 Correspondence Subitize Stable order Cardinality Conservation of number Compare and create sets that have more, less or as many as a given number	Count on Touch and count Create sets to 10	Recognise circles Use positional language to describe location Compare height
	Compare quantities to 10 Count sets to 10 • Connect number names and quantities to 10	1-1 Correspondence Subitize Stable order Cardinality Compare quantities to determine more, less or the same	Touch and count Count on Determine 1 more/less	Recognise circles, squares and rectangles Use positional language to describe location
	Count and compare sets to 10 • Connect number names and quantities to 10 Compose and decompose to 10	Name, match and write number names to quantities Compare quantities to determine more, less or the same Subitize	Describe 6 and 10 as two parts	Describe patterns
	Count, compare and order to 20 • Connect number names and quantities to 20 Compose and decompose to 20	Recall, name, match and write number names to quantities Cardinality Subitize Determine how many more/less Identify parts of a whole in different ways	Touch and count Count to compare Estimate quantities Compare quantities by matching or counting	Compare length Use positional language to describe location Collect data with tallies
	Compare quantities to 100 Estimate and count to 100	Estimate and count in different ways Determine how many more/less	Use benchmarks to estimate Skip Count Doubles Use equal groupings	Estimate and compare measures Explore duration of time

* This book can also be used to address the big idea that "Numbers tell us how many and how much."



We paddle around a bend in the river.
I tell my sister I see 2 beavers on the riverbank.
She tells me to look again. She says she sees 3.
I look again but still see 2.

3

Counting to compare and order

- How many beavers does the boy see? (2) How many does his sister see? (3)
- Who sees more? (*the sister*)
How many more does she see?
(*1 more; 3 is 1 more than 2*)

Composing and decomposing

- How many beavers are there in this scene? (5) How many beavers are on each shore? (2 and 3)
- There are 5 beavers. Now they are in groups of 2 and 3. What other ways can they be on the shores? (*all 5 on one shore with 0 on the other shore, 1 on one shore and 4 on the other shore; and on reverse shores as 4 and 1, 3 and 2, 0 and 5*)

WATCH FOR...

- Does the child count accurately, counting each beaver once and only once (one-to-one correspondence)?
- Does the child recognize the relationship of 2 and 3, stating 3 is 1 more than 2 and 2 is 1 less than 3? Knowing what number is 1 or 2 more (less) is a key step in expressing how numbers are related.
- Can the child offer different ways to compose 5 using 2 parts, and identify the number in each part (part-part-whole relationships)?

Counting to compare and order

- How many beavers are following the canoe? (5) How many turtles do you see? (7)
- Are there more beavers or more turtles? (*more turtles*) How many more turtles than beavers are there? (2; 7 is 2 more than 5)



CONNECTING TO GEOMETRY

Positional Language: Ask: **Where are the beavers?** (*The beavers are in the water behind the canoe.*) **What is between the two groups of turtles?** (*The canoe with the children.*)

Large Group Options

If you read *Paddling the River* to a large group or whole class, you might project the book to facilitate reading aloud and engaging children in counting and comparing. These activities engage children in exploring and communicating their understanding of numbers to 20; choose the activities that best address your children's learning needs.

MAKING A CLASS BOOK

ENGAGE

Draw attention to pages 4–5 of *Paddling the River*. Ask:

- **Do you think there are more turtles or more beavers? How many more?**

Agree on which group is greater. Model a statement to compare the groups of animals. For example, for pages 4–5:

- **There are more turtles than beavers. 7 is 2 more than 5.**

Use other pages to prompt comparisons. Use counters to model the comparisons as needed. For example, for pages 8–9, ask:

- **Who sees more ducks? How many more is 5 than 3? Do you think there are more than 10 (15, 20) or fewer than 10 (15, 20) animals swimming? How can you find out? How can you check your estimate?**

WORK ON IT

Provide drawing materials and offer children the opportunity to create a page for a class version of *Paddling the River*. Say:

- **Imagine going on a canoe ride down a river. You have the chance to write about and draw the animals you see. What might you see?**

List ideas and co-create criteria for the page. For example: Draw at least 2 groups of the animals; use numbers and words to tell about the animals; compare the groups with words and numbers.

