Tips to Help Your Child With Math

Marshall Public Schools
District #413 develops the potential of each learner for success in a changing world.

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"We know from research that children are more likely to be successful learners of any subject when parents actively support their learning. Today, helping children to make the effort to learn, appreciate and master mathematics is more important than ever. Our increasingly technological world demands strong skills in mathematics, not only in the workforce but also in everyday life, and these demands will only increase over the lifetimes of our children.”

“To ensure that our children are ready for high school and on track for success in college and the workforce, parents must become involved early—and stay involved over the school years—to reinforce children’s skills in and positive attitudes toward mathematics.”

“What kind of attitude do you have toward math? Do you believe that math skills are important job and life skills? Do you see math as useful in everyday life? Or do you dread doing things that involve math—figuring out how much new carpet you’ll need, balancing the checkbook, reading the technical manual that came with the DVD player? How you answer these questions indicates how you may be influencing your child’s attitudes toward math—and how he* approaches learning math.”

“Although parents can be a positive force in helping children learn math, they also can undermine their children’s math ability and attitudes by saying things such as: “Math is hard,” or “I’m not surprised you don’t do well in math, I didn’t like math either when I was in school,” or “I wasn’t very good in math and I’m a success, so don’t worry about doing well.” Although you can’t make your child like math, you can encourage her to do so, and you can take steps to ensure that she learns to appreciate its value both in her everyday life and in preparing for her future. You might point out to her how fortunate she is to have the opportunity to learn mathematics today—when mathematics knowledge can open the door to so many interesting and exciting possibilities.”

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“If America is going to stay the best place to do business in the world, we must have the best math students.”
—Margaret Spellings  
Former U.S. Secretary of Education

“Do not worry about your difficulties in mathematics. I assure you that mine are greater.”
—Albert Einstein
“In everyday interactions with children, there are many things that parents can do—and do without lecturing or applying pressure—to help children learn to solve problems, to communicate mathematically and to demonstrate reasoning abilities.” (1)

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Five Green and Speckled Frogs

Five Green and Speckled Frogs
(Hold five fingers on top of your other arm (log)
Sat on a speckled log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool
Where it was nice and cool
Now there are Four green speckled frogs
(Shake up four fingers)

Four Green and Speckled Frogs
Sat on a speckled log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool
Where it was nice and cool
Now there are Three green speckled frogs

Three Green and Speckled Frogs
Sat on a speckled log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool
Where it was nice and cool
Now there are Two green speckled frogs

Two Green and Speckled Frogs
Sat on a speckled log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool
Where it was nice and cool
Now there is one green speckled frog

One Green and Speckled Frog
Sat on a speckled log
Eating the most delicious bugs. Yum! Yum!
It jumped into the pool
Where it was nice and cool
Then there were no more speckled frogs
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Encourage your child to separate toys or other objects into groups. For example, you could ask your child to separate blue toy cars from red cars.

Use toys or other objects to teach your child the concepts big and little as well as more and less. For instance, let your child play with plastic cups in the bathtub and talk about how some cups have more water in them and some have less.

Practice nursery rhymes with your child. Many rhymes also have counting built in, such as “Five Green and Speckled Frogs.”

Count steps while walking with your child on the sidewalk or up and down stairways. You can add patterns to the walks by stating “Take 2 small steps followed by 3 large steps.”

While taking a familiar car trip, talk about how many towns are left before the destination or how many stop signs you encountered on your trip.

Count out blocks with your child and then have your child stack the blocks in a tower.
“Kids are never too young to start learning math skills. Counting, sorting, and even working puzzles are all important first steps to a solid learning.”


**Weigh + measure your child and tell them the results. Record the results on a growth chart.**

**Use terms such as lighter or heavier, taller or shorter when interacting in play activities with your child.**

**Read stories that involve groups of characters or people, such as “The Three Little Pigs” and “Goldilocks and the Three Bears.”**

**Reinforce time concepts by stating meal times bedtimes while showing your child the clock. Use the terms minutes and hours when doing activities. For example, “We can read stories for 20 minutes before dinner is ready.”**

**Start to develop money skills through games. For example, you could roll dice and give your child pennies for each dot. When your child has a group of five pennies, replace with a nickel. Expand to include dimes and quarters through additional practice.**

**Visit: www.MNParentsKNow.info**

For more information on how young children develop and ideas to help your child learn and grow.

