Picture Books with a Mathematical Focus

Annotated Bibliography

Abstract

Annotated Bibliography of picture books focusing on math. Subjects range from Pythagoras to counting and shapes, to problem-solving. Listings include multicultural offerings. Compiled for ages three to eleven, based on grade-level assessment. Twenty-five titles listed.

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Suggested ages are based on grade level and/or readability.
*Indicates multicultural literature.

*Bardoe, C., & McClintock, B. (2018). *Nothing stopped Sophie: The story of unshakeable mathematician Sophie Germain.* Little Brown Books for Young Readers.
This is the biography of a self-taught German mathematician, Sophie Germain who mastered mathematical concepts while overcoming pressure from her parents not to become a mathematician, and learning mathematics during a time when women were prohibited from attending universities. Ages 7-9.

Blackstone, S., & Corr, C. (2014). *My granny went to market: A-round-the-world counting rhyme*. Barefoot Books.
Relevant for young children, particularly as a read aloud. Reinforces counting 1-10 around the word. Ages 4-5.

*Burns, M., & Silveria, G. (2008). *The greedy triangle*. Scholastic Bookshelf.
Excellent story for teaching shapes. The triangle morphs into a quadrilateral and continues to add other angels for becoming other shapes. Ages 4-7.

Carle, E. (1969) *The very hungry caterpillar*. World Publishing Company.
Teaches the concept of counting, identifying one-to-one correspondence. Depicts the life cycle of a caterpillar to a butterfly. Ages 2-5.

*Crespo, A., & Medeiros, G. (2020). *Lia & Luis: Who has more?* Charlesbridge.
Two Brazilian siblings compete to determine who has more snacks. The concept of more/greater is introduced by counting, measurement, and estimation. Ages 4-7.

* Demi (1997). *One grain of rice: A Mathematical Folktale*. Scholastic.
Folktale that teaches the concept of doubling. Ages 4-8.

DK (2020). *What's the point of math?* DK Children.
Attempts to teach children the historical origin and everyday significance of math. Encourages curiosity about math by posing timely questions. Ages 9-12.

Einhorn, D., & Clark, D. (2014). *Fractions in disguise*. Charlesbridge.
Reducing fractions and the lowest common denominator are explored in an entertaining and funny mystery story. Ages 8-11.

Ellis, J., & Homung, P. (2004). *What's your angle, Pythagoras*? Charlesbridge.

The <u>Pythagorean theorem</u> is explored as a mathematical equation through measuring angles. The story is told through word play/puns. Ages 8-11.

*Falwell, C. (1993) *Feast for 10*. Clarion Books.
<u>Counting</u> story about an African-American family's dinner feast, including shopping and preparation. Lively and colorful illustrations in a paper cutout style. Ages 4-6.

Greene, R.G., & Kaczman, J. (2001). *When a line bends a shape*, Clarion Books
Helpful for children learning to distinguish <u>shapes</u> with rhyming text. Ages 4-7 years

*Heiligman, D., & Pham, L. (2013). *The boy who loved math: The improbable life of Paul Erdo.* Roaring Books Press.
This is a <u>biography</u> of the Hungarian mathematician Paul Erdo whose ideas are told and illustrated in this picture book. Ages 8-11.

Hosford, K. & Swiatkowska, G. (2012). *Infinity and me*. Carolrhoda.
Challenges the reader to understand the concept of time as <u>infinity</u> through the story of Uma. Provides the reader to define infinity for themselves. Ages 8-10 years.

*Larocca, R., Sreenivasan, A. (2020). *Seven golden rings*. Lee & Low Books.
Reinforces the concept of <u>binary numbers</u> through the story of Baghat's quest to be a royal singer for the rajah. The story is embedded within a math puzzle for readers to solve. Ages 6-9 years.

*Lin, G. (2020). *What will fit?* Charlesbridge.
Explores <u>spatial relationships</u> with Olivia, a young African American girl who is at the farmer's market trying to select produce that will fit into her basket. Ages 3-5 years.

Lionni, L. (1995) *Inch by inch*. HarperCollins.
Reprint edition 1960 Caldecott Winner Measurement story of an inch worm and how inches are <u>measured</u>. Ages 4-8 years.

*Mosca, J.F. (2020). *The girl with a mind for math: The story of Raye Montague*. The Innovation Press.
A <u>biography</u> of Raye Montague, an African American woman who persevered to become an engineer despite the challenges of racial and gender-based inequality. <u>Role model</u> for promoting mathematics in young girls. Ages 8-11 years.

Scieszka, J. & Smith, L. (1995). *Word curse* Viking Press
A <u>problem-solving story</u> of a young girl who awakens to discover that her day life presents a math problem in need of solving. Ages 4-8.

Schwartz, D.M. & Kellogg, S. (2004). *How much is a million?* HarperCollins.
This picture book helps children improve their <u>numeracy skills</u> by understanding the concept of

one million with interesting and humorous examples. Ages 4-8.

Tang, G. & Briggs, H., *The grapes of math*.
> Teaches <u>creative problem solving</u> instead of learning only by rote and memorization. Encourages children to utilize multiple approaches. Ages 7-10.

*Thong, R. G., & Parra, J. (2015). Round is a tortilla: A book of shapes. Chronical Books.
> This picture book helps to identify <u>shapes</u> in children's everyday objects. Ages 3-5 years.

*Thong, R. G., & Parra, J. (2019). *One is a pinata: A book of numbers*. Chronical Books.
> A <u>counting</u> book in Spanish and English with illustrations of Latino artifacts. Ages 3-5 years. Includes a Spanish phonetic glossary with definitions. Ideal for dual language/immersion classrooms. Ages 3-5 years.

Walsh, E.S. (1995*). Mouse count*, HMH Books for Young Readers.
> Introduction to <u>counting</u> forward and backwards. A group of mice learn to mix colors and to count. Ages toddlers-3 years.

*Winter, J. (2017). *The world is not a rectangle.* Beach Lane Books.
> Zaha Hadid, an Iraqi architect's <u>biography</u> is told and illustrated in this picture book. Her knack for recognizing patterns in nature influenced her architectural ideas. Reinforces identifying patterns as an important mathematical skill and provides a <u>role model</u> for young girls interested in math. Ages 7-11.

*Yim, N. & Yim, V., (2020). *Luna's yum dim sum*. Charlesbridge.
> The concept of <u>division</u> is told through the story of Luna's birthday dinner when her family is confronted with how to divide the dim sum. Ages 4-6 years.