

Mathematics Standards and Instruction

Revised 2022



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MISSION

The curriculum in the Catholic School should reflect the four interrelated purposes of catechesis:

*"to proclaim the mysteries of the faith,
to foster community,
to encourage worship and prayer,
and to motivate service to others." (NCD, #215)*

*Indeed this IS the mission
of the Catholic Schools in the Diocese of Owensboro.*

**The mission of the Catholic Schools of the
Diocese of Owensboro is to share in the Church's
mission, to proclaim the message of Jesus Christ as
lived out in the Catholic Church which creates a
worshiping community of believers whose service is
a witness of their Christian love.**

SUBJECT STUDY PLAN FOR THE DIOCESE OF OWENSBORO

In April 1994, a Standards Revision Committee for Schools of the Diocese of Owensboro, Kentucky was established to provide direction in developing the curricula for all subject areas. Since inception, the study has followed a yearly cycle. As academic standards have improved through the years, this study of the subject expands from a focus on the standards themselves to Catholic Integration into these standards and a review of recommended best practices and resources.

Subject Area	Year of review	Committee recommendation complete	Publication and PD of study and recommendations
Group I - Math	2021-22	Spring, 2022	Summer, 2022
Group II - English/Language Arts	2022-23	Spring, 2023	Summer, 2023
Group III - Science	2023-24	Spring, 2024	Summer, 2024
Group IV - Social Studies	2024-25	Spring, 2025	Summer, 2025
Group V - Arts & Humanities Foreign Language	2025-26	Spring, 2026	Summer, 2026
Group VI – Religion Vocational Studies and Practical Living	2026-27	Spring, 2027	Summer, 2027

The *Subject Study Committee*, chaired by the assistant superintendent for Diocesan Catholic Schools, reviews current state/national standards, assesses strengths and weaknesses in the Diocesan Schools through testing analysis, observation, and interviews, researches and develops a plan for Catholic Integration, develops procedures for updating resources and provides professional development on the recommendations from the study.

Purchase of textbooks and/or materials by the school should be compatible with standards and recommendations. Each school determines its own timeline for study and purchasing.

- *All religion texts and materials must be on the approved list from the USCCB.
- * Texts, particularly Social Studies and Literature, should be reviewed for anti-Catholic sentiment
- * All subjects are required to integrate the Catholic Faith. Suggestions for this will be included in each year’s study.

NATIONAL STANDARDS AND BENCHMARKS FOR EFFECTIVE CATHOLIC EDUCATION

“A school’s Catholic Identity should not be confined to the religion curriculum and campus ministry activities. Every subject taught should be connected in some way to the school’s Catholic Identity. The effective way of aligning academics with Catholic Identity is by integrating the seven principles of Catholic social teaching into the overall school curriculum.”

(Momentum, Sept/Oct 2008)

See [NSBECS Home Page \(ncea.org\)](http://ncea.org)

Standard 2:

An excellent Catholic School adhering to mission provides a rigorous academic program for religious studies and catechesis in the Catholic faith, set within a total academic curriculum that integrates faith, culture and life.

- 2.4 The school’s Catholic Identity requires excellence in academic and intellectual formation in ***all*** subjects including religious education.
- 2.5 Faculty uses the lenses of Scripture and the Catholic intellectual tradition in ***all*** subjects to help students think critically and ethically about the world around them.
- 2.7 The theory and practice of the church’ social teachings are essential elements of the curriculum.

Standard 7:

An excellent Catholic school has a clearly articulated rigorous curriculum aligned with relevant standards, 21st-century skills, and Gospel values, implemented through effective instruction.

- 7.1 The curriculum adheres to appropriate, delineated standards, and is vertically aligned to ensure that every student successfully completes a rigorous and coherent sequence of academic courses based on the standards and *rooted in Catholic values*.
- 7.2 Standards are adopted across the curriculum and include integration of the religious, spiritual, moral and ethical dimensions of learning in ***all*** subjects.

MATH PHILOSOPHY

Mathematics is integral in Catholic schools since it reflects the order and unity in God's universe. Mathematics contributes to the formation of Christians who can respond wisely and effectively to a changing world. Contemporary society demands mathematical knowledge which requires students to develop their ability to reason and think logically and to discover creative ways of problem-solving. Because of its nature, mathematics can contribute to the development of the whole person by enriching one's life and providing one with a practical tool for daily living.

