



# Math SuperStars

Math SuperStars (MSS) is a voluntary math enrichment program for students in Kindergarten through 5<sup>th</sup> grade. The program will enhance your child's journey through mathematics and give them the opportunity to challenge themselves in all types of math concepts by providing additional learning activities. It also helps them extend themselves beyond the mathematics curriculum and become more confident in math.

Grades 1 – 5 participate in a 20-week program, starting mid-September. Kindergarten begins a 10 week program in January. Participating students complete a weekly math worksheet with minimal parental guidance. **(To print out worksheets and view the worksheet due date, parents & students should go to [www.stpeterscatholicschool.com](http://www.stpeterscatholicschool.com), under the “Parents” section.)** Each problem is ranked according to its level of difficulty, which is indicated by the number of stars you see beside a problem. Volunteers will check the worksheets and they will be returned.

Students earn stars for their correct answers and can receive the following incentives during the school year for turning in worksheets.

5 worksheets	Pen, pencil or candy (varies by year)
10 worksheets	MSS NUT day (spring date determined by Principal)
15 worksheets	End-of-Year Social
20 worksheets	\$5 Barnes & Noble gift card

The parent's role in Math SuperStars is to encourage and facilitate your child's problem solving skills. Feel free to suggest a strategy for solving the problem, offer counters or manipulative, or listen as your child shares his/her thinking, but please **DO NOT GIVE THE ANSWERS**.

It is normal for a child **NOT** to be able to complete every problem on a worksheet. Remind your child that he/she is not expected to know the answer to every problem.

We hope you will encourage your child's participation. Permission forms are sent home in late August.

Gia Kean – Program Coordinator

## Math SuperStars: Problem Solving Strategies

Below are some of the problem-solving strategies that students will learn as they go through Math SuperStars.

**CHOOSE AND OPERATION:** Students determine which operation (addition, subtraction, multiplication or division) to use based upon the information presented.

**ESTIMATION:** Students learn both when and how to estimate answers, based on rounding numbers and performing the appropriate operation. Estimation is encouraged as a strategy in all problem solving to verify reasonableness of answers.

**FIND A PATTERN:** This strategy emphasizes pattern recognition of given sequences of numbers, geometric shapes, pictorial information and other data for problem solving.

**GUESS AND CHECK:** Students use a variety of trial and error efforts to reach an answer.

**IDENTIFY EXTRA OR MISSING INFORMATION:** By identifying pertinent information students learn to recognize information which is extra or missing.

**MAKE A DRAWING:** Creating visual images of information makes analysis of the facts easier.

**MAKE A LIST:** Students learn to organize information into meaningful lists for later matching or computation.

**MAKE A TABLE:** Pattern recognition, identification of extra or missing information and arrangement of data into a visual form demonstrate the effectiveness of making a table.

**USE A GRAPH:** Graphing organizes information so that comparisons can be made visually

**MULTI-STEP PROBLEMS:** Some complex problems require the completion of more than one step to calculate the solution. This strategy emphasizes the importance of identifying both the given information and the order of operations to reach the solution.

**USE LOGIC:** In this strategy students learn to recognize relationships and to answer the questions, "Does it make sense?" This includes a process of elimination of answers and sometime visual representation of information to organize the elements of a problem.

**WORK BACKWARDS:** If the end result is known, students can work backwards by recognizing clue words and using them to solve the problem. This skill develops background for later success in algebra.

**WRITE A NUMBER SENTENCE:** Converting written statements into numerical equations (sentences) to solve for an unknown is the basis of an algebraic approach. This strategy demonstrates identification of known and unknown information to develop sentences for solutions.