

Children's Literature and Math CONNECTIONS



Use
Children's
Books to Teach
Math!

REASONS TO USE LITERATURE TO TEACH MATH

- *Helps children learn math concepts by providing context*
- *Reduces Math Anxiety*
- *Helps children learn math-related vocabulary*
- *Provides access to grade-level mathematics*
- *Leads to rich math discussions among students*
- *Provides an engaging introduction to new math content*
- *Provides greater access to mathematics for students who enjoy literature and reading*
- *Shows children how math is used in a variety of situations*

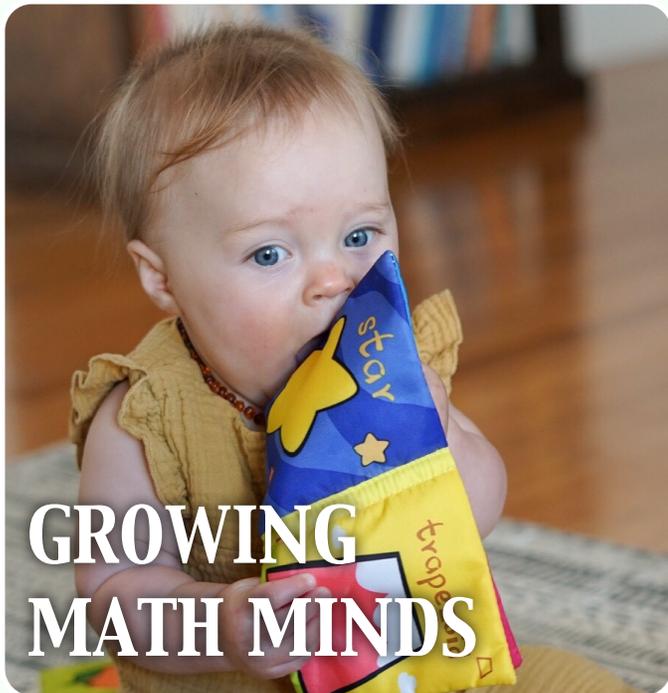
Using literature to teach math concepts is a way for children to access mathematical content through another avenue - perhaps one they have a lot of success with already.

Math literature can effectively introduce children to new mathematical concepts and vocabulary, alleviate math anxiety, add an aesthetic dimension to math lessons, and provide a useful

context for children to understand mathematical concepts. A growing body of research in the fields of mathematics education and literacy support inclusion of children's literature with the teaching and learning of mathematics. When mathematics is included within a story using pictures and language that students understand, students can more readily grasp mathematical ideas and concepts (Wiley, 1999).

Find math literature resources at www.EarlyMathCA.org





Using literature to teach mathematics can also add an aesthetic dimension to math (Whitin and Wilde, 1992). Young children love being read to or to be included in singing rhythmic songs or poems. This natural inclination can be used to reinforce mathematical concepts. Through the use of literature in other subjects, children will not only reinforce mathematical concepts but they will also enhance their reading and writing skills (Gailey, 1993).

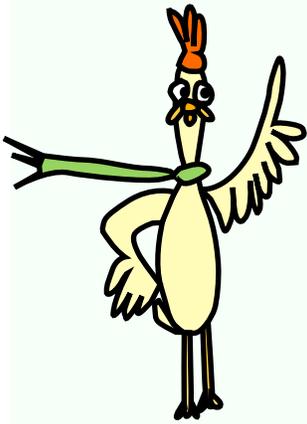
Math literature can also provide children a safe environment to work out their mathematical understandings. They can gain a personalized math experience by entering the story at a different level of curiosity each time (Jenner, 2002).

Children’s literature can introduce children to new vocabulary needed for comprehension of math concepts. A study from Purdue University proposes that teaching children the concept of comparison words such as “more,” “a lot,” “some” and “fewer,” can improve their mathematical skills (Purpura, 2016). Often, children’s literature makes use of these comparison words within the story context, helping children to build the mathematical concept of comparison. David Purpura, an assistant professor of Human Development and Family Studies at Purdue University suggests that children need to understand words such as “before,” “after,” and “more” so that they can process questions such as “what number comes after three?” (2016)

Children’s literature can be used as an opportunity to demonstrate that math is all around us and is used in everyday life. Studies have demonstrated that when teachers incorporate books to enhance their math lessons and use teacher-guided actions to allow students to interact with the book’s ideas, students’ visual creativity become real elements of their engagement with the math lesson (Bryan and Mason, 2013).