Toward these ends, students should:

- learn to value mathematics
- learn to reason mathematically
- learn to communicate mathematically
- learn to use technology to investigate and solve problems
- become confident of their mathematical abilities
- become creative mathematical problem solvers

PROFESSIONAL GROWTH

1. Educators are encouraged to read ["Educating to Truth Beauty and Goodness"](#) and reflect on incorporating this Catholic Worldview in their day-to-day vocabulary.
2. Educators are encouraged to research [The National Council for Teachers of Mathematics](#) for the following:
 - Research-based essential Mathematics Teaching Practices.
 - Conditions, structures, and policies necessary to support the Effective Teaching Practices.
 - Implementation strategies for the Common Core State Standards for Mathematics built from *Principles and Standards for School Mathematics* and designed to attain much higher levels of mathematics achievement for each and every student.
 - Unproductive and productive beliefs, obstacles, and key actions that must be understood, acknowledged and addressed by all stakeholders.
 - Strategies for teachers to engage students in mathematical thinking, reasoning, and sense-making to significantly strengthen teaching and learning.
3. Administrators and teachers should review evidence-based instructional practices in mathematics education summarized on the [Kentucky Department of Education website](#).

CATHOLIC INTEGRATION INTO MATHEMATICS

Mathematics is a system that promotes ways of thinking that are essential to growth in Faith and reason.

In a society of relativism, Mathematics demonstrates there are right and wrong answers. Truth exists, and truth is important.

The appreciation of process and logic, allows reason to not only recognize God's existence but also apply this appreciation and skillset to bolster Faith.

The order and proportion that is fundamental to creation leads us to 'wonder and fear of the Lord' which Scripture attests is the first stage of wisdom (proverbs 9:10) as well as a better understanding of how grace builds on nature.

Just as "The Karate Kid's" lesson of "wax on, wax off " enabled mastery, the discipline required with increased complexity fosters virtue needed in life's pursuit of absolute value.

Mathematics appreciates the importance of the role of each factor in relationships, helping all parts to come to the truth.

Mathematics trains us to ask and analyze in order to discover truth.

"Faith and reason are like two wings on which the human spirit rises to the contemplation of truth, and God has placed in the human heart a desire to know truth". (*Fides et Ratio*) In Mathematics and in life, there is an answer and there is beauty and this is good. Mathematics leads us to God. Mathematics allows us to wonder, to hope, and to have confidence in our Faith. Mathematics is part of God's Pedagogy.

The following are examples of Catholic Curricular Standards from the [Cardinal Newman Society](#) as they affect mathematics.

CATHOLIC CURRICULAR STANDARDS AND DISPOSITIONS IN MATHEMATICS K-6

The Catholic School, 1977, #41

<i>General Standards</i>			
CS	M.K6	GS1	Demonstrate the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning.
CS	M.K6	GS2	Develop lines of inquiry (as developmentally appropriate) to understand why things are true and why they are false.
CS	M.K6	GS3	Recognize the power of the human mind as both a gift from God and a reflection of Him in whose image and likeness we are made.
CS	M.K6	GS4	Survey the truths about mathematical objects that are interesting in their own right and independent of human opinions.
<i>Dispositional Standards</i>			
CS	M.K6	DS1	Display a sense of wonder about mathematical relationships as well as confidence in mathematical certitude.
CS	M.K6	DS2	Respond to the beauty, harmony, proportion, radiance, and wholeness present in mathematics.
CS	M.K6	DS3	Show interest in the pursuit of understanding for its own sake.
CS	M.K6	DS4	Exhibit joy at solving difficult mathematical problems and operations.
CS	M.K6	DS5	Show interest in how the mental processes evident within the discipline of mathematics (such as order, perseverance, and logical reasoning) help us with the development of the natural virtues (such as self-discipline and fortitude).

