

# LIVING MATH THROUGH HISTORY

## Intermediate Level Booklist


### History Cycle 1, Quarter Unit 2: The Alexandrian Golden Age and Medieval Mathematics


If using book lists without purchasing plans, please consider purchasing books through the Amazon affiliate links on the Living Math site to benefit Living Math, or enter through <http://www.amazon.com/exec/obidos/redirect-home/livingmath-20>

**Note:** These are the books recommended for approximately 4<sup>th</sup> through 7<sup>th</sup> grade levels. For children who border the lower end of this age group, supplementing or substituting some of the higher level Primary level math readers may be appropriate. Refer to the Primary level booklists and plans for easier reading level suggestions.

 **Joy of Mathematics** by Theoni Pappas. Math vignettes to inspire exploration

 **Math Talk Poetry in Two Voices** by Theoni Pappas. Poetry in two voices

 **Mathematicians Are People, Too Vol. 1** by Luetta Reimer and/or **String, Straightedge & Shadow** by Julia Diggins, story-like math history, the latter is a little more advanced.

 **Math History readers:** One or more, according to your child's ability:

For younger readers in this age group:

**The History of Counting** by Denise Schmandt-Besserat.

**From Zero to Ten** by Vivian French. A cartoon type resource with humor.

**Go Figure!** by Johnny Ball: DK style book, not nearly as much text or story telling, has outstanding pictures

For older readers in this age group:

**The Wonderful World of Mathematics** by Lancelot Hogben. This is a classic you'll see listed on many math reading lists, older style of writing.


**Mathematics: The World of Science** by Irene Fekete: P. 24 - 27 - excellent.



**The Pantheon Story of Mathematics** for Young People - P. 29-33. Upper level used for Advanced, but a 5<sup>th</sup>+ could enjoy, or read aloud.

 **Marvels of Math**, Kendall Haven.


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 **Volume 2 of the Mathematicians Are People Too** by Luetta Reimer. Volume 2 is scheduled for Cycle 2, but two stories in this book fit the lessons here very well.


  **Science in the Past Series** history of ancient science w/ chapters on mathematics. Short books with lots of pictures. **Ancient Rome** and **Early Islamic Culture** used in this quarter. OR:


  **The Story of Science** by Joy Hakim, middle school+ level


 Optional Historical Context - **Story of the World Vols. 1 and 2** by Susan Wise Bauer and/or **Ten Kings** by Milton Meltzer


 **MathFocus** **The Journey of Al & Gebra to the Land of Algebra** by Bethanie Tucker Ed.D, Explains algebra step by step in a story line, wide age range applicability

 **MathFocus** **Math Smart Junior** - Marcia Lerner - Pre algebra

 **MathFocus** **Realm of Algebra** by Isaac Asimov, out of print, may be difficult to find, for upper age range in this group


 **Rome Antics and City: A Story of Roman Planning and Construction** by David Macaulay, these books show history in the context of buildings, the drawings are very good illustrations of geometric principles in life. The first one is for younger children.

 Additional David Macaulay books: **Mosque, Cathedral, Castle**

 **One Grain of Rice**, Demi and/or **The King's Chessboard**, David Birch - for younger readers in this age level. These are classics, less juvenile in presentation.

 **The Man Who Counted**, Malba Tahan.

 **Math Smart Junior** - Marcia Lerner

 **The Egyptian News** by Scott Steedman (section on Alexandria) and **The Roman News** by Andrew Langley (tabloid-style history reader)


 **Number Art: Thirteen 123s From Around the World** by Leonard Fisher, beautifully illustrated book showing similarities and differences between numerals.


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 **Seven Daughters and Seven Sons** by Barbara Cohen, historical fiction set in medieval Arabia, optional reading for historical context

 **Fascinating Fibonacci, Mystery and Magic in Numbers**, by Trudi Hammel Garland, excellent book on Fibonacci numbers in art and nature. **Fibonacci Fun** by the same author is a book of activities based on Fibonacci numbers if you would like to try more activities on Fibonacci numbers than are included in the lessons.

 **Magical Mystery Tour** by Mark Dahl. Excellent activity book for Fibonacci numbers and the Golden Mean.

 **Right in Your Own Backyard Nature Math**, Time Life "I Love Math" series (out of print, but there seems to be a steady supply of affordable used copies available), These go up to about 5<sup>th</sup> grade level.

 **Math Curse** by Jon Scieska and Lane Smith, classic math tale (the teacher's name is Mrs. Fibonacci).

 **DaVinci**: There are many to choose from. When we study an individual like this, we usually select several sources as some will emphasize his art, some his science, some his life and times.

## Upper Elementary Biographies:

**The Genius of Leonardo** by Guido Visconti, contains quotations from Leonardo's notebooks

**Leonard da Vinci for Kids: His Life and Ideas**, by Janis Herbert - Nice photos and includes 21 activities

**Leonardo, Beautiful Dreamer**, by Robert Byrd

**Leonardo da Vinci** by Diane Stanley

**DaWild, DaCrazy, DaVinci** - Easy chapter book Time Warp Trio book by Jon Scieszka, author of *Math Curse*

Advanced: *Great Minds of Science: Leonardo da Vinci, Genius of Art and Science*, by Jennifer Reed

## Stories Based on DaVinci's Life:

**Leonardo's Horse** by Jean Fritz

**Leonardo and the Flying Boy**, by Laurence Anholt

**The Second Mrs. Giaconda** by L.E. Konigsburg

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Math and Art Concept Readers - Any that you have access to, these apply to a wide age range in appeal and applicability

**Zoom and Re-Zoom**, by Istvan Banyai

**Reflections and Round Trip** by Ann Jonas - These are very cleverly done

**Art Fraud Detective: Spot the Difference, Solve the Crime!** by Anna Nilsen and the companion on Modern Art, **The Great Art Scandal**.

**Seen Art?** By Jon Scieszka - just for fun if you like this author

Advanced: **Mathematics in Art** by Michael Holt



**The Number Devil** by Hans Magnus Enzensberger - wide age range appeal and applicability



**Roman City** (PBS Home Video) Based on the David Macaulay book, **City**.



**History of Science: Antiquity to 1700** (Teaching Company Series [www.teach12.com](http://www.teach12.com)) Parent resource (college level)



**Joy of Thinking Video Series** - (Teaching Company Series [www.teach12.com](http://www.teach12.com)) accessible to middle school level on up, or parent resource