How Many Is Too Many?

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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Pearson

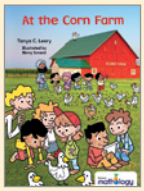
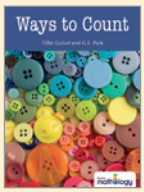
Mathology Little Books

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.

How Many Is Too Many? 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 Connect number names, numerals and quantities to 20 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 2D 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 2D shapes
	Split wholes into equal parts (fractions) Model equal grouping/sharing	Split a whole into equal parts Identify the relationship between the number of parts to the whole Share groups equally Create and solve grouping and sharing problems	Compare parts to whole to determine more/less/equal	Non-standard linear units Time: days, weeks, months 2D shapes and their features

* This book can also be used to address the big idea "Numbers are related in many ways."

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Estimating, and grouping to skip-count

- How many marbles (buttons, cubes, erasers) do you think Jess has? *(accept any answer the child can justify)* How could you check? Why might it be hard to keep track of the ones you count? *(answers will vary)*
- When you count large collections, what do you do to make sure you count items once and only once, to make the counting easier? *(answers will vary but might include line them up, move them, or touch them)*

Have you ever had a messy room?
Jess has one! He plans to clean up.
But it seems his room is always a mess.
Jess collects so many things!

2

WATCH FOR...

- Does the child's estimate seem reasonable*?*
- Does the child draw on prior experiences and offer ideas and suggestions for counting?

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"What a **mess**! You have so many things. You have too many things," says Mom. "Jess, **please** clean up this mess."

3

Comparing quantities

- Do you think Jess has more (cubes) or (buttons)? Why? Let's read on and see if you can find out.
- Which collection do you think has the most (fewest) number of objects? Who has a different idea?

CONNECTING TO DATA MANAGEMENT AND PROBABILITY
Sorting: Ask: **How and why would you sort Jess's collections?**

Large Group Options

If you read ***How Many Is Too Many?*** to a large group or whole class, you might project the book to facilitate reading aloud and better engage children in counting by 2s, 5s, 10s and reading numerals to 100. These activities engage children in exploring and communicating their understanding of estimating and, grouping to skip count, and comparing quantities to 50; choose the activities that best address your children's learning needs.

DIFFERENT WAYS TO COUNT

ENGAGE

Display a collection of 20–50 small items such as buttons, counters, or centimetre cubes. Ask:

- **How many (buttons) do you think there are?** Record estimates.
- Present copies of Ten-Frames (LM 3). Ask: **Do you think the buttons will fill (4) ten-frames? Let's see.**
- Count aloud with the children as each button is placed on the ten-frame. **How many did you just count? (43) How many groups of 10s are there? (4) How many leftover 1s? (3) That's 4 tens and 3 ones. Let's recount by 10s. (10, 20, 30, 40…41, 42, 43)** Record the total.
- Continue: **Let's count a different way to check that there are (43). What is another way you could count?** *(2s, 5s)*

Again, count aloud with the children as you touch or point. Note a ten-frame can be used to count by 2s by counting the columns; 5s by counting the rows. Confirm the count. Compare children's estimates to the actual count.

WORK ON IT

Provide multiple ten-frames (LM 3), 1 bag with 20–50 small items to each pair, and a Counting Recording Sheet (LM 4). Pairs spill the contents of the bags and record an estimate. They place the items on the ten-frames and count in at least 2 different ways to check how many there are. Children can exchange bags to check each other's counts.

SHARE AND REFLECT

Reconvene as a large group and prompt discussion by asking:

- **What were two different ways you counted the objects? Did you end up with the same number each time?**
- **Which way do you find is the easiest to count?**
- **How many groups of 10 did you have? How many leftover 1s?**

MATHS FOCUS: estimate, group (by 2s, 5s, 10s) to skip-count to 50; group quantities based on units of 10

MATERIALS: bags containing 20–50 small items (buttons, counters, centimetre cubes); Ten-Frames (LM 3); Counting Recording Sheet (LM 4)

WATCH FOR...

- Does the child count by 2s, 5s 10s fluently, or does the child pause and need support?
- Does the child recognize that in a fixed arrangement, when starting at different points and counting in different ways, the number of items in the set remains the same?
- Can the child count on from different numbers when there are extra 1s?

DIFFERENTIATE: Some children may be ready to count and record numbers greater than 50. Provide opportunities by offering bags containing more items.

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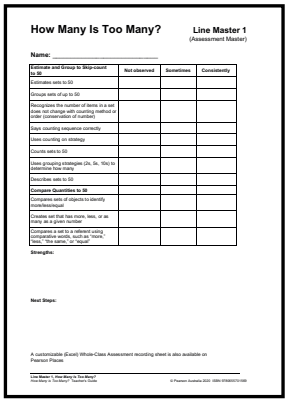
How Many Is Too Many? Line Master 1 (Assessment Master)

Name: _____

Estimate and Group to Skip-count to 50	Not observed	Sometimes	Consistently
Estimates sets to 50			
Groups sets of up to 50			
Recognises the number of items in a set does not change with counting method or order (conservation of number)			
Says counting sequence correctly			
Uses counting on strategy			
Counts sets to 50			
Uses grouping strategies (2s, 5s, 10s) to determine how many			
Describes sets to 50			
Compare Quantities to 50			
Compares sets of objects to identify 'more/less/equal'			
Creates set that has more, less, or as many as a given number			
Compares a set to a referent using comparative words, such as "more," "less," "the same," or "equal"			

