

There's a Book for That: Picture Books for Counting & Measurement

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Why Use Books in Math?

- Books with contexts rich in number, measurement, geometry, and problem solving connect to children's interests, prior knowledge, and new schema for mathematics content, vocabulary, and processes.
- Young children don't differentiate between math time and reading time.

COUNTING

Book	Brief Summary	Mathematics Teaching Idea
	COUNTING SEQUENCE	
Bajaj, Varsha. <i>How Many Kisses Do You Want Tonight?</i> illust. Ivan Bates. New York: LB Kids, 2007.	This book counts from 1 to 10 as animal children request bedtime kisses from their parents. Readers might be surprised by the number of kisses requested by the human children in the story.	Young children put bright colored lip balm on their lips, kiss an index card, and count the kisses. Older children kiss the card, cover the kiss with split peas and count to find the area of their kiss.
Jay, Alison. <i>1 2 3: A Child's First Counting Book</i> . New York, NY: Dutton children's Books, 2007.	Illustrated with scenes from familiar fairy tales, this book counts from 1 to 10 and back again and connects mathematics to stories children know well.	Identify numbers in favorite nursery rhymes and fairy tales. Make a class book called <i>Numbers in Nursery Rhymes</i> .
Maloney, Peter, and Felicia Zekauskas. <i>One Foot Two Feet: An Exceptional Counting Book</i> . New York: G.P. Putnam's Sons, 2011.	This counting sequence has a twist: a die-cut window framing a single object that, when the page turns, becomes a common irregular plural noun (e.g., mice, dice, oxen or octopi).	Have children make mice by pressing their thumb onto an ink pad and adding ears, eyes, and tail with a marker. Children can count to see how many mice fit on an index card.
Rubinger, Ami. <i>Dog Number 1. Dog Number 10</i> . New York: Abbeville Kids, 2011.	During a read aloud, preschoolers can call out the missing numbers in this rhymed counting book.	Make up a rhyme that children complete using a number: for example, A dog like me can itch a flea. I am dog number ____.
	ORDINAL NUMBERS	
Carle, Eric. <i>Ten Little Rubber Ducks</i> . New York: Harper Collins, 2005.	Based on a true story, ten ducks fall from a ship during a storm and drift off in different directions.	With string mark a finish line across the end of the sensory table. Add water and rubber ducks. With straws children blow the ducks toward the finish line. Note which duck crosses first, second, third, etc.
Martin, Bill, Jr. <i>Ten Little Caterpillars</i> , illus. Lois Ehlert. New York: Beach Lane Books, 2011.	The first through ninth caterpillars make their way across a garden, but the tenth caterpillar climbs a tree and waits patiently for something amazing to happen.	Write the ordinal numbers on clothespins. Children color caterpillars to match those in the book, then hang them on a clothesline with the clothespins matching their order in the story.

