

Best New Books to Engage Students in Math and Science
Lisa Bea Walters, DESE, Library Media and Technology Consultant
J. B. Petty, Missouri State University, Coordinator/LIS Education

In working with teachers and pre-service teachers, we often get requests for “good” books to accompany math and science curriculum. We have read all of the books in this bibliography and recommend them. We have also attached Grade Level Expectations to each title so that books may be chosen to expand the particular concept being taught. The GLE codes are given on this first page for clarification of the document. For further information about the GLEs, visit:

<http://dese.mo.gov/divimprove/curriculum/GLE/index.html>

For information about the books, please visit the Curriculum Resource Center, Meyer Library.

Bibliography

SAMPLE ENTRY

Author. Copyright date. *Book title*. Place of publication: publisher. Grades; GLE codes.

GLE Codes

Health Strands

FI = Functions and Interrelationship of Systems

HM = Health Maintenance and Enhancement

RA = Risk Assessment and Reduction

Mathematics Strands

N = Number and Operations

A = Algebraic Relationship

G = Geometric and Spatial Relationships

M = Measurement

D = Data and Probability

Science Strands

ME = Properties and Principles of Matter and Energy

FM = Properties and Principles of Force and Motion

LO = Characteristics and Interactions of Living Organisms

EO = Changes in Ecosystems and Interactions of Organisms with their Environments

ES = Process and Interactions of the Earth’s Systems

UM = Composition and Structure of the Universe and the Motion of the Objects Within It

SI = Scientific Inquiry

ST = Impact of Science, Technology and Human Activity

Elementary Nonfiction

- Aldrin, Buzz. 2005. *Reaching for the Moon*. Illustrations by Wendell Minor. NY: HarperCollins. Gr. 2-3; ST.2.A.2-3.
- Borden, Louise. 2004. *Sea Clocks: Story of Longitude*. Illustrated by Erik Blegvad. NY: Margaret K. McElderry. Gr. 2-5; G.2.8.2-5.
- Bowen, Anne. 2006. *Great Math Tattle Battle*. Illustrated by Jaime Zollars. Chicago: Albert Whitman. Gr. 1-3; N.1.A.2; N.3.B.1-2.
- Brenner, Barbara. 2004. *One Small Place in a Tree*. Illustrated by Tom Leonard. NY: HarperCollins. Gr. K-3; LO.1.B.2-3.
- Cash, Megan Montague. 2003. *What Makes the Seasons?* NY: Viking. Gr. K-3; EO.1.A.K; CS.2.C.K.
- Corcoran, Mary K. 2006. *Quest to Digest*. Watertown, MA: Charlesbridge. Gr. 1-5; FI.1.H.3-4.
- Ekeland, Ivar. 2006. *Cat in Numberland*. Illustrated by John O'Brien. Chicago: Carus. Gr. 3-5; N.1.A.5; N.1.D.3-4; N.3.B.1-4.
- Fisher, Valorie. 2006. *How High Can a Dinosaur Count?: And Other Math Mysteries*. NY: Schwartz & Wade. Gr. K-3; N.1.D.2-3; N.1.A.K-2.
- Jenkins, Steve and Robin Page. 2003. *What Do You Do with a Tail Like This?* NY: Houghton Mifflin. Gr. K-4; LO.1.D.K; EO.3.C.4.
- Kessler, Cristina. 2006. *Best Beekeeper of Lalibela*. Illustrated by Leonard Jenkins. NY: Holiday House. Gr. K-3; LO.3.D.K-2.
- Lasky, Kathryn. 2003. *Man Who Made Time Travel*. Illustrated by Kevin Hawkes. NY: Farrar, Straus and Giroux. Gr. 3-5; G.2.A.2-5.
- Lin, Grace and Ranida T. McKneally. 2006. *Our Seasons*. Illustrated by Grace Lin. Watertown, MA: Charlesbridge. Gr. K-2; EO.1.A.K; UM.2.C.K.
- Markle, Sandra. 2006. *Little Lost Bat*. Illustrated by Alan Marks. Watertown, MA: Charlesbridge. Gr. K-4; LO.3.D.K, 2.
- Murphy, Stuart J. 2006. *Rodeo Time*. NY: HarperCollins. Gr. 1-4; M.1.C.1-4.
- Paye, Won-Ldy and Margaret H. Lippert 2006. *Talking Vegetables*. Illustrated by Julie Paschkis. NY: Henry Holt. Gr. K-3; LO.1.B.3.
- Pettenati, Jeanne K. 2006. *Galileo's Journal 1609—1610*. Illustrated by Paolo Rui. Watertown, MA: Charlesbridge. Gr. 2-5; ST.1.B.2-5; ST.2.A.3-5.

