

# How to Teach Math Using Any Picture Book

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# Five Strategies for Using Picture Books to Teach Mathematics

## Strategy One: Make Predictions

The Make Predictions strategy offers opportunities to turn literary wonderings into mathematical problem situations. Books that are suited to this strategy often have an element of suspense, and it makes sense to stop and wonder, to make predictions, and to quantify—How many? How far? How long?

## Strategy Two: Create Another Outcome

The Create Another Outcome strategy invites readers to mathematize the story differently. Look for books (or poems) that have a pivotal moment in the story when the main character uses information to make a decision or solve a problem. Is any of the information the character has countable or measurable? Would a change in the count or measurement change the outcome of the story?

## Strategy Three: Find the Unknown Quantity

The Find the Unknown Quantity strategy loans numbers to the story. Books suited to this strategy often describe quantities or measurements in general ways (“a giant beanstalk”) and it makes sense to imagine the outcome with specific values.

## Strategy Four: Transcribe the Actions

In the Transcribe the Action strategy, students examine the action of the story, first discussing the unfolding events as narrative and second, focusing on quantities. The students then use their understanding of the story to learn to write equations that describe the events in the story. The students mathematize it. Books with repetitive or counting patterns are often appropriate for this strategy.

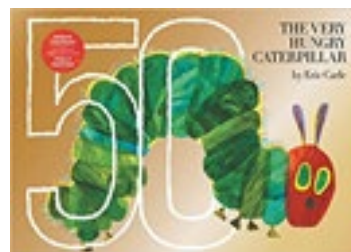
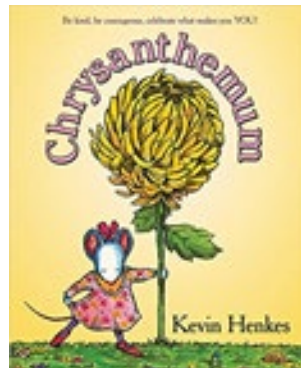
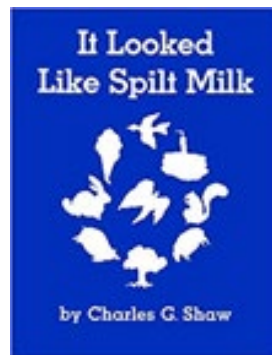
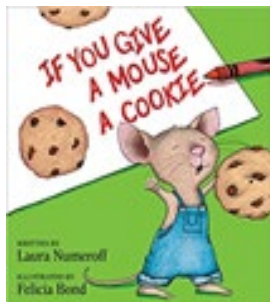
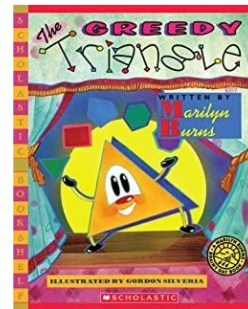
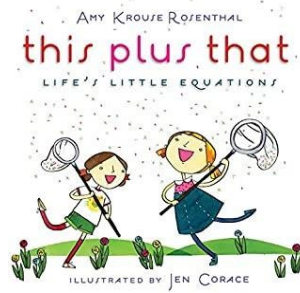
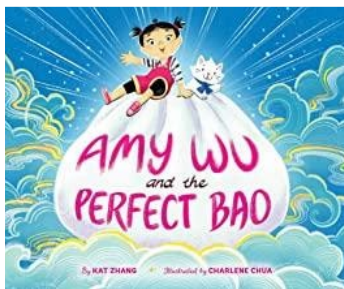
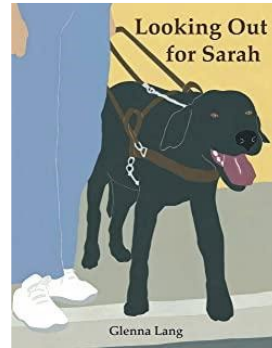
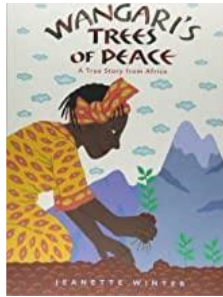
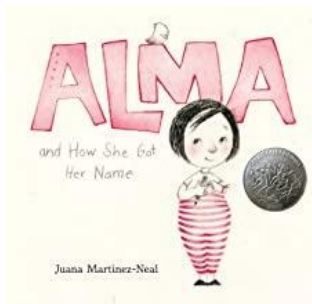
## Strategy Five: Play with Quantities

The Play with Quantities strategy, like Transcribe the Action, does not pull mathematics out of the story; rather they unexpectedly push the mathematics *into* the story. Using equations as another form of communication helps students develop a richer sense of the actions or relationships that addition and subtraction represent. In a meaningful way, this helps students familiarize themselves with how equations work.

Descriptions excerpted from:

Morrow-Leong, K., Moore, S. D., & Gojak, L. M. (2021). Bringing Mathematical Life to Favorite Books, *Mathematics Teacher: Learning and Teaching PK-12 MTLT*, 114(2), 103-109. Retrieved Apr 1, 2021, from <https://pubs.nctm.org/view/journals/mtlt/114/2/article-p103.xml>

Picture Books Used in the Presentation



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