Ways to Count

Teacher's Guide

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Sample pages

Line Masters

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

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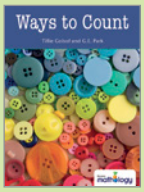
Mathology Little Books

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.

Ways to Count engages children in conversations, investigations, and activities that help to develop their understanding of the big maths idea that "Quantities and numbers can be grouped by units or split into units."*

Big Idea: Quantities and numbers can be grouped by units or split into units
(Skip counting, place value, fractions and decimals)

TITLE	KEY MATHS FOCUS	MATHS SKILLS	STRATEGIES	ADDITIONAL FOCUS
	Group quantities based on units of 10 Compare and order sets/ quantities to 20	Compare quantities Use ordinal numbers Order 3 quantities using sets Compose and decompose teen numbers Group to 20	Use benchmarks to make mental comparisons and estimates Count on Count to compare	Add on from 10 Informal units of measure Recognise 2-D shapes
	Estimate and group to skip count to 50 Compare quantities to 50	Estimate, group, count, describe and compare sets of up to 50 Conservation of number Create sets with more, less or as many as a given number Compare a set to a referent using comparative language	Count on Count to compare Group (2, 5, 10) to determine how many Skip count by 5, 10 and 25	Sort collections
	Estimate and group to count to 100 Skip count to 100	Skip count by 2, 5 10 from a given number Estimate and compare quantities Count and group to recount a collection Name, write, and match numerals to quantities	Use benchmarks to estimate Recognise and use skip-counting patterns	Skip count 5c and 10c Identify pattern rules Odd and even numbers
	Split quantities into equal groups to count to 100 Compose/decompose to 100	Skip count using equal-sized units Keep track of number of sets and how many in each set Recognise patterns in repeated units related to 10 Share equally	Skip count to 100 Use benchmarks to make mental comparisons and estimate quantities Add and subtract Count in groups Count on for leftovers	Graph to show preferences Money combinations Describe and continue patterns Estimate area Estimate and calculate length Identify and describe 2-D shapes

Sample pages

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

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Estimating and counting

- How many objects do you think are in the bag of (pencils)? *(answers will vary)* Who has a different estimate? There are 45 pencils. How close was your estimate?
- Which bag do you think has about 25 objects in it? *(clothespegs)* Why? Who has a different estimate?
- What would help you make a closer estimate? *(e.g., spread the objects out; count a group of them. Pursue reasonable responses.)*

It's almost time for our school's Spring Fair. I love the bouncy castle, dunk tank, popcorn machine, face painting, and games. Every class makes a game.

This year, our class came up with a great game. Families gave us collections of stuff they don't need anymore. We give other people a chance to reuse the collections so they don't get thrown away. It's a great way to help the environment. And as my Nonna says, "My trash is your treasure!"

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WATCH FOR...

- Do the child's estimates seem reasonable?

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We've already collected all the stuff—or should I say *treasure*? Now we need to get the game ready.

First, we'll count how many things are in each bag and write the total on a sticker. Next, we'll put the collection in a jar. Then we'll put the sticker on the bottom of the jar. At the fair, people will guess how many things are in each jar. The person with the closest guess wins the treasure in the jar.

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Estimating and counting

- How would you go about counting one of these collections? *(e.g., group and skip-count)*
- How would you keep track of the ones (groups) you count? *(touch, move, or other reasonable strategy)*
- Do you think there are more (trading cards) or (pompoms)? Why? *(answers will vary; there are 25 clothespegs, 42 bangles, 45 pencils, 55 erasers, 70 hair clips, 90 trading cards, and 95 pompoms)*

Sample pages

CONNECTING TO NUMBERS

Ordinal Numbers: Post the ordinal numbers 1st to 5th. Invite children to describe the procedure for making an Estimating Jar using ordinal numbers.

Large Group Options

If you read ***Ways to Count*** 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; choose the activities that best address your children's learning needs.

COUNTING COLLECTIONS

ENGAGE

Draw attention to pages 8–9 of ***Ways to Count***. Ask children how many cars they think there are. Record estimates.

