

A Class-full of Projects

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.

If the icon doesn't appear or if you are new to Pearson Places, please contact our digital helpdesk at help@pearson.com.au and we will set up a teacher account for you.

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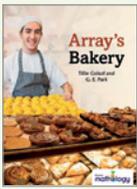
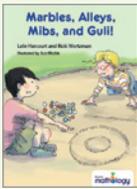
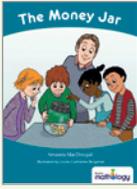
Mathology Little Books

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.

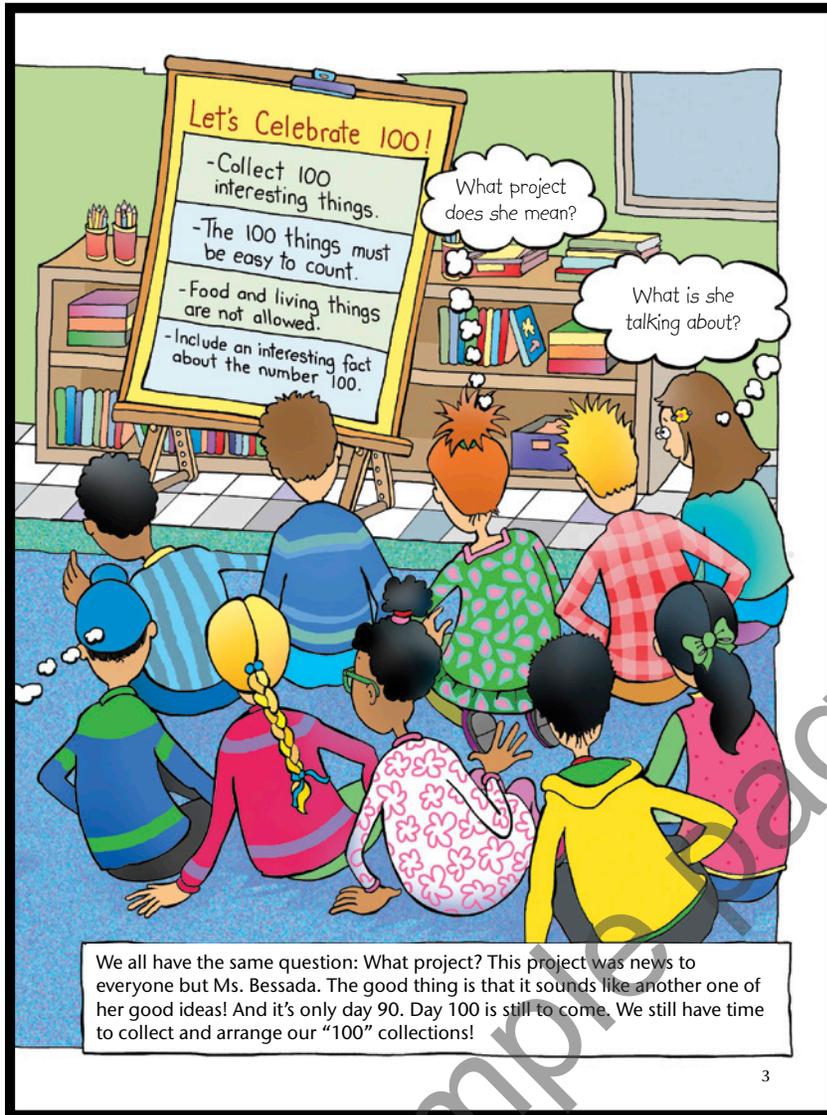
A Class-full of Projects engages children in conversations, investigations, and activities that help to develop their understanding of the big maths idea that “Quantities and numbers can be added and subtracted to determine how many or how much.”*

Big Idea: Quantities and numbers can be grouped by units or split into units

(Addition and Subtraction concepts and strategies)