Pringle, Laurence. 2003. *Come to the Ocean's Edge: A Nature Cycle Book*. Illustrated by Michael Chesworth. Honesdale, PA: Boyds Mills. Gr. K-4; EO.1.A.4.

Pringle, Laurence. 2004. *Snakes! Strange and Wonderful*. Illustrated by Meryl Honesdale. PA: Boyds Mills. Gr. K-5; LO.1.B.2; LO.1.D.1, 3, 5.

Sill, Cathryn. 2003. *About Arachnids: A Guide for Children*. Illustrated by John Sill. Atlanta: Peachtree. Gr. K-3; LO.1.D.K-2.

Singer, Marilyn. 2006. *What Stinks?* Plain City, OH: Darby Creek. Gr. 3-6; EO.1.A.4; EO.1.B.6.

Toft, Kim Michelle. 2005. *The World that We Want*. Watertown, MA: Charlesbridge. Gr. K-4; EO.1.A.K-1, 4.

Elementary Series

A+ Animal Opposites

Bullard, Lisa. 2006. *Big and Small: An Animal Opposites Book*. Mankato, MN: Capstone. Gr. K-2; LO.1.D.K; LO.1.E.1.

Animal Kingdom Classification

Gilpin, Daniel. 2006. *Centipedes, Millipedes, Scorpions and Spiders*. Minneapolis, MN: Compass Point. Gr. 4-6; LO.1.A.6.

Animals, Animals

Jango-Cohen, Judith. 2004. *Camels*. (One of 40+ titles in the series). NY: Benchmark/Marshall Cavendish. Gr. 3-6; LO.

KidHaven Science Library

George, Linda. 2003. *Plate Tectonics*. (One of multiple titles in the series). NY: Thomson Gale. Gr. 3-7; EO.1.D.6, ES.2.B.6.

Look Closer

Malyan, Sue. 2005. *Reptiles*. NY: DK. Gr. K-3; LO.3.D.K, 2.

Earthworks

Harrison, David L. 2004. *Earthquakes: Earth's Mightiest Moments*. (One of multiple titles in the series). Illustrated by Cheryl Nathan. Honesdale, PA: Boyds Mills. Gr. 2-4; EO.1.D.6, ES.2.B.6.

Fact Finders. Explore the Biomes

Tagliaferro, Linda. 2006. *Explore the Tropical Rain Forest*. (One of multiple titles in the series). Mankato, MN: Capstone. Gr. 2-4; EO.1.A.4; EO.2.A.3-4.

Living on the Edge

Pfeffer, Wendy. 2003. *Icy Antarctic Waters*. (One of multiple titles in the series). NY: Marshall Cavendish. Gr. 2-6; ES.1.B.5; ES.2.A.4.

Math Matters

Pitino, Donna Marie. 2005. *Too Tall Tina*. Illustrated by Liza Woodruff. (One of multiple titles in the series). NY: Kane. Gr. K-2; M.1.A.K.

Richards, Kitty. 2000. *It's about Time, Max!* Illustrated by Gioia Fiammenghi. NY: Kane. Gr. K-2; M.1.C.K-2.

Pebble Plus

Hall, Margaret. 2007. *Spiders*. (Bilingual – Spanish/English). Mankato, MN: Capstone. Gr. K-2; LO.1.A.1.

Olson, Gillia M. 2007. *Phases of the Moon*. Mankato, MN: Capstone. Gr. K-2; UM.1.A.K; UM.2.B.K.

