

September 1, 2023

Dear families,

This year our class will be focusing on mastering the basic addition, subtraction, multiplication and division facts. Below is more information about the importance of fact fluency.

*What is fact fluency?*

Math fact fluency, or the ability for students to recall basic math facts quickly, accurately, and effortlessly, is an essential component of students' math knowledge. It would take you ages to write a paper if you had to look up the spelling of each individual word: In the same way, lack of fact fluency can slow down students' processing of more complex math problems and situations. Recent research shows the importance of fact fluency as a foundation for more difficult math, and even as a predictor of future math success. For these reasons, fact fluency is one important component of our math curriculum this year.

*How do we build fact fluency?*

It is important to realize that fact fluency is not just memorizing the basic facts. During class, we will focus on building students' conceptual understanding of the basic math facts, rather than focusing solely on memorization. We will encourage children to focus on looking for patterns and relationships between the facts, building on and connecting to what facts they already know (for example, if students know  $5 \times 5 = 25$ ,  $5 \times 6$  is one more group of 5, or 30). This conceptual framework anchors students' recall in meaning. In other words, students are making meaningful connections that make remembering the facts easier.

*What can we do to help?*

Students will also be required to practice math facts at home. This extra practice helps the brain transition facts from short-term memory into long-term storage. Practicing can be as easy as quizzing your child in the car on the way to school, or doing flashcards while dinner is cooking. A quick internet search will provide tons of great websites, Youtube videos, and apps that provide practice opportunities. We have also provided a list of resources on the following page to get you started!

Thank you for your support,  
*Mrs. Mettafick*

### Fact Fluency Apps:

- Sushi Monster by Houghton Mifflin Harcourt, *free*
- Monster Math : Kids Fun Games by Elementary Facts, *free*
- Math Balance : Games for Kids, *free*
- Addition & Multiplication Number Bubbles by Unripe Grape, *free*
- MathEdge Addition, *free* (or \$2.99 for paid version with subtraction)
- MathEdge Multiplication or Division (for long division), *free*
- Flash Cards by Eggroll Games LLC, *free*
- Basic Facts by Math Adventures, *free*
- Number Find by Math Adventures, *free*
- Math Slide: add & subtract by Math Adventures, *free*
- Math Slide: multiply & divide by Math Adventures, *free*
- Math Flash Cards ! by King's Apps, \$0.99
- Operation Math by Little 10 Robot, \$2.99

### Worksheets:

- <https://www.math-drills.com/>

### Websites:

- [www.multiplication.com](http://www.multiplication.com)
- <https://www.timestables.com/>
- [www.xtramath.org](http://www.xtramath.org) (free on computer or Safari; \$5 for app)

### Videos:

- [Math Songs by NUMBEROCK](#)
- [Multiplication Mash Up - A Fun Way to Learn Your Multiplication Facts!](#)

**The General Card Game (Math War):** split the deck between two players. The players each flip over the top card in their deck at the same time. First one to find the correct sum, difference, or product wins both cards. The goal is to win all the cards in the deck. If there is a tie when answering, each player takes his or her card back. If you play with face cards, Joker can be considered a zero, and all face cards are 10. For a challenge, make Jack 11, Queen 12, and King 13. If you play math “war”, when two matching cards are placed down that is considered a “war”. Both players must then place one more card face down, and a third card face up. The new “war” is against these new cards.

### ***Fun ways to Practice Math Facts at Home***

**Play with dice.** Really. Toss the flash cards and practice adding, subtracting, and multiplying using the numbers you roll on dice.

**Flashlight math.** Use the flashcards and flip two cards at a time. Children shine a flashlight on the one they know and answer that one. Simple. Don't have a flashlight? Make a math wand. Use a stick or a lightsaber. Anything that interests your child!

**Use electronics.** Take advantage of the many apps and websites that do the trick! IF you have five minutes and your child says, "Can I play a game on your phone?" Say, "Why yes you may, I'm so very glad you asked."

**Write the answer.** Or paint the answer. Water on cement or chalk on the sidewalk or window crayon on a window. One person flashes the cards and the other one writes!

**Math Bingo.** Again, toss the flash cards and play math bingo as a way to learn and practice these numbers.

**Answer Races.** Stand on one side of the room and make your child run to the other side of the room to write the answer on a long piece of roll paper on the floor or taped to the wall.

**Go crazy!** You flip the card and say it in one voice and the child says the answer in the same kind of voice (whisper, grumble, shout, squeaky, princess, movie character, etc.).

**Skype or Facetime** with family members and have them flash the cards and the child says the answers.

**Tricks** can work pretty well, especially for hard to remember facts. For example, multiplying a number times 2 is the same as the double of the number in addition,  $7 \times 2 = 7 + 7$ ; or remembering the product of  $7 \times 8$  by counting 5,6,7,8 ( $5,6, = 7, \times 8$ ); or when solving for x11 facts, double the digit being multiplied by 11 (up to  $9 \times 11$ .) etc. !

**Mnemonic Devices (or stories)** have proven to be the best for students with learning disabilities, but they work for everyone. For example, "You have to be 16 to drive a  $4 \times 4$ ." or "Picture a football coach feeding his 7 linemen 7 cans of beans each, so they can beat the '49ers."

**Limit the facts to be learned at once.** Sort a stack of flashcards into piles; those that are known automatically and those that are not. Practice one or two unknown facts at a time along with known facts until they become automatic.

**Use timers.** Each night, give 1, 2 or 3 minutes to answer as many math facts as possible given a sheet of problems or a stack of flashcards. Chart the number right and celebrate/reward increasing automaticity.

**Use music.** There are a lot of CD's and DVD's that do this. One that comes to mind is Schoolhouse Rock.