CATHOLIC CURRICULAR STANDARDS AND DISPOSITIONS IN MATHEMATICS 7-12

The Catholic school, 1977, #41

<i>General Standards</i>			
CS	M.712	GS1	Demonstrate the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning in the pursuit of transcendent truths.
CS	M.712	GS2	Develop lines of inquiry to understand why things are true and why they are false.
CS	M.712	GS3	Have faith in the glory and dignity of human reason as both a gift from God and a reflection of Him in whose image and likeness we are made.
CS	M.712	GS4	Explain how mathematics in its reflection of the good, true, and beautiful reveals qualities of being and the presence of God.
<i>Intellectual Standards</i>			
CS	M.712	IS1	Explain the nature of rational discourse and argument and the desirability of precision and deductive certainty which mathematics makes possible and is not possible to the same degree in other disciplines.
CS	M.712	IS2	Demonstrate how sound logical arguments and other processes of mathematics are foundational to its discipline.
CS	M.712	IS3	Recognize how mathematical arguments and processes can be extrapolated to other areas of study, including theology and philosophy.
CS	M.712	IS4	Explain how it is possible to mentally abstract and construct mathematical objects from direct observations of reality and how one's perception of that reality is important to what one is doing (see Appendix F).
CS	M.712	IS5	Recognize personal bias in inquiry and articulate why inquiry should be undertaken in a fair and independent manner.
CS	M.712	IS6	Evaluate the ongoing nature of mathematical inquiry, its inexhaustibility, and its openness to the infinite.
CS	M.712	IS7	Explain man's limitations of understanding and uncovering all mathematical knowledge.
CS	M.712	IS8	Explain how fundamental questions of values, common sense, and religious and human truths and experiences are beyond the scope of mathematical inquiry and its syllogisms.
<i>Dispositional Standards</i>			
CS	M.712	DS1	Display a sense of wonder about mathematical relationships, especially mathematical certitude which is independent of human opinion.

CS	M.712	DS2	Share with others the beauty, harmony, proportion, radiance, and wholeness present in mathematics.
CS	M.712	DS3	Advocate for the pursuit of understanding for its own sake and the intrinsic value or discovery of the true and the beautiful often at the requirement of great sacrifice, discipline, and effort.
CS	M.712	DS4	Exhibit appreciation for the ongoing nature of mathematical inquiry.
CS	M.712	DS5	Exhibit habits of thinking quantitatively and in an orderly manner, especially through immersion in mathematical observations found within creation.
CS	M.712	DS6	Propose how mathematical objects or proofs (such as the golden mean, the Fibonacci numbers, the musical scale, and geometric proofs) suggest divine origin.
CS	M.712	DS7	Exhibit appreciation for the process of discovering meanings and truths existing within the solution of the problem and not just arriving at an answer.
CS	M.712	DS8	Exhibit humility at knowing that as a human being man can only grasp a portion of the truths of the universe.
CS	M.712	DS9	Advance an understanding of the ability of the human intellect to know and the desire of the will to want to know more.

ACADEMIC STANDARDS FOR K-12 MATHEMATICS

The standards for mathematics to be used in the Diocese of Owensboro may be found on the KDE [website](#) which also includes several resources available to teachers in the Diocese of Owensboro, KY.

Automaticity of ‘math facts’ is an expectation. Once taught in the primary grades, the automaticity of math facts is an expectation.

RECOMMENDED BEST PRACTICES IN MATHEMATICS INSTRUCTION

The Diocese of Owensboro makes the following recommendations for mathematics instruction:

1. **Pacing Guide:** Teachers should *use* a pacing guide to ensure all standards are presented. Standards not presented should be sent to the administrator by April 15 to develop a plan to address the deficiency.
2. **Personalized Learning:** It is recommended that teachers use a personalized computer program to fill in gaps and challenge students as needed. If a personalized program does not exist, there should be another system of addressing personalized learning needs.
3. **Objectives:** Each standard should be a learning objective (‘I Can’ statement) that is posted on the board at all grade levels, and referenced at the beginning, middle, and end of the lesson.
4. **Homework:** Regular homework in math is encouraged to encourage greater automaticity. Homework should be posted in a clear and timely manner.
5. **Strategy consensus:** When a math series presents several strategies, a school-wide consensus is recommended to determine which ones will be used in the main lessons and which are saved to use as needed.
6. **Climate:** High expectations, growth mindset vocabulary and Catholic integration should be the climate in a classroom in the Diocese of Owensboro.
7. **Grading:** Grades should accurately reflect mastery of content. There should be enough grades so as not to have the grade skewed through one assignment. Effort and participation should not overly inflate grades.
8. **Tracking:** Schools that track in math, for instance, algebra and pre-algebra classes, should include a variety of criteria for the placement decision. If a parent insists on not following the recommendations of the school, it is recommended that this be documented with the parent's signature.