Tagliaferro, Linda. 2004. *Spiders and Their Webs*. Mankato, MN: Capstone. Gr. K-4; LO.1.A.1; LO.1.B.2.

World of Biomes

Johansson, Philip. 2004. *Tropical Rain Forest: A Web of Life*. Berkeley: Enslow. Gr. 2-5; EO.2.A.3-4; EO.1.A.4.

Tell Me Why, Tell Me How

Murphy, Patricia J. 2006. *How Does the Wind Blow?* NY: Marshall Cavendish. Gr. 3-6; ES.1.C.3; ES.2.A.4, 6.

World of Plants

Farndon, John. 2006. *Stems*. NY: Blackbirch/Thomson Gale. Gr. 2-5; LO.1.D.3; EO.3.C.4.

Farndon, John. 2006. *Roots*. NY: Blackbirch/Thomson Gale. Gr. 2-5; LO.1.D.3; EO.3.C.4.

Elementary Poetry

Florian, Douglas. 2005. *Zoo's Who?* San Diego: Harcourt. Gr. K-4; CI.1.E.1; CI.3.D.K, 2.

Frank, John. 2003. *A Chill in the Air*. Illustrated by Mike Reed. NY: Simon & Schuster for Young Readers. Gr. K-2; EO.1.A.K; UM.2.C.K.

George, Kristine O'Connell. 2004. *Hummingbird Nest: A Journal of Poems*. Illustrated by Barry Moser. San Diego: Harcourt. Gr. K-5; LO.1.B.2.

- Katz, Susan. 2005. *Looking for Jaguar and Other Rainforest Poems*. Illustrated by Lee Christiansen. NY: Greenwillow. Gr. K-4; EO.2.A.3-4; EO.1.A.4.
- Shields, Carol Diggory. 2003. *Brain Juice: Science, Fresh Squeezed!: 41 Thirst-for-Knowledge Quenching Poems*. Illustrated by Richard Thompson. NY: Handprint. Gr. K-5; EO.3.A.4; UM.1.B.5.
- Singer, Marilyn. 2003. *Fireflies at Midnight*. Illustrated by Ken Robbins. NY: Atheneum for Young Readers. Gr. K-4; UM.2.C.3.
- Tang, Greg. 2003. *Math Appeal*. Illustrated by Harry Briggs. NY: Scholastic. Gr. 2-6 A.1.A.1; A.1.A.1-4.
- Yolen, Jane. 2006. *Count Me a Rhyme*. Photographs by Jason Stemple. Honesdale, PA: Wordsong/Boyd's Mills. Gr. 3-5; N.1.A.3-5.
- Yolen, Jane. 2003. *Least Things*. Illustrated by Jason Stemple. Honesdale, PA: Wordsong/Boyd's Mills. Gr. K-4; LO.1.D.K-1.

Elementary Fiction

- Benton, Jim. 2006. *Frantastic Voyage*. (Franny K. Stein: Mad Scientist series). NY: Simon & Schuster for Young Readers. Gr. 2-4; SI.1.B.2-4.
- Cos, Judy. 2005. *That Crazy Eddie and the Science Project of Doom*. Illustrated by Blanche Sims. NY: Holiday House. Gr. 2-4; SI.1.E.2-4.
- Dowell, Frances O'Roark. 2006. *Phineas L. McGuire...Erupts! The First Experiment*. Illustrated by Preston McDaniels. NY: Atheneum for Young Readers. Gr. 3-5; SI.1.E.3-5.
- Greene, Stephanie. 2004. *Owen Foote, Mighty Scientist*. Illustrated by Cat Bowman Smith. NY: Clarion. Gr. 2-4; SI.1.E.2-4.
- Hamilton, Richard. 2006. *CAL and the Amazing Anti-Gravity Machine*. Illustrated by Sam Hearn. NY: Bloomsbury. Gr. 3-5; SI.1.E.3-5.
- Hopkinson, Deborah. 2006. *Into the Firestorm*. NY: Alfred A. Knopf. Gr. 4-6; EO.1.D.6; PI.2.B.6.
- Reiberg, Joanne. 2006. *Zachary Zormer Shape Transformer*. Watertown, MA: Charlesbridge. Gr. 1-3; G.1.A.1-3; G.1.C.3.
- Yep, Laurence. 2006. *Earth Dragon Awakes: The San Francisco Earthquake of 1906*. NY: HarperCollins. Gr. 3-6; ES.1.D.6; ES.2.B.6.

