## M IS FOR <br> MATHEMATICS

NEWSLETTER FOR PARENTS OF 5 TH GRADE MATH STUDENTS AT WASHINGTON STEAM ACADEMY

## WELCOME TO WMS!

by John Davis

I hope your child finds a large amount of success through his math class this year. Throughout the school year, we will be sending out a digital newsletter in an effort to better communicate with parents about what is going on in the math classroom here at WMS. I hope you find it beneficial and it leads to higher success for your student.

Did you know that struggle is good for your child to experience in learning? There are multiple pieces of research that support this thinking.

Check out this article from Jo Boaler talking about synapses firing in your brain when you get an answer wrong.

## Mistakes Make the Brain Grow

## KEY CONCEPT OVERVIEW

Lessons 1 through 4 focus on understanding place value and representing numbers from millions to thousandths on a place value chart.
Examples include:

- Multiply and divide by 10,100 , and 1,000 using the place value chart (see sample)
- Write numbers in exponential form. (e.g. $10,000=10^{\wedge} 4$ )
- Use knowledge of measurements (e.g., $3 \mathrm{~m}=300 \mathrm{~cm}$ ) and exponential form to solve problems.


## SAMPLE PROBLEM

Use the place value chart and arrows to show how the value of each digit in the number 421 changes when divided by $100 .-421 \div 100=4.21$


## HOW YOU CAN HELP AT HOME

- Practice drawing and labeling a place value chart (to the thousandths.)
- Practice metric conversions with your child in the kitchen. (1L=1000mL)
- Play the "Exponent" dice game with your child.

1. Your child rolls a die to represent an exponent. The base number is 10.
2. You ask your child to say the number in standard form.

For example, your child rolls a 4. You ask, "Say 10^4 in standard form." They say "10,000."

## TERMS

Exponential Form: A numeric form involving exponents. (e.g, the exponential form of 1,000 is $10^{\wedge} 3$.
Place value: The value given digit based on its position in a number (e.g., the place value of the digit 2 in 235 is 200 (2 hundreds))
Standard Form: A way to write numbers using the digits 0-9 (e.g., the standard form of seventy-two and forty-eight thousandths is 72.048).

## MODELS

Place Value Chart

| $1,000,000$ | 100,000 | 10,000 | 1,000 | 100 | 10 | 1 | . | $\frac{1}{10}$ | $\frac{1}{100}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |$\frac{1}{1000}$

