

## **Books for Math Lovers, Math for Book Lovers**

A 'Mathy Bibliography' by Brent A. Ferguson, The Lawrenceville School, [BFerguson@Lawrenceville.org](mailto:BFerguson@Lawrenceville.org)

\* Current (v. 2017, Dec 1) favorite titles are indicated with an asterisk \*

### **Assorted Topics, History, & Biography:**

- \* Bellos, Alex. *Here's Looking at Euclid: A Surprising Excursion through the Astonishing World of Math*. NY: Free Press, 2010.
- \* Bellos, Alex. *The Grapes of Math: How Life Reflects Numbers and Numbers Reflect Life*. New York: Simon and Schuster, 2014.
- Benjamin, Arthur. *The Magic of Math: Solving for X and Figuring Out Why*. New York: Perseus/Basic, 2015.
- Cheng, Eugenia. *How To Bake  $\pi$ : An Edible Exploration of the Mathematics of Mathematics*. New York: Basic Books, 2015.
- Devlin, Keith. *The Language of Mathematics: Making the invisible visible*. (& others written!) New York: W.H. Freeman, 1998.
- \* Ellenberg, Jordan. *How Not To Be Wrong: The Power of Mathematical Thinking*. New York: Penguin, 2014.
- Feynman, Richard P. *Surely, You must Be Joking, Mr. Feynman! Adventures of a Curious Character*. New York: Norton, 1985.
- Hoffman, Paul. *Archimedes' Revenge: The Joys and Perils of Mathematics*. New York: Random House, 1988.
- Hull, Thomas. *Project Origami: Activities for Exploring Mathematics*, 2ed. Boca Raton: CRC Press, 2013.
- Kanigel, Robert. *The Man Who Knew Infinity*. New York: Simon & Schuster, 1991.
- \* Mackenzie, Dana. *The Universe in Zero Words: The Story of Mathematics as Told Through Equations*. Princeton: Princeton University Press, 2012.
- Pappas, Theoni. *Mathematical Scandals*. San Carlos, CA: Wide World/Tetra, 1997.
- Paulos, John Allen. *Innumeracy: Mathematical Illiteracy and Its Consequences*. New York: Farrar, Straus, Giroux, 2001.
- Paulos, John Allen. *A Mathematician Reads the Newspaper*. New York: Basic Books, 1995.
- Pickover, Clifford. *The Math Book... 250 Milestones in the History of Mathematics*. New York: Sterling, 2009.
- Singh, Simon. *Fermat's Enigma*. New York: Anchor Books, 1997.
- Singh, Simon. *The Simpsons and Their Mathematical Secrets*. New York: Bloomsbury, 2013.
- du Sautoy, Marcus. *The Music of the Primes: Searching to Solve the Greatest Mystery in Mathematics*. NY: Harper Collins, 2003.
- Strogatz, Steven. *The Calculus of Friendship: What a Teacher and a Student Learned About Life While Corresponding About Math*. Princeton: Princeton U. Press, 2009.
- \* Strogatz, Steven. *The Joy of X: A guided Tour of Math from One to Infinity*. New York: Houghton Mifflin, 2012.

### **Collections of Problems & Facts:**

- Gardner, Martin. *Sphere Packing, Lewis Carroll, and Reversi*. New York: Cambridge, 2009...(This is just one of 15 in the series!)
- \* Stewart, Ian. *Professor Stewart's Cabinet of Mathematical Curiosities*. New York: Basic Books, 2009.
- \* Wells, David. *The Penguin Dictionary of Curious and Interesting Numbers*. London: Penguin, 1986.
- Wells, David. *The Penguin Dictionary of Curious and Interesting Geometry*. London: Penguin, 1991.
- Wells, David. *The Penguin Dictionary of Curious and Interesting Mathematics*. London: Penguin, 1997.