TITLE	KEY MATHS FOCUS	MATHS SKILLS	STRATEGIES	ADDITIONAL FOCUS
	Solve addition/ subtraction problems Solve equal grouping/ sharing problems	Estimate sums and differences Model and symbolize repeated addition Create and describe equal groups of objects Model and solve equal grouping and sharing problems	Arrays Equal grouping Skip count Repeated addition Estimate Share groups equally Use number sentences	Equality Model and write time Features of 3-D objects
	Add/subtract 2-digit numbers Solve equal grouping/ sharing problems	Create and solve addition and subtraction problems Use appropriate symbols to express addition and subtraction Add and subtract fluently with quantities to 20 Create and solve equal grouping and sharing problems	Estimate Skip count Mental addition and subtraction strategies Repeated addition Arrays Grouping into sets Sharing groups equally	Compare distance Identify 2-D shapes Features of triangles
	Add/subtract to 100 Compare/order numbers	Model and symbolise addition and subtraction Develop complements of 100 Write, read and compose numbers to 100 with 2-digit numbers as 10s and 1s Determines 10 (other multiples of 10) more/less than a given number	Estimate Skip count Grouping Place value Use mental and personal addition and subtraction strategies	Identify units of time
	Add/subtract to 100 Compose/decompose based on units of 10	Extend known sums and differences to solve other equations Model and symbolize addition and subtraction Compare quantities to 100 Order three or more quantities Find how many more/less one quantity is compared to another	Use friendly numbers Make 10 Develop mental maths and personal strategies Estimate sums and differences	Describe and continue patterns Measuring in kms Organising information Interpreting charts Creating graphs

* This book can also be used to address the big idea that “Quantities and numbers can be grouped by units or split into units.”



Composing 100

- The chart says “The 100 things must be easy to count.” How would you arrange 100 things to make them easy to count? *(answers will vary and can be supported through quick sketches of groupings)*
- Will we get the same amount if we count by 10s (5s, 2s, 25s) as we do when counting by 1s?

WATCH FOR...

- Does the child know that 10 more than 90 is 100? Explore if children can count by 10s to 100.

Adding and subtracting

- Suppose on the first day, each child in the (rock) group brings in (10 rocks). How many would they have? (40) How many more do they need to make 100? (60)
- Suppose the (button) group brings (50 buttons) on the first day. Do you think that is a good start? Why or why not? How many groups of 10 would that be? (5)



WATCH FOR...

- When responding to the question of how many there would be if each child brings in 10 (or 20), do children count by 10s (or add 20)? Do they know the number of groups of 10 (20, 50) in 100?

Large Group Options

If you read *A Class-full of Projects* to a large group or whole class, you might project the book to facilitate reading aloud and better engage children in counting and comparing. These activities engage children in exploring and communicating their understanding of numbers to 100 as they add, subtract, compose, and decompose 2-digit numbers; choose the activities that best address your children's learning needs.

THIS IS 100

ENGAGE

Draw attention to pages 10–11 of *A Class-full of Projects*. Engage children in describing each collection of 100.

- **How did the rock group display 100? Is there another way that we can tell about the groups they made?**

Create a chart entitled “This Is 100!” and record each response.

Continue the discussion, but focus on the displays of pencils, buttons, and elastics. Chart each response. Discuss how the collections can be described using groups.

WORK ON IT

Children work in small groups. Provide each group with paper for recording and a resealable plastic bag containing 100 small objects, such as counters, linking cubes, buttons, or square tiles. Ask children to check that they have exactly 100 in their collection. Continue:

- **You all have a collection of 100. Your job is to display your collection so it's easier to count. When you have a display of 100, record it using numbers. Use drawings, too, if you want.**

If possible, photograph the completed displays. After recording a display, children can continue to find other ways to group and record 100.

SHARE AND REFLECT

Meet and prompt reflection. Project any photographs you took. Have children refer to their recordings. Scribe as children offer descriptions using numbers. Ask questions such as:

- **How did your group show your collection of 100? Use numbers (a number sentence) to tell us.** (e.g., $20 + 20 + 20 + 20 + 20$; $50 + 10 + 10 + 30$; $75 + 25 = 100$)
- **What other ways did you find to display 100?**
- **Is there another way that we can think of together?** (Follow up on suggestions, using objects to display them.)
- **Suppose there are 2 groups of 20 and 1 group of 50. Would that show 100? (no) Explain.**

Keep the “This Is 100!” recording posted so that children can continue to investigate and record other ways to display 100.