Secondary Nonfiction

- Benchley, Peter. 2005. *Shark Life*. NY: Delacorte. Gr. 5-8; LO.1.B.6, 8.
- Brynie, Faith Hickman. 2006. *101 Questions about Sleep and Dreams That Kept You Awake Nights... Until Now*. Minneapolis: Twenty-First Century. Gr. 8-11; (interesting, factual, but doesn't really match any specific GLE).
- Carson, Mary Kay. 2006. *Exploring the Solar System*. Chicago: Chicago Review. Gr. 5-8; UM.1, 2. 5+.
- Croswell, Ken. 2006. *Ten Worlds: Everything that Orbits the Sun*. Honesdale, PA: Boyds Mills. UM.1.A.7; UM.2.C.7, 9-11; UM.2.D.7, 9-11.
- Deem, James M. 2005. *Bodies from the Ash*. Boston: Houghton Mifflin. Gr. 5-8; EO.1.D.6; ES.2.A.6, 8.
- Deland, Marfe Ferguson. 2005. *Genius: A Photobiography of Albert Einstein*. Washington DC: National Geographic. Gr. 5-9; ST.2.A.6-8; ST.2.B.6-8; ST.2.A.9-11; ST.2.B.9-11.
- Dendy, Leslie and Mel Boring. 2005. *Guinea Pig Scientists*. Illustrated by C.B. Mordan. NY: Henry Holt. Gr. 5-9; ST.2.A.6-8; ST.2.B.6-8; ST.2.A.9-11; ST.2.B.9-11.
- Kampion, Drew. 2005. *Waves: From Surfing to Tsunami*. Illustrated by Jeff Petersen. Salt Lake City: Gibbs Smith. Gr. K-8; ES.2.B.6, 8.
- Krull, Kathleen. 2005. *Leonardo da Vinci*. Illustrated by Boris Kulikov. NY: Viking. Gr. 5-12; ST.2.A.6-8; ST.2.B.6-8; ST.2.A.9-11; ST.2.B.9-11.
- Markle, Sandra. 2005. *Outside and Inside Mummies*. NY: Walker & Sons. Gr. 5-8; ME.1.G.6.
- Myers, Jack. 2005. *On Top of Mount Everest: And Other Explorations of Science in Action*. Honesdale, PA: Boyds Mills. Gr. 5-12; FI.1.6.6-12.
- Ride, Sally and Yam O'Shaughnessy. 2003. *Exploring Our Solar System*. NY: Crown. Gr. 5-12; UM.1.A.7; UM.1.B.7; UM.2.A.7; UM.2.B.7; UM.2.C.7.
- Skurzynski, Gloria. 2004. *Are We Alone?: Scientists Search for Life in Space*. Washington, DC: National Geographic. Gr. 7-11; UM.1.A.7; UM.1.B.7; UM.1.C.7; UM.2.A.7; UM.2.B.7; UM.2.C.9-11; UM.2.D.9-11.
- Steele, Philip. 2005. *Galileo: Genius Who Faced the Inquisition*. Washington D.C.: National Geographic. Gr. 5-8; ST.2.A.6-8; ST.2.B.6-8; ST.2.A.9-11; ST.2.B.9-11.

Secondary Series

AnimalWays

Steffoff, Rebecca. 2005. *Penguins*. NY: Marshall Cavendish. Gr. 5-8; LO.1.A.6; LO.1.B.6.

Cool Science

Johnson, Rebecca L. 2006. *Nanotechnology*. Minneapolis: Lerner. Gr. 4-8; ME.1.C.6; ME.2.A.7, 8.