### **Fiction (suggested grade levels indicated):**

- (10-12) Doxiadis, Apostolos. *Uncle Petros and Goldbach's Conjecture*. New York: Bloomsbury USA, 1992.
- \* (4-8) Enzenberger, Hans Magnus. *The Number Devil: A Mathematical Adventure*. New York: Holt, 1998.
- (10-12) Green, John. *An Abundance of Katherines*. New York: Penguin Group, 2006.
- (K-7) Heiligman, Deborah; Pham, LeUyen. *The Boy Who Loved Math: The Improbable Life of Paul Erdos*. New York: Roaring Brook, 2013.
- (6-12) Juster, Norton. *The Phantom Tollbooth*. New York: Random House, 1961. (see also: *The Dot and the Line*, 1963)
- (5-10) Mohr, Lilac. *Math & Magic in Wonderland*. Lilac Mohr, 2016.
- (9-12) Ogawa, Yoko. *The Housekeeper and the Professor* (English translation by Stephen Snyder). New York: Picador, 2009.
- \* (K-3) Otashi, Kathryn. *Zero* (2010), *One* (2008), *Two* (2014). Novato, CA: KO Kids Books.
- \* (2-12+) Phillips, Richard. *Numbers: facts, figures, and fiction*. Cambridge: Cambridge University Press, 1994.
- (10-12) Rojstaczer, Stuart. *The Mathematician's Shiva*. New York: Penguin. 2014.
- (K-5) Schwartz, Richard Evan. *You Can Count on Monsters*. Natick, MA: A.K. Peters, 2010.
- \* (6-12) Tahan, Malba. *The Man Who Counted*. New York: Norton. 1972 (English translation, 1993)
- (1-4) Tang, Greg. *Math Fables, Math for All Seasons, Math-terpieces, The Grapes of Math, Math Appeal, The Best of Times*.
- (11-12+) Yuki, Hiroshi. *Math Girls\*\**. Austin: Bento Books, 2011.
- (11-12+) Yuki, Hiroshi. *Math Girls2\*\**. Austin: Bento Books, 2012.
- \* (5-12) Yuki, Hiroshi. *Math Girls talk about integers*. Austin: Bento Books, 2014.
- (7-12) Yuki, Hiroshi. *Math Girls talk about equations and graphs*. Austin: Bento Books, 2014.
- (8-12) Yuki, Hiroshi. *Math Girls talk about trigonometry*. Austin: Bento Books, 2015.
- \*\* note: there is some **very** sophisticated math in these two books...! They are 80% math, 20% novel (the reverse for many of the others in this list).

### Classics:

- Abbott, Edwin A. *Flatland: A Romance of Many Dimensions*. In ebook form by TopPackages (2005) Original © 1884.
- \* Recently updated – *The Annotated Flatland: A Romance of Many Dimensions*. Cambridge, MA: Perseus Publishing, 2002.
- Countryman, Joan. *Writing to Learn Mathematics: Strategies that Work*. Portsmouth, NH: Heineman, 1992.
- Courant, Richard, and Robbins, Herbert. *What Is Mathematics? An Elementary Approach to Ideas and Methods*. New York, NY: Oxford University Press. 1941 (2<sup>nd</sup> ed. with revisions by Ian Stewart, 1996)
- Huff, Darrell. *How to Lie With Statistics*. New York: Norton, 1954.
- Kepler, Johannes. *The Six-Cornered Snowflake: A New Year's Gift*. Philadelphia: Paul Dry Books, 2010.
- Lieber, Lillian. *The Education of T.C. MITS (The Celebrated Man In The Street)*. Philadelphia: Paul Dry Books, 1942.
- Morrison, Philip and Morrison, Phylis. *Powers of Ten: About the Relative Size of Things in the Universe*. New York: Scientific American Library, 1982.
- Polya, George. *How to Solve It*. Princeton: Princeton University Press, 1945.
- \* Whitehead, A. N. *Introduction to Mathematics (Home University Library, No. 15)*. New York: Holt, 1939. London, 1911.