- **Why do you think Angus put the cars in groups of 10?**
- **How many groups of 10 do you think there are?**
- **Are there any leftover 1s?** *(yes, 6)*
- **How can we count to find out how many cars?**

Use children's suggestions to count, recount, then record the amount.

- **Which of our estimates are close to 66? How do you know?**

Discuss and circle reasonable responses. Continue the discussion focusing on other collections in the book.

WORK ON IT

Point out the "counting collections" bags and introduce the task:

- **Work with a partner to estimate and count a collection. First, decide how you will count the collection; how you will keep track of the groups you count; and what counting tools, if any, you might find helpful.**

Make counting tools such as Ten-Frame (LM 3), Hundred Chart (LM 4), and Blank Hundred Chart (LM 5) available. Provide each pair with a Counting Collections (LM 6) recording sheet.

- **Before you begin counting, isolate 10 objects. Use this group to help you estimate (guess) how many objects are in your bag.**

Ask children to count and recount the collection, and record how many there are. Have them use numbers, words, and/or drawings to show how they counted. Before returning to the group, ask children to reflect on their estimate and indicate whether it was close to the final count.

SHARE AND REFLECT

Meet and discuss children's counting strategies. Ask:

- **How did you count the objects? Who else counted by (10s)? Who has a question about (Claire's) way of counting (recording)?**
- **If you had another group of 10 (2, 5), how many would you have?**
- **How did you count the leftover 1s? Let's use (Lee's counting on strategy) to check.**
- **How did you keep track of the groups (1s) you counted? Who used a different (similar) strategy?**

MATHS FOCUS: use a benchmark to estimate; group and count sets to 100; name, write, and match numerals to quantities

MATERIALS: ***Ways to Count,*** pp. 8–9; collections of 50–100 small objects in zip-lock bags (e.g., buttons, caps, paper clips, craft sticks, pompoms, puzzle pieces, pebbles, marbles), each labelled with a letter; counting mats and tools (Ten-Frame (LM 3), Hundred Chart (LM 4), Blank Hundred Chart (LM 5)); Counting Collections (LM 6)

WATCH FOR...

- Does the child approach counting quantities based on equal groups and 1s (single units)?
- Does the child arrange/group the objects so they are easy to count? Is it an appropriate and efficient counting strategy?
- Does the child use numbers, words, or drawings to record her/his estimates, answers, and method of counting?
- Does the child use the same strategy for counting or keeping track of each new collection, or does he/she try a new strategy?

DIFFERENTIATE: Children will benefit from counting collections on a regular basis. Increase or decrease the range of objects to suit the children's number sense.

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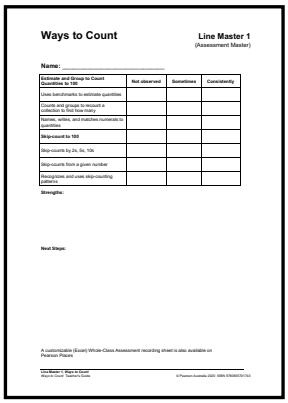
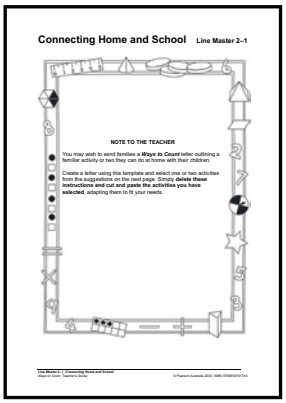
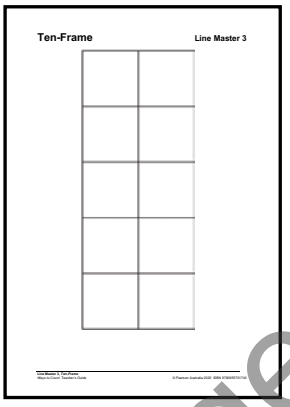