Re-read the story to review groups of animals and how numbers are used in text, and to chart suggestions for how text could be expanded to include more numbers and comparisons. For example, on pages 6–7, text could be any of the following: I see 1 more otter than my sister sees; There are 9 otters; 12 animals are swimming and 9 otters are on shore, 3 more are swimming.

SHARE AND REFLECT

Invite children to share their pages. To further engage listeners, you might do the following:

- Encourage children to use their fingers to represent numbers (establish some sort of different signal for numbers greater than 10).
- Have children record numbers from the pages on sticky notes. The group can sort, compare, and order them on a number line.
- Ask children to identify pages that are similar in some way.
- Decide on how to order the pages to form a class book.

MATHS FOCUS: estimate, compare, and order quantities to 20

MATERIALS: *Paddling the River*; drawing materials; sticky notes; number line (optional)


WATCH FOR...

- Does the child use numbers to accurately describe the groups created?
- Does the child's estimate of a group having more than 10 or fewer than 10 (other target number) seem reasonable?

DIFFERENTIATE: Different criteria can be offered according to needs. For example, drawing one group only, drawing a specific number of animals, creating a group between 10 and 15, and using only numbers or only words.

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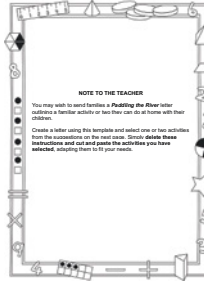
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Line Master 1
Assessment Master

Connecting Home and School

Line Master 2-1



NOTE TO THE TEACHER

You may wish to send families a **Publishing the River** letter explaining a familiar activity or task they can do at home with their children.

Create a letter using the template and adapt one or two activities from the resources on the next page. Clearly indicate those that can be done at home. Encourage families you have selected, adapting them to fit your needs.

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Line Master 2

Connecting Home and School

Numeral Cards			Line Master 3-1
0	1	2	
3	4	5	
6	7	8	
9	10	11	

Line Master 3

Numeral Cards

Comparing Groups

Recording Sheet

Line Master 4

Name: _____

How many counters?	How many red?	How many yellow?	Circle one
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)
			<input type="radio"/> more red and fewer yellow <input type="radio"/> more yellow and fewer red <input type="radio"/> red and yellow are the same (equal)


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Line Master 4

Paddling the River Maths Mat Line Master 5



Free Resource 1: Paddling the River Maths Mat
Paddling the River Maths Mat

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Line Master 5
Paddling the River Maths
Mat

River Mat Recording Sheet

Line Master 6

Name: _____

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Line Master 6
River Mat Recording Sheet

Dot Cards

Line Master 7--1

1

2

2

3

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Line Master 7

Dot Cards

I See, You See

Line Master 8

What You Need

- Disk cards

How to Play


1. Deal the deck of cards.
2. Turn piles face down.
3. Count to 3 and turn the top card over.
4. Take turns telling what cards you see:
I see ____ You see ____
5. If you have the greater number, keep both cards. If your partner has the greater number, your partner gets both cards.
6. If the cards are the same, turn over another card.
7. Take turns telling what new cards you see:
I see ____ You see ____
8. If you have the greater number, you get all of the turned over cards. If your partner has the greater number, your partner gets all of the turned over cards.
9. Keep playing until a player has all the cards.

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Line Master 8

I See, You See

Ten-Frame



Line Master 9

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Line Master 9
Ten-Frame

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Line Master 10
10 Rocks in the River
Recording Sheet

Story Template		Line Master 11
<p>My River Trip</p> <p>by _____</p> <p>_____</p>		
<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>I see _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	
		
<p>I see _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>I see _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	

Line Master 11

Story Template

Solving Problems		Line Master 12
You see 10 animals.	You see 6 animals.	
How many are in the river?	Some are standing.	
How many are on the shore?	Some are sitting.	
Show what you see using pictures, numbers, and words.	Show what you see using pictures, numbers, and words.	
Your friend sees 10 animals.	You see more than 10 animals but less than 15.	
You see more.	How many animals do you see?	
Show what you see using pictures, numbers, and words.	Show what you see using pictures, numbers, and words.	

Line Master 12

Solving Problems