

Everything You've Always Wanted To Know About Helping Your Kids With Math But Were Afraid To Ask

This handout provides suggestions for helping your child with homework and the development of organizational skills. You can teach him or her to value mathematics, and implement ways to make mathematics a part of family activities.



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Math Resources Website:
www.themathofkaan.com

Helping Your Child with Homework

One goal in helping children learn is to assist them in figuring out as much as they can for themselves (that is, constructing meaning). You can help by asking questions that guide without telling them what to do. Good questions and good listening will help children make sense of mathematics, build self-confidence, and encourage mathematical thinking and communication. A good question expands a problem and supports different ways of thinking about it. Here are some questions you might try; notice that none of them can be answered with a simple "yes" or "no."

Getting Started

- What do you need to find out?
- What do you need to know?
- How can you get the information?
- Where can you begin?
- What terms do you understand or not understand?
- Have you solved similar problems that would help?

While Working on a Problem

- How can you organize the information?
- Can you make a drawing (model) to explain your thinking?
- Are there other possibilities?
- What would happen if...?
- Can you describe an approach (strategy) you can use to solve this?
- What do you need to do next?
- Do you see any patterns or relationships that will help solve this?
- How does this relate to ...?
- Can you make a prediction?
- What assumptions are you making?

Reflecting About the Solution

- How do you know your solution (conclusion) is reasonable?
- How did you arrive at your answer?
- How can you convince me your answer makes sense?
- What did you try that did not work?
- Has the question been answered?
- Can the explanation be made clearer?

Responding-Helping Your Child Clarify and Extend His or Her Thinking

- Tell me more.
- Can you explain it in a different way?
- Is there another possibility or strategy that would work?
- Help me understand this part.

Helping Your Child Get Organized

An important part of being successful in mathematics (or in other disciplines) is taking responsibility for one's own learning. In DMS math classes students are expected to use a notebook to record class discussions on problems and mathematical reflections. Students are also expected to develop and record a vocabulary list as well as any homework and assessment items. The notebook serves as a resource for learning for the student throughout the year. The following suggestions can help you encourage good organizational and study habits.

- Provide a study place. If possible, have these materials readily available: scientific calculator for 6th grade, graphing calculator for 7th and 8th grade; graph paper and notebook paper; ruler with both metric and standard units; dictionary.
- Many children need assistance in organizing and maintaining a notebook. Help them develop a system for organizing and maintaining notebook and notes.
- Encourage your child to use his/her agenda to record assignments, as well as for keeping track of progress. Check to make sure that the agenda is being used consistently and appropriately.
- Help your child develop a system for taking meaningful notes. Frequently, note taking is taught during class, so it may just be a matter of seeing whether your child is taking and using notes.
- Encourage your child to identify study buddies or another math student he or she can call to work with on assignments, get clarification, find out about makeup work, and so on. Some parents/guardians have established study teams and times so that students have planned opportunities to study together after school. There are activity busses most Tuesdays, Wednesdays, and Thursdays after school so that DMS students can attend the Back On Track supervised study sessions.
- Encourage and expect your child to get work done on time, to stay caught up, to get help in a timely manner, and to correct errors in work. You may want to help your child go over incorrect or incomplete work and talk about how the work could be improved.
- It is generally expected that middle school students know the basic addition, subtraction, multiplication, and division facts as well as whole number computation. If your child is not proficient with these skills, help him or her master the needed skills.

Helping Your Child Develop Positive Attitudes About Math

Most parents/guardians enjoy reading to their young children. It sets an example, establishes a positive attitude toward reading, and develops a value that reading is both fun and important. Similarly, the parent/guardian's attitude and approach to math at home impacts the importance and value that students place on learning mathematics in school.

Two important goals for all students are that (1) they learn to value mathematics and (2) they become confident in their ability to do mathematics. Parents/guardians can help children develop a "can do" disposition toward math by nurturing their children's natural curiosity and providing support and encouragement.

How Do YOU Feel About Math?

Your feelings about mathematics will have an impact on how your child perceives and values mathematics, as well as influencing his or her view of himself or herself as a mathematician. Take a moment to think about these questions:

- Did you like math in school?
- Do you think everyone can learn math?
- Do you believe girls are as good at math as boys?
- Is it just as important for girls to learn math as boys?
- Do you think of math as important and useful in everyday life?
- Do you believe that most jobs today require math skills?
- How are your attitudes about math impacting your child's attitudes?

In your interactions with your child, try to portray positive images and values about mathematics.

Doing Math at Home with Your Child

The following suggestions provide some practical ways to help your child learn mathematics.

- Math is everywhere, yet many children don't see it. Look for ways to point out and reinforce math skills at home. For example:
 - Talk about how you use math at work or in the home.
 - Involve your child in tasks that require computing, measuring, estimating, building, following directions, problem solving and reasoning.
 - Look for activities that require your child to use his or her math skills such as building scale models, cooking, planning trips, and playing logic games.
 - Encourage your child to participate in games and activities that teach and/or reinforce mathematics and thinking. For example, look for games that . . .
 - require and develop skill with mental computation and estimation.
 - require players to use their math skills.
 - involve the development of strategies.
 - require players to think about the probability of certain events occurring.
 - require the use of spatial visualization skills.
 - require logical thinking.
 - When you see articles that have data that might interest your child, such as sports statistics, data on teenage smoking, or facts about natural disasters, share them and talk about what the numbers mean.
 - Share your problem-solving strategies and techniques, mental computation strategies, and estimation strategies. Have your child teach you some. Work on the same problem, then compare strategies as well as answers.
 - Invite your child to explain what was learned in math class or have him or her teach it to you. This type of interaction provides an opportunity for your child to help clarify his or her thinking, to practice new skills, and to practice communicating mathematically.
 - If your child has access to a computer, look for software that reinforces and teaches math concepts. Help your child learn to use math utilities such as spreadsheets and graphing programs.

Check out this great math resource:

www.themathofkaan.com

Click on "Parents" or "Kids" and go exploring from there! You'll find lots of math information and fun practice sites.

The above ideas were taken from the Administrative Notebook for Middle School Mathematics, Plano Independent School District, Plano, Texas, and adapted for DMS use.

Source: <http://www.math.msu.edu/cmp/ImplementingCMP/Support/HelpingYourChild.htm>