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“Children need to have math experiences that incorporate their senses, that require them to experiment and make observations, and that allow them time to investigate a topic further. Children learn at their own rate and frequently return to former tasks and try solving them in new ways.”

“If America is going to stay the best place to do business in the world, we must have the best math students.”
— Margaret Spellings
Former U.S. Secretary of Education

Tips to Help Your Child With Math

Have your child classify and sort toys into piles and have your child explain why the piles are organized in that manner.

Teach your child important numbers and information such as: his or her birthday, your telephone number(s), and your address.

Using newspapers or magazines, have your child highlight numbers that are used in the articles or on the pages. For a project, have students cut out pictures that have 1, 2, 3, 4 items or groups to form into their very own book of numbers/objects.

Play “Find the number” games while in the car. Use signs, license plates, and billboards as references.

Ask your child to explain/show what he or she learned in math class today. Letting children take the teacher role gives them the chance to practice new skills and to clarify their thinking on a lesson.

Read storybooks together that help increase your child’s interest in math. For example, read Leo Lionni’s *Inch by Inch*, the story of an inchworm who uses math to save his life. After you read the story, measure items around the house with your child.

A List of Common Vocabulary terms for grades K-12 can be found on the website: [Www.spellingcity.com/math-vocabulary.html](http://Www.spellingcity.com/math-vocabulary.html)

Some examples:
- Alike, different
- Estimate, solve
- Above, below
- Less than, more than
- Gallon, pound
- Second, hour
- Even, odd
Fun Math Fact: If your heart beats once every second, it would take about 11 and a half days to beat a million times. It would take about 32 years to beat a billion times!

Teach your child math by teaching him or her about money. Children between six and ten should be able to make change, understand that things cost money, and start developing responsibility of their own money.

Find and play games online that are appropriate for the age-level and skills being discussed in your child’s math class. Example sites include: www.pbskids.org, www.coolmath.com, and www.figurethis.org.

The Apple App Store has many free or low-cost apps for mathematics on the i-phone, i-pod, and i-pad. Similar apps are available on other smart phones or tablets as well. Search for keywords such as “math” or “addition.” Be sure to read over the ratings comments prior to purchasing any apps.

Roll dice and have your child count out the number of dots with beans or coins. You can expand to the concepts of addition or subtraction with two dice while using the beans to help count and take away.

Create a calendar with your child with pictures of items that are important to your child so that you can use together to learn the days of the week and months of the year. Each day count out the days of the month. For example, if today is the 17th, you can count to 17 together.
Tips to Help Your Child With Math

Helping children practice number recognition can take many forms. Encourage them to listen for common expressions that include numbers and number words, such as: “Two’s company, three’s a crowd”; “Two can play that game”; or “Three strikes and you’re out.”

Special points of interest:

- Problems Can Be Solved in Different Ways Encouraging more than one way to solve a problem improves problem solving skills.
- Wrong Answers Sometimes Can Be Useful.
- Being Able to Do Mathematics in Your Head Is Important.
- Being able to explain how he or she solved a math problem increases comprehension and deep thinking skills.

Show children that you use math skills by “thinking out loud” as you do things such as measuring distances on a map: “Let’s see, it’s five miles to Jackson and then three miles from Jackson to Albany, so that’s a total of eight miles. It’s two miles from Jackson to Corbin, so that’s a total of seven miles. Albany is further away from Jackson than Corbin is.”

Make a point to praise your child’s efforts in math. Don’t focus on mistakes. Offer praise every time your child finishes an assignment and every time he or she figures out a difficult problem.

Talk to a teacher anytime you have questions or concerns about your child’s math skills. Ask for suggestions on what to work on at home to help.

Use flashcards to practice basic skills that your child is working on in class. www.mathcafe.com has a menu to build flashcards by grade level.

Find and play games online that are appropriate for the age-level and skills being discussed in your child’s math class. Example sites include: www.pbskids.org, www.coolmath.com, www.figurethis.org.