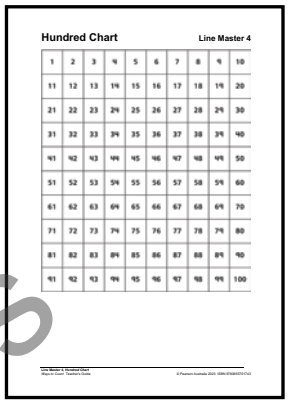
Line Master 1
Assessment Master



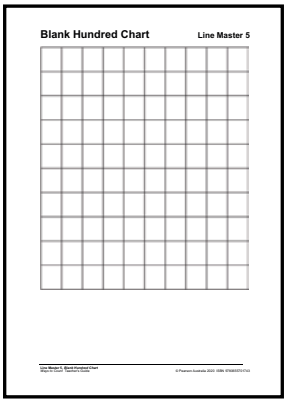
Line Master 2
Connecting Home and School Letter Template



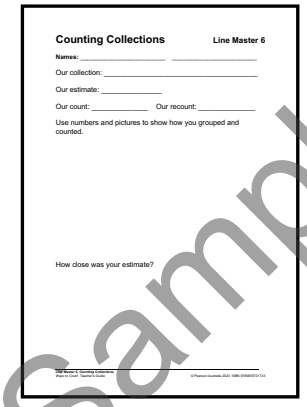
Line Master 3
Ten-Frame



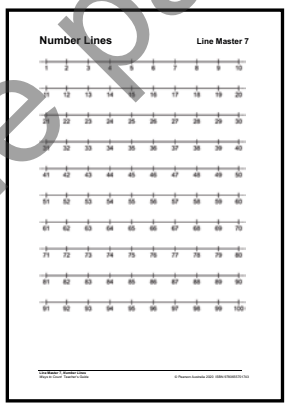
Line Master 4
Hundred Chart



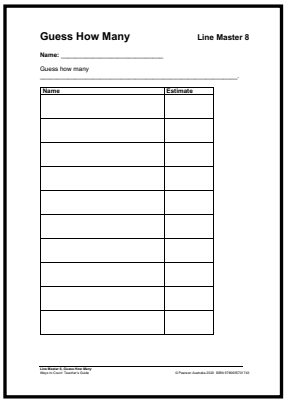
Line Master 5
Blank Hundred Chart



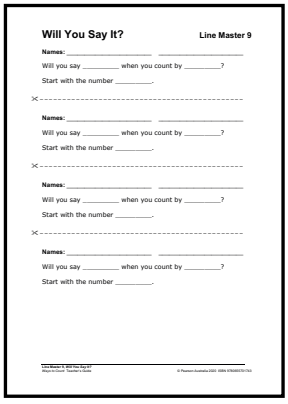
Line Master 6
Counting Collections



Line Master 7
Number Lines



Line Master 8
Guess How Many



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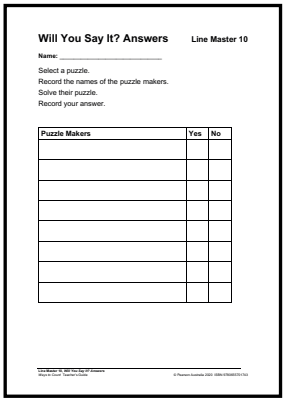
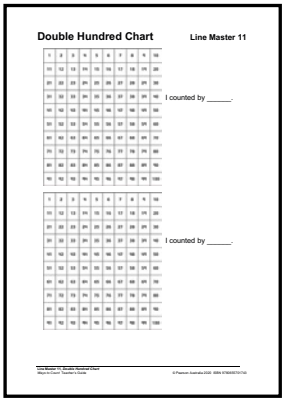
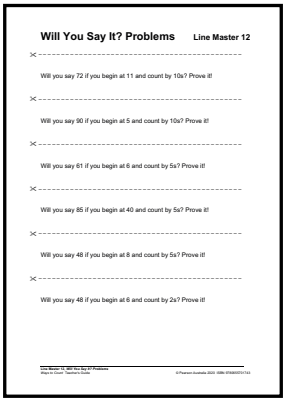
Will You Say It?



Line Master 10
Will You Say It? Answers



Line Master 11
Double Hundred Chart



Line Master 12
Will You Say It? Problems

Sample pages

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