Strengths:

Next Steps:

A customizable (Excel) Whole-Class Assessment recording sheet is also available on Pearson Places

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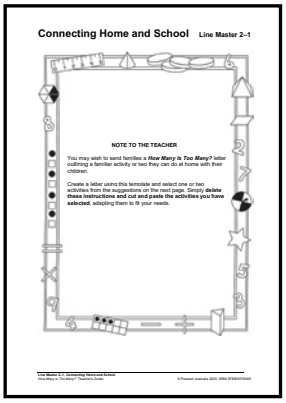
Line Master 1
Assessment Master


Connecting Home and School Line Master 2–1

NOTE TO THE TEACHER

You may wish to send families a ***How Many Is Too Many?*** letter outlining a familiar activity or two they can do at home with their children.

Create a letter using this template and select one or two activities from the suggestions on the next page. Simply **delete these instructions and cut and paste the activities you have selected**, adapting them to fit your needs.

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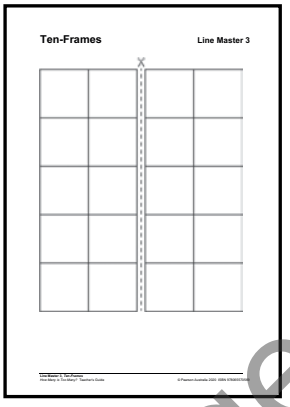
Line Master 2
Connecting Home and School Letter Template


Ten-Frames Line Master 3

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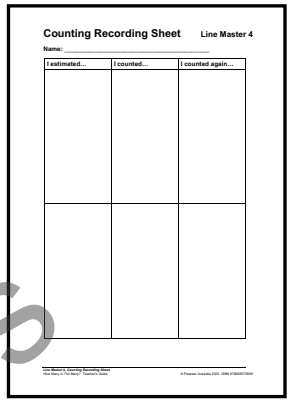
Line Master 3
Ten-Frames


Counting Recording Sheet Line Master 4

Name: _____

I estimated...	I counted...	I counted again...

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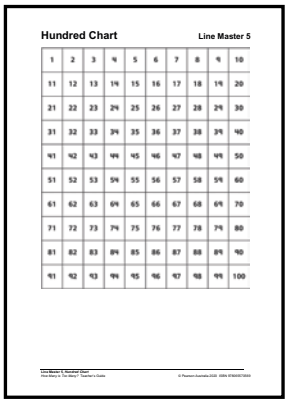
Line Master 4
Counting Recording Sheet


Hundred Chart Line Master 5

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

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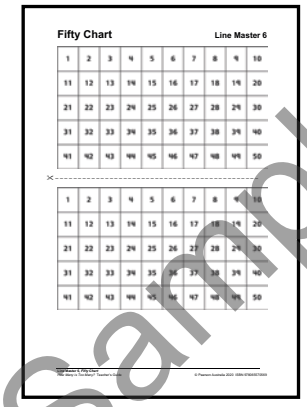
Line Master 5
Hundred Chart


Fifty Chart Line Master 6

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

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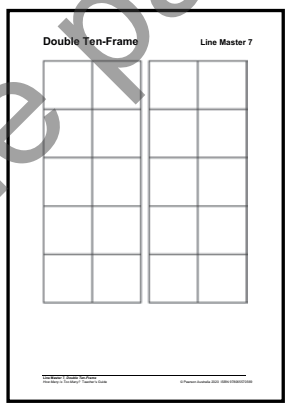
Line Master 6
Fifty Chart


Double Ten-Frame Line Master 7

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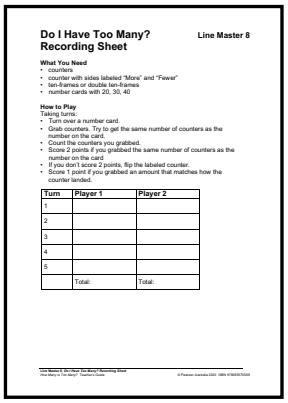
Line Master 7
Double Ten-Frame


Do I Have Too Many? Recording Sheet Line Master 8

What You Need
- counters
- counter with sides labeled "More" and "Fewer"
- ten-frames or double ten-frames
- number cards with 20, 30, 40

How to Play
Taking turns:
- Turn over a number card.
- Grab counters. Try to get the same number of counters as the number on the card.
- Count the counters you grabbed.
- Score 2 points if you grabbed the same number of counters as the number on the card
- If you don't score 2 points, flip the labeled counter.
- Score 1 point if you grabbed an amount that matches how the counter landed.

Turn	Player 1	Player 2
1		
2		
3		
4		
5		
	Total:	Total:

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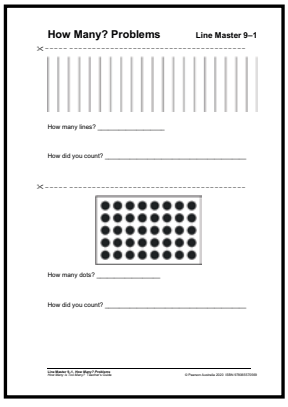
Line Master 8
Do I Have Too Many? Recording Sheet


How Many? Problems Line Master 9–1

How many lines? _____

How did you count? _____

How many dots? _____

How did you count? _____

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Line Master 9
How Many? Problems

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