The Apple App Store has many free or low-cost apps for mathematics on the i-phone, i-pod, and i-pad. Similar apps are available on other smart phones or tablets as well. Search for keywords such as “math” or “multiplication.” Be sure to read over the ratings and comments prior to purchasing any app.

Offer to visit your child’s classroom during math time. This will show your child that you value mathematics and believe learning math skills is important.
“The essence of mathematics is not to make simple things complicated, but to make complicated things simple.” ~S. Gudder

Buy a few inexpensive, age-appropriate math workbooks for your child to use at home. You may not think children would sit around and do math problems for fun, but some do.

Play math-related games with your child. Some examples include: Dominoes, Yahtzee, Uno, Monopoly, and other card games.

When driving, ask your child basic facts questions or have worksheets pre-printed for your child to work on during the ride. www.mathfactcafe.com has some pre-made worksheets or build your own custom sets.

Have your child help you measure ingredients while you cook. Make a 1/2 batch or double batch where your child will have to figure new quantities.

A Brief View of Key
MN Academic Standards
3rd Grade
- Compare and Order Numbers to 100,000.
- Add & Subtract Multi-Digit Numbers.
- Represent Multiplication and Division in Various Ways
- Understand the Meaning and Uses of Fractions.
- Use time, money, and temperature to solve problems.
- Use various tools to measure.
- Create and Describe Common Geometric Shapes.

A Brief View of Key
MN Academic Standards
4th Grade
- Demonstrate Mastery of Basic Multiplication and Division Facts.
- Represent and Compare Fractions and Decimals.
- Use Input-Output rules, Tables and Charts to Represent Patterns and Relationships.
- Name, Describe, Classify and Sketch Polygons.
- Compare, Measure and Classify Angles
- Find the Area of Geometric Figures.
- Use Translations, Reflections and Rotations for Congruence and Similarity.
- Use Tables, Bar Graphs, Timelines, and Venn Diagrams to Display Data Sets.

Learning to use calculators is important for children—they’re part of everyday life. However, they are no replacement for strong arithmetic. Children should not be encouraged to rely too heavily on calculators.
Tips to Help Your Child With Math

Even if your child does not plan to pursue a career in which math is important, learning math is still important because it teaches how to think in a disciplined way.

A Brief View of Key MN Academic Standards

5th grade
- Divide Multi-digit Numbers.
- Add & Subtract Fractions and Decimals.
- Use Tables & Graphs to Solve Problems.
- Use Geometric Formulas to Solve Problems

6th Grade
- Read, Write, Represent and Compare Rational Numbers.
- Multiply and Divide Decimals and Fractions.
- Use Ratios to Solve Problems.
- Calculate Perimeter, Area and Surface Area in Story Problems.
- Use Probability so Solve Real-World Problems.

Asking children to explain in their own words how they arrive at a solution to a problem—including how they used a calculator—encourages them to get into the habit of thinking and reasoning mathematically.

Schedule a time and provide a quiet environment for your child to work only on math homework. Restrict the use of electronics during this time.

Offer to visit your child’s math class to talk about how you use math in your workplace or daily living.

Don’t be afraid if you don’t understand what your child is working on in class. Often, asking your child questions such as, “Have you looked back at your notes?” or “Have you looked at a similar example problem in your book?” will guide your child to think back to what he or she learned in class. If you need additional assistance, contact your child’s teacher or visit www.math.com/parents.html for review lessons.

The Apple App Store has many free or low-cost apps for mathematics on the iPhone, iPod, and iPad. Similar apps are available on other smart phones or tablets as well. Search for keywords such as “math” or “multiplication.” Be sure to read over the ratings and comments prior to purchasing any app.
“Arithmetic is where the answer is right and everything is nice and you can look out of the window and see the blue sky - or the answer is wrong and you have to start over and try again and see how it comes out this time. “ ~Carl Sandburg

Students need to learn how to read a math textbook effectively, and this task is often overlooked and takes practice. Math textbooks may be set up entirely different than any other text. Important ideas are usually bold, italicized, put into tables or other graphics, or highlighted. Make a record of how these are presented and focus attention on learning the vocabulary necessary for proper mathematics communication.

Mathematics is sequential. Concepts taught now will be lay an important foundation for future success. Ensure that your child is doing his or her best to master the material. This will require monitoring on your part.