Drugs

Menhard, Francha Roffe. 2006. *Facts about Ritalin*. NY: Marshall Cavendish. Gr. 8-12 RA.3.A.6, 9-12; RA.3.B.6, 8, 9-12; RA.3.C.6, 9-12; RA.3.D.9-12.

Edge

Martin, Michael. 2005. *Modern Mummies*. Mankato, MN: Capstone. Gr. 4-6; ME.1.G.6.

Epidemic!

Peters, Stephanie True. 2005. *Battle Against Polio*. NY: Marshall Cavendish. Gr. 6-10; LO.2.G.8; RA.1.A.8-12; AR.1.B.8-12; RA.1.C.9-12; FI.1.L.8-12.

Peters, Stephanie True. 2005. *1918 Influenza Pandemic*. NY: Marshall Cavendish. Gr. 6-10; LO.2.G.8; RA.1.A.8-12; AR.1.B.8-12; RA.1.C.9-12; FI.1.L.8-12.

Elements

Cooper, Chris. 2007. *Arsenic*. NY: Marshall Cavendish. Gr. 7-12; ME.1.A.8; ME.1.F.8.

Jackson, Tom. 2007. *Lithium*. NY: Marshall Cavendish. Gr. 7-12; ME.1.A.8; ME.1.F.8.

Eyewitness

Burnie, David. 2005. *Tree*. NY: DK. LO.1.A.6, 8; LO.1.E.6.

Pollock, Steve. 2005. *Ecology*. NY: DK. Gr. 5-12; EO.1.D.6, 8; EO.1.D.9-11.

Family Trees

Zabludoff, Marc. 2006. *Protoctist Kingdom*. NY: Marshall Cavendish. Gr. 4-8; LO.2.A.6, 8-11; LO.3.C.8.

Zabludoff, Marc. 2006. *Insect Class*. NY: Marshall Cavendish. Gr. 4-8; LO.3.C.8.

Forensic Science Projects

Rainis, Kenneth G. 2006. *Blood and DNA Evidence: Crime-solving Science Experiments*. Berkeley Heights, NJ: Enslow. Gr. 9-12; LO.2.E.9-11; LO.3.B.9-11.

Great Ideas of Science

Fleisher, Paul. 2006. *Big Bang*. Minneapolis: Lerner. Gr. 7-12; ST.2.B.9-11.

Great Minds of Science

Bankston, John. 2005. *Stephen Hawking: Breaking the Boundaries of Time and Space*. Berkeley Heights, NJ: Enslow. Gr. 5-12; ST.2.A.6, 8-11.

Health Alert

Bjorklund, Ruth. 2007. *Cerebral Palsy*. NY: Marshall Cavendish. Gr. 7-12; FI.1.G.9-12; FI.1.L.9-12.

Bjorklund, Ruth. 2006. *Food-borne Illnesses*. NY: Marshall Cavendish. Gr. 7-12; ME.2.F.7; HE.2.F.9-12.

Hoffmann, Gretchen. 2007. *Flu*. NY: Marshall Cavendish. Gr. 7-12; RA.1.A.9-12; RA.1.B.9-12; RA.1.C.9-12.

Collard III, Sneed B. 2006. *Science Adventures: In the Rain Forest Canopy*. NY: Marshall Cavendish. Gr. 6-11; EO.1.D.6; EO.1.C.9-11.

Open for Debate

Fridell, Ron. 2005. *Environmental Issues*. NY: Marshall Cavendish. Gr. 6-12; EO.1.D.6; EO.4.D.6; EO.1.C.9-11.

Science on the Edge

Lindop, Laurie. 2006. *Cave Sleuths*. Minneapolis: Twenty-First Century. Gr. 9-11; ES.1.B.9-11; ES.3.A.9-11.

Secondary Poetry

Bulion, Leslie. 2006. *Hey There, Stink Bug!* Illustrated by Leslie Evans. Watertown, MA: Charlesbridge. Gr. 4-7; LO.3.C.8-11.

Scieszka, Jon and Lane Smith. 2004. *Science Verse*. NY: Viking. Gr. 2-12; ES.2.E.7.