MEASUREMENT

Book	Brief Summary	Mathematics Teaching Idea
Kang, Anna. <i>You are Not Small</i> , illus. Christopher Weyant. Seattle, WA: Two Lions, 2014.	<p style="text-align: center;">MEASUREMENT TERMS (fast, slow, large, small)</p> <p>Two creatures debate their size in relation to each other and to a larger group of creatures.</p>	Using a paper creature like the one in the book, have children find and share examples of classroom objects that are bigger and smaller: "This __ is bigger/ smaller than the creature."
Krauss, Ruth. <i>The Growing Story</i> , illus. Helen Oxenbury. New York: Harper Collins, 2007.	A little boy notices how he and his pet animals are growing at different rates. The puppy and chicks are full grown very quickly compared to the boy.	Measure the children at the beginning and end of the year. Have parents send baby and current photos of the children and match them.
Marlow, Layn. <i>Hurry Up and Slow Down</i> . New York: Holiday House, 2008.	In a twist on the familiar tale, this time Hare is the one who slows down—for a bedtime story read by Tortoise.	Ask children what they like to do quickly and slowly. Make a t-chart of their ideas.
Jenkins, Steve. <i>Actual Size</i> . New York: HMH Books for Young Readers, 2011.	<p style="text-align: center;">LINEAR MEASUREMENT</p> <p>The engaging illustrations and foldouts in this book help children make size comparisons as they learn the actual sizes of some unusual animals and their body parts.</p>	Cut pieces of ribbon, yarn, or paper to the lengths of some of the animals in the book and label them. Put in order from longest to shortest.
Schafer, Susan. <i>Where's My Tail</i> . Tarrytown, NY: Marshall Cavendish, 2005.	A lizard loses his tail and begins noticing the sizes of his animal friends' tails.	Children cut yarn to the length of tail they would like to have. As a group, order the tails from longest to shortest.
Zane, Alexander. <i>The Wheels on the Race Car</i> , illus. James Warhola. New York: Orchard Street Press, 2005.	Animals zoom around a racetrack at a lyrical pace, mirroring "The Wheels on the Bus."	Have a race with wind-up toys. Use nonstandard units to measure the distance each toy goes with three twists of the mechanism.
Schubert, Ingrid, and Dieter Schubert. <i>There's Always Room for One More</i> . Asheville, NC: Front Street, 2001.	<p style="text-align: center;">CAPACITY</p> <p>Beaver builds a boat. As his friends join him, the boat sinks deeper with each new passenger.</p>	Children form boats out of heavy-duty tinfoil and place them in a water-filled pan or sensory table. They count and place counters in the boat until it goes down.
Walsh, Ellen Stoll. <i>Balancing Act</i> . New York: Beach Lane Books, 2010.	<p style="text-align: center;">WEIGHT</p> <p>Two mice have fun balancing on a teeter-totter until their friends arrive. Can they make more room, or will they all fall?</p>	Children use the pan balance to explore weight and equality. Emphasize terms such as <i>heavier</i> , <i>lighter</i> , and <i>equal</i> .

Willems, Mo. <i>A Big Guy Took My Ball</i> . New York: Disney Hyperion, 2013.	A big guy takes Piggie's ball. Gerald the elephant is big, but is he big enough to get Piggie's ball back? The duo decides sharing the ball with their new friend is a better solution.	The words <i>heavier</i> or <i>lighter</i> can help children understand some aspects of <i>big</i> . Have them place an item such as a bottle of glue on one side of a pan balance and use the balance to find objects that are heavier or lighter.
DePaola, Tomie. <i>Pancakes for Breakfast</i> . Orlando, FL: Harcourt Brace, 1978.	PASSAGE OF TIME	
Hutchins, Hazel. <i>A Second is a Hiccup</i> , illus. Kady MacDonald Denton. New York: Arthur A. Levine Books, 2007.	Time is described in child-friendly terms: "A second is a hiccup—"The time it takes to kiss your mom." A minute is long enough to "sing just one small song." In an hour, you could build a sandcastle, run through a sprinkler, climb a tree, and play pretend.	Have children experience activities for one minute. Record how many times they can jump, walk to the classroom door and back, and put together a puzzle.
Katz, Karen. <i>Rosie Goes to Preschool</i> . New York: Schwartz & Wade, 2015.	Rosie follows the preschool routines and schedule with ease and confidence.	Take pictures of children doing various classroom activities. Have them place the photos in order for the daily class schedule.
Lamb, Albert. <i>Tell Me the Day Backwards</i> , illus. David McPhail. Somerville, MA: Candlewick Press, 2011.	Timmy Bear and his mama and papa had a busy first day after waking from winter hibernation. They relate the day's events in reverse order, trying to recall "what happened before that?"	Relate the events of your own day in reverse order. Rearrange the classroom schedule in reverse order. What comes before lunch? What comes after lunch?
Seeger, Laura Vaccaro. <i>First the Egg</i> . New York: Roaring Brook Press, 2007.	Clever die cuts deliver a string of first-then creations including frogs, flowers, butterflies, pictures, and stories.	Make a set of first-then creations similar to those in the book. Have children match the sets and identify how time passing affects living and nonliving things.

Book Titles, Mathematics Concepts, and Teaching Suggestions

Source: "Get the Picture: Connecting Young Children to Mathematics through Books," by Carrie Cutler, in *Deepening Children's Mathematical Understanding with Children's Literature* Monroe, Young, Fuentes, Dials (Eds.), NCTM, 2018

For more ideas, visit www.carriecutler.com or Carrie's [YouTube channel](#).

Carrie's new book [Math-Positive Mindsets: Growing a Child's Mind without Losing Yours](#) is available on Amazon.