Incorporating literature into mathematical lessons can also be used to alleviate math anxiety. Listening to stories is enjoyable for children and adults alike making it a non-threatening experience. Math literature allows teachers to convey mathematical concepts in an easy to understand manner that can be relaxed and followed by a discussion to deepen children’s understanding (Lightsey, 1999).





BOOKS TO ENCOURAGE MATHEMATICAL THINKING

Literature engages children's interest and provides a unique and useful context for understanding

Sorting Books

The Button Box by Margarete S. Reid

A Pair of Socks by Stuart J. Murphy

Introductory Counting Books

Baby Goes to Market by Atinuke

Over in the Meadow illustrated by Ezra Jack Keats

The Very Hungry Caterpillar by Eric Carle

Have You Seen My Dragon? by Steve Light

Banana for Two by Ellen Mayer

Counting Books

One Watermelon Seed by Celia Barker Lottridge

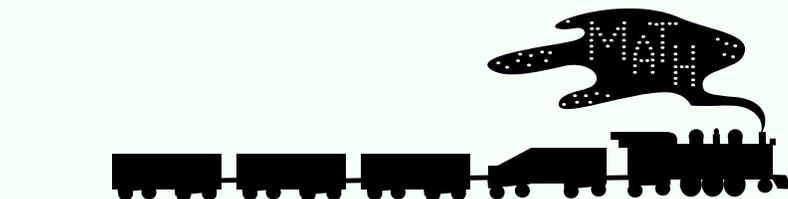
One is a Snail Ten is a Crab by April Pulley Sayre and Jeff Sayre

Spatial Relationships

Room on a Broom by Julia Donaldson

Clean Up, Up, Up! by Ellen Mayer

Elephants Aloft by Kathi Appelt



Shape Books

Perfect Square by Michael Hall

Color Zoo by Lois Ehlert

Round Trip by Ann Jonas

Money

Alexander Who Used to be Rich Last Sunday by Judith Viorst

A Chair for My Mother by Vera B. Williams



Problem Solving Books

The Most Magnificent Thing by Ashley Spires

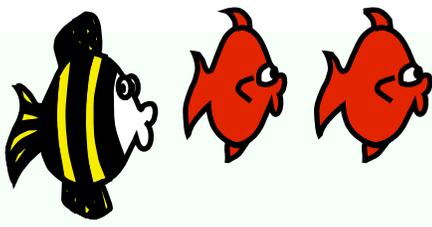
Spaghetti and Meatballs for All! by Marilyn Burns

More or Less by Stuart J. Murphy

Classifying Books

Which One Doesn't Belong? by Christopher Danielson

Biggest, Strongest, Fastest by Steve Jenkins

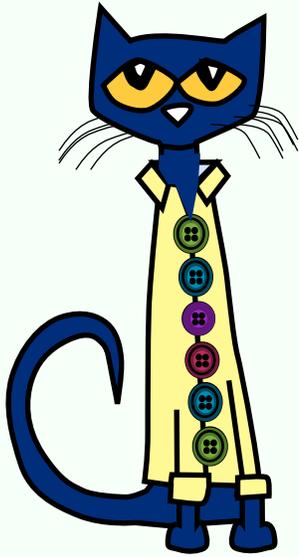


Pattern Books

Beep Beep, Vroom Vroom! by Stuart J. Murphy
The Napping House by Audrey Wood
Pattern Fish by Trudy Harris

Measurement Books

Actual Size by Steve Jenkins
Pretend Soup by Mollie Katzen and Ann Henderson
Just a Little Bit by Ann Tompert



Estimation Book

Betcha! by Stuart J. Murphy

Prime Numbers Book

Bean Thirteen by Matthew Mc Elligott

Addition/Subtraction and Equations Books

Pete the Cat and His Four Groovy Buttons by Eric Litwin
Fish Eyes by Lois Ehlert
Quack and Count by Keith Baker



Multiplication and Division Books

Divide and Ride by Stuart J. Murphy
A Remainder of One by Elinor J. Pinczes
One Hundred Hungry Ants by Elinor J. Pinczes
The Doorbell Rang by Pat Hutchins

Time Books

Just a Second by Steve Jenkins
A House for Hermit Crab by Eric Carle

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