LIVING MATH THROUGH HISTORY

Advanced and High School Level Booklist

History Cycle 1 Quarter Unit 3: Renaissance to Age of Enlightenment

These selections are not final.

Plan updates are in progress and some substitutions or additions could occur.

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: Recommendations for upper middle school through high school are included. Comments are included to help discern which resources to choose from, particularly for borderline individuals.

Joy of Mathematics by Theoni Pappas. Math vignettes to inspire exploration
Math Talk Poetry in Two Voices by Theoni Pappas. Poetry in two voices
String, Straightedge & Shadow by Julia Diggins Classic early math history book written in a story style for middle school level.
Euclid's Window by Leonard Mlodinow - more advanced reading than SS&S,
The Pantheon Story of Mathematics for Young People - P. 29-33. An older style book, well illustrated, middle school level.
Marvels of Math, Kendall Haven
The Story of Science by Joy Hakim, middle school+ level
Mathfocus Math Smart Junior - Marcia Lerner - Pre algebra OR
Mathfocus Algebra by Gelfand / Shen OR
MathFocus Realm of Algebra by Isaac Asimov, out of print, may be difficult to find, middle school level+
Great Moments in Science by Kendall Haven - Reader's Theatre, well done,

recommended if you have the ability to act out as a family or in groups.

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Giants of Science, "Nicolaus Copernicus, Father of Modern Astronomy" by Scott Ingram - deeper biographical source
"Galileo Galilei, Inventor, Astronomer & Rebel" by Michael White OR
Galileo Galilei: First Physicist James MacLauchlan (Oxford Portraits in Science)
The Kid Who Named Pluto and Stories of Other Extraordinary Young People in Science by Marc McCutcheon
Biography of Kepler, Recommended sources:
Johannes Kepler: Giant of Faith and Science by John Tiner
<i>More challenging:</i> Johanes Kepler and the New Astronomy, James Voelkel (Oxford Portraits in Science)
Biographical Essay: Blaise Pascal , Living Math History by Julie Brennan - written for 5 th to 10 th grade levels
Teaching resources: Pascal's Triangle: A Teacher's Guide by Tony Colledge; Seymour, Dale: Visual Patterns in Pascal's Triangle.
Biographies on Newton - any or all, mix and match:
Isaac Newton: Discovering Laws That Govern the Universe (Giants of Science) by Michael White
Dead Famous, Sir Isaac Newton by Kjartan Poskitt (author of Murderous Maths, irreverent in tone)
Isaac Newton and the Scientific Revolution (Oxford Portraits in Science)
Newton (Discoveries Series) Maury, Jean-Pierre
MathFocus Calculus By and For Young People by Don Cohen - Parent resource for activities
Primer by Swann & Johnson - Pretty advanced, comic style presentation

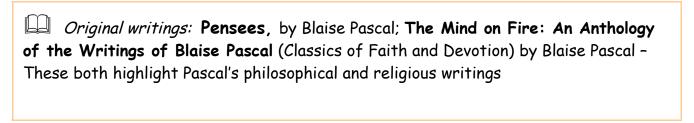
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Mathfocus Ten Things All Future Mathematicians and Scientists Must Know by Edward Zacarro
Five Equations That Changed the World by Michael Guillen - This book was recommended for the advanced level, however, more mature readers in this group may enjoy it. It contains far more detail than what I have written in the lesson synopsis, and it contains both the background leading up to Daniel Bernoulli's work, and the subsequent use of it in aeronautics. It does not contain adult themes.
Also recommended (tie in with Bernoulli's work) William Harvey And the Mechanics of the Heart (Oxford Portraits in Science) by Jole Shackelford
High School Mathematics and History Reading
HS+ From Five Fingers to Infinity, A Journey Through the History of Mathematics, Frank Swetz - A series of essays through the history of mathematics emphasizing the human element of math. Text is more readable than most math histories I've run across, with numerous clear diagrams / pictures.
HS+ Mathematics: From the Birth of Numbers by Jan Guillberg. See introductory material on how to use this text.
Euclid's Window by Leonard Mlodinow
The Day The Universe Changed by James Burke
HS+ The Measure of Reality, Quantification and Western Society, 1250-1600, by Alfred W. Crosby
HS Men of Mathematics by E.T. Bell
HS Galileo's Commandment (original writings excerpted)
HS On The Shoulders of Giants Original writings compiled and commented on by Stephen Hawkins

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- Video PBS special based on Galileo's Daughter, Galileo's Battle for the Heavens.
- History of Science: Antiquity to 1700 (Teaching Company Series www.teach12.com) Parent resource (college level)
- My Favorite Universe Series (Teaching Company Series www.teach12.com) accessible to middle school level on up as instructor is engaging, or parent resource