Sidman, Joyce. 2005. *Song of the Water Boatman: & Other Pond Poems*. Illustrated by Becky Prange. Boston: Houghton Mifflin. Gr. 3-7; ES.1.A.6, 9-12.

Singer, Marilyn. 2002. *Footprints on the Roof: Poems about the Earth*. Illustrated by Meilo So. NY: A. A. Knopf. Gr. 5-10; EO.1.A.6, 9-11; ES.2.F.7.

Singer, Marilyn. 2003. *How to Cross a Pond: Poems about Water*. Illustrated by Meilo So. NY: A. A. Knopf. Gr. 5-10; ES.2.E.7; ME.1.C.6, 8.

Singer, Marilyn. 2005. *Central Heating: Poems about Fire and Warmth*. Illustrated by Meilo So. NY: Alfred A. Knopf. Gr. 4-9; ME.2.A.6-8, 9-11.

Secondary Fiction

- Balliett, Blue. 2004. *Chasing Vermeer*. Illustrated by Brett Helquist. NY: Scholastic. Gr. 5-9; G.1.A.9; G.3.C.5-9; G.4.B.6-9.
- Balliett, Blue. 2006. *Wright 3*. Illustrated by Brett Helquist. NY: Scholastic. Gr. 5-9; G.1.A.9; G.3.A.5-9; G.3.C.5-9; G.4.B.6-9.
- Cooney, Caroline B. 2005. *Code Orange*. NY: Delacorte. Gr.7-12; LO.2.G.8; HM.1.B.6, 8; HM.1.C.6, 8; HM.3.C.6, 8; RA.1.A.9-12.
- Dowell, Frances O’Roark. 2005. *Chicken Boy*. NY: Atheneum Gr. 4-7; SI.1.E.4-7.
- Grunwell, Jeanne Marie. 2003. *Mind Games*. Boston: Houghton Mifflin. Gr. 5-8; SC.1.A.5-8; SC.1.B.5-8; SC.1.C.5-8; SC.1.D.5-8.
- Hobbs, Valerie. 2005. *Defiance*. NY: Farrar, Straus and Giroux. Gr. 4-8; LO.2.G.8; RA.1.A.6, 8; RA.1.B.6, 8; RA.1.D.6, 8.
- Karwoski, Gail Langer. 2004. *Quake! Disaster in San Francisco, 1906*. Illustrated by Robert Papp. Atlanta: Peachtree. Gr. 4-7; ES.2.B.6.
- Klise, Kate. 2004. *Regarding the Sink*. Illustrated by M. Sarah Klise. NY: Harcourt. Gr. 3-5; EO.1.D.6.
- Leavell, Chuck and Nicholas Cravotta. 2005. *Tree Farmer*. Illustrated by Rebecca Bleau. Lorton, VA: VSP. Gr. 3-12; ST.3.B.5-12; LO.1.D.4; LO.1.D.6.
- Lewis, Richard. 2006. *Killing Sea*. NY: Simon & Schuster. Gr. 9-12. ES.2.B.9-11; ES.2.G.9-11.
- Park, Linda Sue. 2005. *Project Mulberry*. NY:Clarion. Gr. 5-8. SI.1.E.6-8
- Pettenati, Jeanne K. 2006. *Galileo’s Journal 1609 - 1610*. Illustrated by Paolo Rui. Watertown, MA: Charlesbridge. Gr. 5-8; ST.2.A.6-8; ST.2.B.6-8; ST.2.A.9-11; ST.2.B.9-11.
- Richards, Douglas E. 2004. *The Prometheus Project: Trapped*. Eagleville, PA: DNA Press. Gr. 6-10; N; ME; EO; ST.
- Smith, Greg Leitich. 2003. *Ninjas, Piranhas, and Galileo*. NY: Little, Brown. Gr. 5-8; SI.1.E.5-8.
- Smith, Greg Leitich. 2005. *Tofu and T.rex*. NY: Little, Brown. Gr. 6-9; HE.2.A.6-7; HE 2.C.6-7.
- Vrettos, Adrienne Maria. 2006. *Skin*. NY: Margaret K. McElderry. Gr. 8-12; HE.2.D.7; RA.1.D.8.