Appendix A Assessment

Assessment

Assessment is formative for the student, teacher, and curricular development. For students, assessment highlights areas where reteaching and more practice are needed. For teachers, assessment enables proper differentiation, and daily lesson plan adjustments and personal pedagogical growth. For curriculum analysis, assessment highlights text and instruction strengths and weaknesses to inform decision-making.

General assessments

The vision of mathematics education places demands on instruction and forces ongoing analysis of methods by which we chart our students' progress.

Many assessment techniques are available: portfolios, informal questioning, multiple-choice, short-answer, discussion or open-ended questions, structured or open-ended interviews, homework, projects, journals, essays, dramatizations, class presentations, computer programs and more

The mode of assessment can be written, oral, or computer-oriented. Assessment should not rely on a single instrument or technique.

Standardized Assessments

The Diocese of Owensboro requires the use of NWEA MAP testing in elementary grades to be used to affect formative and meaningful personalized instruction. The use of personalized computer programs that can upload student NWEA reports, and develop a personalized plan for re-instruction, practice, and reassessment is strongly recommended.

Appendix B Math Literature

MATH LITERATURE SUGGESTIONS

Kindergarten:

- *What Comes in 2's, 3's, and 4's?* by Suzanne Aker
- *Pattern Bugs* by Trudy Harris
- *Swan Harbor: A Nature Counting Book* by Laura Rankin
- *All for Pie, Pie for All* by David Martin
- *One Stuck Duck* by Phyllis Root
- *The Pig Is in the Pantry, The Cat Is on the Shelf* by Shirley Mozelle
- *Anno's Counting Book* by Mitsumasa Anno (ISBN 0064433150)
- *The Three Little Pigs* by Paul Galdone (ISBN 0064431231)
- *The Very Hungry Caterpillar* by Eric Carle (ISBN 0399208539)
- *Ten Red Apples* by Pat Hutchins (ISBN 0688167974)
- *Afro-Bets* by Cheryl Willis (ISBN 0940975019)
- *The Very Busy Spider* by Eric Carle (ISBN 059412902)
- *My First Look at Numbers* by Toni Ran (ISBN 067905335)
- *And the Cow Said Moo* by Mildred Phillips (ISBN 0688168032)
- *Bear in a Square* by Stella Blackstone (ISBN 1846860553)
- *Shapes* by Margie Burton (ISBN 1892393379)
- *The Shape of Things* by Dayle Ann Dodds (ISBN 0439136662)
- *Afro-Bets* by Cheryl Willis (ISBN 0940975019)
- *Math Counts* by Henry Pluckrose (ISBN 0516454566)
- *Number Munch! A Funny Crunchy Counting Book* by Chuck Reasoner (ISBN 0843136746)
- *Time To...* by Bruce McMillan (ISBN 0688088552)

Grade 1:

- *Dinner at the Panda Palace* by Stephanie Calmenson
- *Rumble Bus* by Larry Dane Brimner
- *How Many Birds?* by Don L. Curry
- *100 Days of School* by Trudy Harris
- *Tail Feather Fun: Counting by Tens* by Michael Dahl
- *The Great Graph Contest* by Loreen Leedy
- *How Do You Know What Time It Is?* by Robert E. Wells
- *Caps for Sale* by Esphyr Slobodkina
- *More Bugs? Less Bugs?* by Don L. Curry
- *When a Line Bends . . . A Shape Begins* by Rhonda Gowler Greene
- *Dos, Tres: One, Two, Three* by Pat Mora (ISBN 0618054685)