Use the textbook website: my.hrw.com to gain access to: many extra resources including:

- Textbook online
- Video tutorials for all examples
- Interactive Quizzes

Encourage your child how to look through examples prior to working homework sets. Likewise, if there is a homework problem that he or she does not understand, encourage your child to look through the examples along with the class notes for tips.

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A Brief View of Key
MN Academic Standards

7th Grade
- Read, Write, Represent, Compare and Calculate with Positive and Negative Rational Numbers.
- Use Proportions to Solve Problems.
- Use Order of Operations to Evaluate Expressions.
- Represent Real-World and Mathematical Situations using Equations with Variables
- Analyze the Effect of Change of Scale on the Attributes of Two-Dimensional Figures.
- Display and Interpret Data in a Variety of Ways.
- Calculate Probabilities to Solve Problems.

8th Grade
- Understand the Concept of Functions. Distinguish between Linear and Non-Linear Functions.
- Use Tables, Graphs and Equations to represent Linear Functions.
- Solve Systems of Equations.
- Represent and Solve Equations and Inequalities for Real-World Situations
- Solve Problems Involving Right Triangles.
- Solve Problems Involving Parallel and Perpendicular Lines.
- Interpret Data using Scatterplots and Approximate a Line of Best Fit.
Tips to Help Your Child With Math

High School

Even if your child does not plan to pursue a career in which he or she will use math, learning it is still important because math teaches how to solve problems and how to think logically.

It has been estimated that 85% of the jobs that your children will have after post-secondary opportunities have not yet been created. Many of these jobs are being created through the advancements in technology. The study of mathematics will help prepare your child for future opportunities.

Have a positive attitude toward math. If math was difficult or easy for you, be careful with your word choices when interacting with your child. Your child might think they inherited the same ability. Instead, try to encourage a good work ethic and perseverance.

Talk with your child about money skills. You can be the most valuable resource your child has. Talk about budgets, investing, taxes, saving, and debt.

Offer to visit your child’s math class to talk about how you use math in your workplace or daily living.

Be sure your child knows how to operate his or her calculator effectively, especially if it is a graphing calculator.

Don’t be afraid if you don’t understand what your child is working on in class. Often, asking your child questions such as, “Have you looked back at your notes?” or “Have you looked at a similar example problem in your book?” will guide your child to think back to what he or she learned in class. If you need additional assistance, contact your child’s teacher or visit www.math.com/parents.html for review lessons.

The Apple App Store has many free or low-cost apps for mathematics on the i-phone, i-pod, and i-pad. Similar apps are available on other smart phones or tablets as well. Search for keywords such as “math” or “multiplication.” Be sure to read over the ratings and comments prior to purchasing any app.
Mathematics is sequential. Concepts taught now will be lay an important foundation for future success. Ensure that your child is doing his or her best to master the material. This will require monitoring on your part.

Encourage your child to take as many math classes as possible and to take the highest level for which he or she qualifies. One of the highest predictors of students who start and finish a 4-year degree is the highest level math class taken in high school.

For teens who suffer from math anxiety and test panic, the math.com website offers this advice: “Work around the panic by finding something on the test that you can do. Gain confidence and then go back and finish the rest of the problems. Keep going on the ones you can do, then go back and try the others. You might be surprised to find that you can now tackle them with ease.” Your teen can find more tips at www.math.com/students/advice/anxiety.html.

Encourage your child to find a math study partner.

Use the textbook website: my.hrw.com to gain access to: many extra resources including:

- Textbook online
- Video tutorials for all examples
- Interactive Quizzes

Utilize the website www.hotmath.com for worked out solutions to the odd problems in many of the High School Textbooks.
References and Resources


Websites to Visit:
- my.hrw.com
- www.hotmath.com
- www.aaamath.com
- www.coolmath.com
- www.funbrain.com
- www.mathgoodies.com
- www.webmath.com
- www.brainpop.com
- www.visualfractions.com
- http://illuminations.nctm.org/
- http://www.kenken.com/
- http://www.ixl.com/
- http://mathsisfun.com/
- http://www.figurethis.org/index.html
- http://www.mathplayground.com/
- http://www.math-play.com
- http://www.studyisland.com
- http://www.aplusmath.com/