### Special/recommended online sources for learning:

- \* Numberphile: <https://www.youtube.com/user/numberphile> (and many other channels by Brady Haran...)
- Vi Hart's YouTube channels: <https://www.youtube.com/user/Vihart> and <https://www.youtube.com/user/vihartvihart>
- Vlogbrothers: <https://www.youtube.com/user/vlogbrothers>
- Strogatz, Steven. *Me, Myself, and Math*. New York Times Opinionator Blog series, Sept 10<sup>th</sup>, 2012 – Oct 15<sup>th</sup>, 2012. <http://opinionator.blogs.nytimes.com/category/me-myself-and-math/>
- Strogatz, Steven. *The Elements of Math*. New York Times Opinionator Blog series, Jan 31<sup>st</sup> 2010 – May 9<sup>th</sup>, 2010. [http://topics.nytimes.com/top/opinion/series/steven\\_strogatz\\_on\\_the\\_elements\\_of\\_math/index.html](http://topics.nytimes.com/top/opinion/series/steven_strogatz_on_the_elements_of_math/index.html)
- \* Wallace, David Foster. *This is Water: Some Thoughts, Delivered on a Significant Occasion, about Living a Compassionate Life*. New York: Little, Brown & Co, 2009. (Delivered live in Gambier, OH: May 21<sup>st</sup>, 2005.)
- Transcript at – <http://web.ics.purdue.edu/~drkelly/DFWKenyonAddress2005.pdf>

### Books for Educators: Cognitive Science, Pedagogy, Relationships, Identity, & Effectiveness

- Banaji & Greenwald. *Blind Spot: Hidden Biases of Good People*. New York: Bantam, 2016.
- Brooks, David. *The Road To Character*. New York: Random House, 2015 (see also: *The Social Animal* by Brooks)
- \* Brown, Peter; Roediger III, Henry L.; & McDaniel. Mark A. *Make It Stick: The Science of Successful Learning*. 2014.
- Cary, Lorene. *Black Ice*. New York: Alfred Knopf, 1991.
- \* Dweck, Carol. *Mindset: The New Psychology of Success*. New York: Ballantine Books (Random House), 2006.
- Gladwell, Malcolm. *Outliers: The Story of Success*. New York: Little, Brown, and Co. 2008.
- Heischman, Daniel. *Good Influence: Teaching the Wisdom of Adulthood*. New York: Morehouse Publishing, 2009.
- Jensen, Frances E. *The Teenage Brain: A Neuroscientist's Guide...* New York: Harper, 2015.
- Keirsey, David & Bates, Marilyn. *Please Understand Me: Character and Temperament Types*. Del Mar, CA: Prometheus Nemesis, 1984.
- Palmer, Parker. *The Courage To Teach: Exploring the Inner Landscape of a Teacher's Life*. San Francisco: Jossey-Bass, 1998.
- Pink, Daniel. *Drive: The Surprising Truth About What Motivates Us*. New York: Penguin Books, 2009.
- \* Sizer, Theodore & Sizer, Nancy. *The Students Are Watching: Schools and the Moral Contract*. Boston: Beacon Press, 1999.
- Steele, Claude. *Whistling Vivaldi: how stereotypes affect us and what we can do*. New York: Norton, 2010.
- \* Willingham, Daniel. *Why Don't Students Like School? A Cognitive Scientist Answers Questions About How the Mind Works and What It Means for the Classroom*. San Francisco: Jossey-Bass/Wiley, 2009.

### Narratives & poetry worth reading...mostly youth & young adult lit. (not mathy, grade-levels listed)

- (8-12) Alexie, Sherman. *The Absolutely True Diary of a Part-Time Indian*. New York: Little, Brown, and Co., 2007.
- (10-12) Anderson, M.T. *Feed*. Cambridge, MA: Candlewick Press, 2002.
- (3-6) Dahl, Roald. *Matilda*. New York: Puffin Books, 1988. (Also, *Danny, Champion of the World* and many others...)
- (5-10) Haddon, Mark. *The Curious Incident of the Dog in the Night-Time*. New York: Random House, 2003.
- (4-8) Lin, Grace. *Where the Mountain Meets the Moon*. New York: Little, Brown: 2009.
- (10-12) Mali, Taylor. *What Learning Leaves: Poems by Taylor Mali*. Newtown, CT: Hanover Press, 2002.
- (4-10) Palacio, R. J. *Wonder*. New York: Alfred A. Knopf, 2012.
- (5-10) Sloan, Holly Goldberg. *Counting By Sevens*. New York: Penguin, 2013. Also by Sloan: *Short* (2017)