- *A Triangle for Adaora* by Ifeoma Onyefulu (ISBN 1845077385)
- *Round is a Mooncake* by Roseanne Thong (ISBN 0811826767)
- *Circles and Squares Everywhere!* by Max Grover (ISBN 0152000917)
- *So Many Circles, So Many Squares* by Tana Hoban (ISBN 0688151655)
- *Unos, Dos, Tres: One, Two, Three* by Pat Mora (ISBN 0618054685)
- *A Triangle for Adaora* by Ifeoma Onyefulu (ISBN 1845077385)
- *Round is a Mooncake* by Roseanne Thong (ISBN 0811826767)
- *Circles and Squares Everywhere!* by Max Grover (ISBN 0152000917)
- *Hopscotch Around the World* by Mary Lankford (ISBN 0688147453)
- *Emeka's Gift: An African Counting Story* by Ifeoma Onyefulu (ISBN 0711214476)
- *Feast for Ten* by Cathryn Falwell (ISBN 0547064314)
- *I Knew Two Who Said Moo* by Judi Barrett (ISBN 068985935X)
- *One Little Mouse* by Dori Chaconas (ISBN 0670889474)
- *Counting Our Way to Maine* by Maggie Smith (ISBN 0892727756)
- *One Moose, Twenty Mice* by Clare Beaton (ISBN 1841481297)
- *Count on Your Fingers African Style* by Claudia Zaslavsky (ISBN 0863162509)
- *I Spy Two Eyes* by Lucy Micklethwait (ISBN 0688126405)
- *Turtle Splash! Countdown at the Pond* by Cathryn Falwell (ISBN 0061429279)
- *Ten Flashing Fireflies* by Philemon Sturges (ISBN 1558586741)
- *Elevator Magic* by Stuart Murphy (ISBN 0064467090)
- *Animals on Board* by Stuart Murphy (ISBN 0064467163)
- *Too Many Dinosaurs* by Bob Barner (ISBN 0553375660)
- *Math Fables: Lessons That Count* by Greg Tang (ISBN 0439754984)
- *Domino Addition* by Lynette Long (ISBN 0881063525)
- *Adding It Up at the Zoo* by Judy Nayer (ISBN 0736812784)
- *Subtraction Fun* by Betsy Franco (ISBN 0736812873)
- *Spunky Monkeys on Parade* by Stuart Murphy (ISBN 0064467279)
- *Two Ways to Count to Ten* by Ruby Dee (ISBN 0805013148)
- *Underwater Counting: Even Numbers* by Jerry Pallotta (ISBN 0881068004)
- *One Guinea Pig is Not Enough* by Kate Duke (ISBN 014056814X)
- *Mission: Addition* by Loreen Leedy (ISBN 0823414124)
- *A Chair for My Mother* by Vera Williams (ISBN 0688040748)
- *My Rows and Piles of Coins* by Tololwa Mollel (ISBN 0395751861)
- *Picking Peas for a Penny* by Angela Medearis (ISBN 0938349554)
- *Mama Bear* by Chyng Feng Sun (ISBN 0395634121)
- *One Hundred Is a Family* by Pam Ryan (ISBN 078681120X)
- *Chicka Chicka 1, 2, 3* by Bill Martin (ISBN 0689858817)
- *Many Ways to 100* by Betsy Franco (ISBN 0736870326)
- *The Best Vacation Ever* by Stuart Murphy (ISBN 0064467066)
- *The Birth-Order Blues* by Joan Drescher (ISBN 0670836214)
- *Lemonade for Sale* by Stuart Murphy (ISBN 0064467155)
- *Graph It* by Lisa Trumbauer (ISBN 0736812822)

- *A Cloak for the Dreamer* by Aileen Friedman (ISBN 0590489879)
- *Lots and Lots of Zebra Stripes* by Stephen Swinburne (ISBN 1563979802)
- *The Seasons Sewn* by Ann Whitford Paul (ISBN 0152021078)
- *I Spy Shapes in Art* by Lucy Micklethwait (ISBN 0060731931)
- *Cubes, Cones, Cylinders, & Spheres* by Tana Hoban (ISBN 0688153259)
- *Two of Everything: A Chinese Folktale* by Lily Toy Hong (ISBN 0807581577)
- *Anno's Magic Seeds* by Mitsumasa Anno (ISBN 0698116186)
- *Kites: Magic Wishes That Fly Up to the Sky* by Demi (ISBN 0375810080)
- *Less Than Half! More Than Whole* by Kathleen Lacapa (ISBN 0873585925)
- *The Turtle and the Monkey* by Joanna Galdone (ISBN 0395544254)
- *Give Me Half!* by Stuart Murphy (ISBN 0064467015)
- *Eating Fractions* by Bruce McMillan (ISBN 0590437712)
- *Tell Me What the Time Is* by Shirley Willis (ISBN 0531159795)
- *Somewhere in the World Right Now* by Stacey Schuett (ISBN 0679885498)
- *Game Time!* by Stuart Murphy (ISBN 0064467325)
- *The Grapes of Math* by Greg Tang (ISBN 0439598400)
- *The Smushy Bus* by Leslie Helakoski (ISBN 0761319174)
- *Fifty-Five Grandmas and a Llama* by Lynn Manuel (ISBN 0879057858)
- *The Coin Counting Book* by Rozanne Lanczak (ISBN 0881063258)