MATHS FOCUS: count and compose 100

MATERIALS: *A Class-full of Projects*, pp. 10–11; chart paper; resealable plastic bags containing 100 small objects (e.g., counters, linking cubes, buttons, square tiles)

This Is 100!

Rocks

$$30 + 30 + 30 + 10$$

$$90 + 10$$

$$5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 +$$

$$5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 +$$

$$5 + 5 + 10$$

Pencils

$$10 + 10 + 10 + 10 + 10 + 10 + 10 +$$

$$10 + 10 + 10$$

WATCH FOR...

- Does the child recognize that changing the order of the addends does not change the result and that, sometimes, changing the order can make finding the total easier?
- Does the child use numbers correctly to describe parts of 100?
- Does the child participate by offering ideas and questions?

DIFFERENTIATE: Some children may be more successful if given a set of Base Ten Blocks, which they can use to create different displays of 100 (e.g., 3 rods and 7 rods and record $30 + 70$, or 6 rods and 4 rods and record $60 + 40$).

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A Class-full of Projects Line Master 1 (Assessment Master)

Name: _____

Did you follow the list?	How successful?	Comments	Continuing?
Collective cards and references			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			
Use the cards to create a display			

Examples: _____

Next Steps: _____

Line Master 1
Assessment Master

Connecting Home and School Line Master 2-1

NOTE TO THE TEACHER

You may wish to send families an A Class-full of Projects letter outlining a familiar activity or task they can do at home with their children.

Create a letter using the template and select one of the activities from the responses in the next page. Clearly outline these instructions and set and paste the activities you have selected, adapting them to fit your needs.

Line Master 2
Connecting Home and School
Letter Template

Hundred Chart Line Master 3

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Line Master 3
Hundred Chart

Number Lines Line Master 4

Line Master 4
Number Lines

Make It 100 Line Master 5

Name: _____

How many are in your collection?
Use numbers, words, and/or drawings to tell how many.

How many more do you need to make 100?
Show how you know using numbers, words, and/or drawings.

Line Master 5
Make It 100

From 100 Line Master 6

Name: _____

How many are in your collection? _____

How many are you taking from your collection? _____

How many are left in your collection? _____

Show how you know using numbers, words, and/or drawings.

Line Master 6
From 100

Maths Mat Line Master 7

Name: _____

Line Master 7
A Class-full of Projects Maths
Mat

Get Close to 100 Line Master 8

Name: _____

Roll	Tens	Ones
1		
2		
3		
4		
5		
How many?		

Line Master 8
Get Close to 100

Numerals Cards Line Master 9

Line Master 9
Numerals Cards

3 in a Row Line Master 10

Name: _____

What You Need:

- 10 cards for 0-9
- counters in 2 colours

How to Play:

- Turn 2 cards face down. Use them to make a 2-digit number. For example, if you cards are 3 and 4, you can make the number 34 or 43.
- Put a counter on the number you make. Or, you can put a counter on the number that is 10 more or 10 less.
- On an 0-9, which is 10 more than the number you made? Or on 10-9, which is 10 less than the number you made?
- The player with 3 in a row WINS!

Turn	My Cards	My Number	Number I Put My Counter On
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Line Master 10
3 in a Row

Solving Problems Line Master 11

Name: _____

Jovita wants to make a collection of 100 baseball cards. She has 65 already. How many more does she still need?

Allen collected 30 shells the first day at the beach. The next day, she collected another 40. How many does she need to collect to make 100?

Kyle collected 100 rocks. He decided to give some to his sister. He gave her 25. How many does he have left in his collection?

Sarah is excited because her Grandma gave her 55 stamps for her collection. He now has 100 stamps. How many did he have before his Grandma gave her 55 stamps?

Joseph, Lucy, and Abby are working together to make a collection of 100 stickers. Joseph has 40 stickers, Lucy has 35, Abby has 10. Do they have 100?

Line Master 11
Solving Problems