How To Help Your Child With Mathematics

The study of mathematics has changed significantly since we were in school. Part of the reason for that is that technology has allowed us to focus less on computational skills and more on applications and problem solving. Another reason for the change is more mathematically based: over the course of the past twenty years, new mathematical discoveries and constructs have been developed and incorporated into both middle school and high school mathematics programs.

Finally, the traditional approach to mathematics has been to learn the steps, formulas, and algorithms, *without necessarily understanding the underlying mathematics*. This has led to the development of many people who believe that mathematics is not relevant to “real life” or that it is acceptable to be “bad at math” because they never really understood it. **The focus of Common Core is for students to learn the underlying mathematics.** As a result, some of the procedures and methods that your students learn may seem inefficient (they are, at first), but will eventually become nearly identical to the methods you may have learned.

Please note that our textbooks do not explain how to answer the questions (there are few, if any, sample problems.) Your child should bring home a few problems each night to complete, based upon the day’s assignment.

# How You Can Help

## Notes

1. Encourage your child to take good notes.
2. At a minimum, they should copy the information that is written, projected, or drawn on the board.
3. In addition, they should write down questions that they have (and the answers), or anything else that would help them to remember how the problems were solved.
4. **Have your child explain his/her notes to you.**

## Homework

1. Students should be able to show what they did and explain why they did it.
2. Explain how they know (or why they think) their answer is correct.
3. Write down any questions that they have (or encountered while doing their homework).

**When students run into trouble with their homework**

1. Ask your child to explain the question. What is it asking?
2. Ask your child to “frame” the answer. What will the answer look like?
3. Ask your child to read the pages carefully both before and after that particular question. Sometimes, even the other questions may offer hints for how to solve a particular problem (or what the question is asking).

## Working together with other students

1. I encourage students to discuss their homework with their colleagues – especially if they are having difficulty, however, it is important to note that they should NEVER give, loan, show, or transmit their answers to other students.
2. They may discuss aspects of a question or solution. They may even discuss answers, but each student should do his or her own explanations individually.

## Extra Help

 Check with your teacher to arrange time for additional help.

**Internet:**

 The Internet also offers several different locations for mathematics help. When searching the internet for assistance, please bear a few things in mind:

1. The more specific mathematics vocabulary you use, the more likely you are to get good results. For example: “Addition of fractions with unlike denominators” is more likely to get better results than “adding” or “adding fractions”.
2. Not all mathematics on the internet is correct. I have found a lot of really good “How-To” math videos on YouTube, but I have also found some where the math is incorrect. Be careful here.
3. Not all sites on the internet are child-friendly or safe. Please help your child search online.

**Some of my favorite sites:**

[www.khanacademy.org](http://www.khanacademy.org) : This is a website designed for students who are home-schooled where a parent may not necessarily be an expert in all areas. There are video tutorials there which demonstrate specific skills.

Dr. Math’s website: <http://mathforum.org/dr.math/>. This is a general math help site, which is sponsored by Dr. Math at Drexel University.

Eric Weisstein’s World of Mathematics: <http://mathworld.wolfram.com/>. This is the most complete mathematical reference page that I have found online yet. While much of it will be WAY over the heads of middle school students, there is a lot there that will be of value, especially an alphabetical index of mathematical terms. The first paragraph of each definition is usually accessible to everyone. After that, some of the definitions get really complex and “mathy”.

[www.PurpleMath.com](http://www.PurpleMath.com) and <https://www.mathsisfun.com/> are both general tutorial websites.