Grade 2:

- *Domino Addition* by Lynette Long
- *Keep Your Distance!* by Gail Herman
- *Count on Pablo* by Barbara deRubertis
- *A Cloak for a Dreamer* by Aileen Friedman
- *A Place for Zero: A Math Adventure* by Angeline Sparanga LoPresti
- *How Do You Know What Time It Is?* by Robert E. Wells
- *Fair is Fair!* by Jennifer Dussling
- *A Cloak for the Dreamer* by Aileen Friedman
- *Henry Hikes to Fitchburg* by D.B. Johnson
- *Patterns in Nature* by Jennifer Rozines Roy and Gregory Roy
- *One Grain of Rice: A Mathematical Folktale* by Demi
- *Measuring Penny* by Loreen Leedy
- *The Grapes of Math* by Greg Tang
- *Henry Hikes to Fitchburg* by D.B. Johnson
- *Oliver's Party* by Jenny Fry (ISBN 0764154614)
- *Jelly Beans for Sale* by Bruce McMillan (ISBN 0590865968)
- *Racing Around* by Stuart Reed (ISBN 0064462440)
- *Even Steven and Odd Todd* by Kathryn Cristaldi (ISBN 0590227155)
- *Shapes (Slide 'n Seek)* by Chuck Murphy (ISBN 0689844775)
- *Shapes, Shapes, Shapes* by Tana Hoban (ISBN 0688147402)

- *Hippos Go Berserk* by Sandra Boynton (ISBN 0689808180)
- *Clocks and More Clocks* by Pat Hutchins (ISBN 0689717697)
- *My Grandmother's Clock* by Geraldine McGaughrean (ISBN 0618216956)
- *Tiger Math: Learning to Graph a Baby Tiger* by Ann Whitehead Nagda (ISBN 0805071610)
- *Tightwad Tod* by Daphne Skinner (ISBN 1575651095)
- *100th Day Worries* by Margery Cuyler (ISBN 1416907893)
- *Pigs Will Be Pigs: Fun With Math and Money* by Sharon McGinley (ISBN 0689812194)
- *Earth Day-Hooray* by Stuart Murphy (ISBN 0060001292)
- *The 329th Friend* by Marjorie Weinman (ISBN 0590315487)
- *Hannah's Collections* by Marthe Jocelyn (ISBN 0887766909)
- *Tell Me How Far It Is* by Shirley Willis (ISBN 0531159750)
- *Millions to Measure* by David Schwartz (ISBN 0060848064)
- *Each Orange Had 8 Slices: A Counting Book* by Paul Giaganti (ISBN 0688139858)
- *The Door Bell Rang* by Pat Hutchins (ISBN 0874998030)
- *Let's Fly a Kite* by Stuart Murphy (ISBN 0064467377)

Grade 3:

- *How Much, How Many, How Far, How Heavy, How Long, How Tall Is 1000?* by Helen Nolan
- *Grandfather Tang's Story: A Tale Told with Tangrams* by Ann Tompert
- *One Less Fish* by Kim Michelle Toft and Allen Sheather
- *Sam Johnson and the Blue Ribbon Quilt* by Lisa Campbell Ernst
- *Amanda Bean's Amazing Dream: A Mathematical Story* by Cindy Neuschwander
- *One Hundred Hungry Ants* by Elinor J. Pinczes
- *A Grain of Rice* by Helena Clare Pittman
- *Building with Shapes* by Rebecca Weber
- *The Doorbell Rang* by Pat Hutchins
- *Jumanji* by Chris Van Allsburg
- *Fraction Fun* by David A. Adler
- *Building with Shapes* by Rebecca Weber
- *Penguins at Home: Gentoos of Antarctica* by Bruce McMillan
- *Alice Ramsey's Grand Adventure* by Don Brown
- *A Bundle of Beans* by Mark Steele (ISBN 0395616208)
- *The Greatest Gymnast of All* by Stuart Murphy (ISBN 0007619351)
- *One Grain of Rice* by Demi (ISBN 0590939980)
- *Amanda Bean's Amazing Dream* by Cindy Neuschwander (ISBN 0590300124)
- *Spaghetti and Meatballs for All: A Mathematical Story* by Marilyn Burns (ISBN 0545044455)
- *Sea Squares* by Joy N. Hulme (ISBN 1562825201)
- *Secret Treasures and Mathematical Measures: Adventures in Measuring: Time, Temperature, Length, Weight, Volume, Angles, Shapes, and Money* by Chris Kensler (ISBN 0743235259)
- *The Big Orange Splot* by Daniel Manus Pinkwater (ISBN 0590445108)
- *Jump, Kangaroo, Jump* by Stuart Murphy (ISBN 0064467216)

- *Mega-Fun Fractions* by Martin Lee (ISBN 0439288446)
- *The Fraction Family Heads West* by Marti Dryk (ISBN 0965891219)
- *Piece=Part=Portion: Fractions=Decimals=Percents* by Scott Gifford (ISBN 1582462615)
- *A Remainder of One: A Mathematical Folktale* by Elinor J. Pinczes (ISBN 0618250776)
- *The Great Divide* by Dayle Ann Dodds (ISBN 0763615925)
- *Room for Ripley* by Stuart Murphy (ISBN 0395665602)
- *How Tall, How Short, How Faraway?* (ISBN 0823413751)

Grade 4:

- *Amanda Bean's Amazing Dream: A Mathematical Story* by Cindy Neuschwander
- *Anno's Mysterious Multiplying Jar* by Masaichiro and Mitsumasa Anno
- *Grandfather Tang's Story: A Tale Told with Tangrams* by Ann Tompert
- *Sold! A Mathematics Adventure* by Nathan Zimelman
- *A Fly on the Ceiling: A Math Reader* by Julie Glass
- *Rabbits Rabbits Everywhere: A Fibonacci Tale* by Ann McCallum
- *The Math Chef* by Joan D'Amico and Karen Eich Drummond
- *A Remainder of One* by Elinor J. Pinczes
- *Tiger Math: Learning to Graph from a Baby Tiger* by Ann Whitehead Nagda and Cindy Bickel
- *Fraction Action* by Loreen Leedy
- *Building with Shapes* by Rebecca Weber
- *Pigs Will Be Pigs: Fun with Math and Money* by Amy Axelrod
- *Hottest, Coldest, Highest, Deepest* by Steve Jenkins
- *Arithme-Tickle: An Even Number of Odd Riddle-Rhymes* by Patrick Lewis (ISBN 0152058487)
- *The Kings Chessboard* by David Birch (ISBN 0140548808)
- *The Great Divide: A Mathematical Marathon* by Dayle Ann Dodds (ISBN 0763615925)
- *The Math Chef* by Joan D'Amico and Karen Eich Drummond (ISBN 0471138136)
- *Sir Cumference and the First Round Table: A Math Adventure* by Cindy Neuschwander (ISBN 1570911606)
- *Careless at the Carnival: Junior Discovers Spending* by Dave Ramsey (ISBN 0972632317)

Grade 5/6:

- *Anno's Mysterious Multiplying Jar* by Masaichiro and Mitsumasa Anno
- *O, Say Can You See?* by Sheila Keenan
- *Building with Shapes* by Rebecca Weber
- *Polar Bear Math: Learning About Fractions from Klondike and Snow* by Ann Whitehead Nagda and Cindy Bickel
- *Sir Cumference and the Great Knight of Angleland: A Math Adventure* by Cindy Neuschwander
- *Fraction Action* by Loreen Leedy
- *The Math Chef* by Joan D'Amico and Karen Eich Drummond
- *The Amazing Impossible Erie Canal* by Cheryl Harness
- *Tiger Math: Learning to Graph from a Baby Tiger* by Ann Whitehead Nagda and Cindy Bickel

- *Go, Fractions!* by Judith Bauer Stamper
- *Find the Constellations* by H.A. Rey
- *Piece = Part = Portion: Fractions = Decimals = Percents* by Scott Gifford
- *The Best of Times: Math Strategies that Multiply* by Greg Tang
- *Math-terpieces: The Art of Problem Solving* by Greg Tang (ISBN 043943883)
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