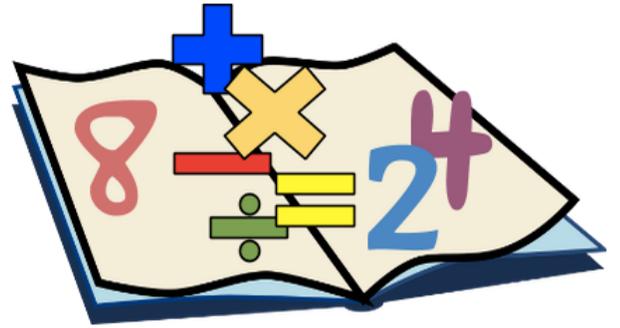


Math Parent Roadmap



Supporting your child in second grade

Did you like attending math classes as a student? Were you a confident math student? Often times when people are asked these questions, the most common response is that they were not so good at math or that they didn't like math class at all. Only a few people will actually say that they loved math or that they were good at it. We want to change that story!

The School District of Waukesha is constantly working to improve math instruction for students.

The School District of Waukesha (SDW) is constantly working to improve mathematics instruction for students. Teachers intentionally plan lessons that engage students in problem solving focused on procedural fluency (knowing math facts), conceptual understanding, and mathematical applications. Using grade level math standards, SDW developed a Mathematics Continuum which enables teachers to identify exactly what each student knows, is ready to learn, and what comes next in the learning progression. The standards indicate the level of quality and achievement that is considered proficient or secure.

This document outlines the math curriculum at each grade level. While every grade level develops most math concepts, this document focuses on the most critical areas at each level. Math concepts are revisited and extended throughout your child's SDW educational career.

Math Practices are what the students are doing as they learn the content standards and will be embedded into daily math experiences.

The Math Practices involve students:

1. Making sense of problems and persevering in solving them
2. Reasoning through problems
3. Constructing viable arguments and critiquing the reasoning of others
4. Modeling with mathematics
5. Using appropriate tools strategically
6. Attending to precision
7. Looking for and making use of structure
8. Looking for and expressing regularity in repeated reasoning



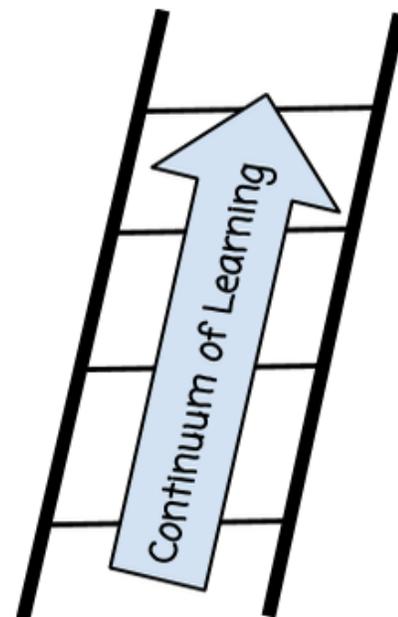
Academic standards are important because they help ensure that all students, no matter where they live, are prepared for success in college and the workforce. They help set clear and consistent expectations for students, parents, and teachers; build a child's knowledge and skills; and help set high goals for all students.

Of course, high standards are not the only thing needed for our children's success, but standards provide an important first step - a clear roadmap for learning for teachers, parents, and students. Having clearly defined goals helps families and teachers work together to ensure that students succeed. Standards help parents and teachers know when students need extra assistance or when they need to be challenged even more.

-The National PTA

In first grade math, students developed their number sense working with whole numbers and place value. They improved their addition and subtraction fact fluency by adding and subtracting fluently within 20, adding within a sum of 100, and solving addition and subtraction problems. First graders also developed an understanding of place value of tens and ones in two-digit numbers. Additionally, linear measurement (measuring lengths) and reasoning about shapes are part of the first grade math curriculum.

In second grade students will deepen their understanding of number operations to develop fluency with addition and subtraction within 100. They will extend their knowledge of the base ten system, including counting by fives, tens, and multiples of hundreds, tens, and ones. Students will then use this knowledge of the base ten system to compare numbers, along with understanding that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. They will apply that knowledge to solve addition and subtraction problems within 1000. Second graders will also further their learning about linear measurement and reasoning about two and three-dimensional shapes.



Here are just a few examples of how your child will develop math skills across grade levels:

Addition/Subtraction/Multiplication and Problem Solving		
<p>Earlier Learning</p> <ul style="list-style-type: none"> • Add and subtract within 10 fluently using various strategies • Add and subtract within 100 by using strategies based on place value • Solve addition and subtraction word problems with numbers within 20 	<p>Grade Two Math</p> <ul style="list-style-type: none"> • Fluently add and subtract within 20 using mental strategies • Use addition and subtraction within 100 to solve one- and two-step word problems • Work with equal groups of objects as a foundation for multiplication 	<p>Next Steps</p> <ul style="list-style-type: none"> • Use a variety of ways to represent and solve problems using multiplication and division • Multiply and divide within 100 • Solve two-step word problems using addition, subtraction, multiplication, and division

Examples of Grade Two Word Problems

Addition + (One-Step Problem)	Tara ordered 42 cookies from the fundraiser. Her grandma gave her some more cookies. Then she had 74 cookies. How many cookies did her grandma give her?
Addition + (Two-Step Problem)	Pablo and Ella were playing basketball. Pablo scored 3 points. Ella scored 6 points. They play until the total is 18 points. How many more more points do they need to score?
Subtraction - (One-Step Problem)	There were 77 cookies on trays. After her brother and his friends came over, Tara counted 23 cookies. How many cookies did they eat?
Subtraction - (Two-Step Problem)	Ariel has 15 stickers. She uses 6 stickers. Then her dog eats 2 of the stickers. How many stickers does Ariel have now?
Foundations for Multiplication	Write this array as an addition problem and solve: 

Place Value

Earlier Learning	Grade One Math	Next Steps
<ul style="list-style-type: none"> Investigate and model two digit numbers using multiples of tens and ones 	<ul style="list-style-type: none"> Investigate and model three digit numbers using multiples of hundreds, tens, and ones 	<ul style="list-style-type: none"> Use place value understanding to round numbers and add, subtract, multiply, and divide.

Example of Grade Two Place Value

Solve each equation, writing the answer as a number.

$$2 \text{ hundreds} + 3 \text{ tens} + 7 \text{ ones} = \underline{\hspace{2cm}}$$

$$8 \text{ dimes} + 19 \text{ pennies} = \underline{\hspace{2cm}}$$

$$6 \text{ hundreds} + 2 \text{ tens} + 9 \text{ ones} = \underline{\hspace{2cm}}$$

$$4 \text{ hundreds} + 28 \text{ tens} = \underline{\hspace{2cm}}$$

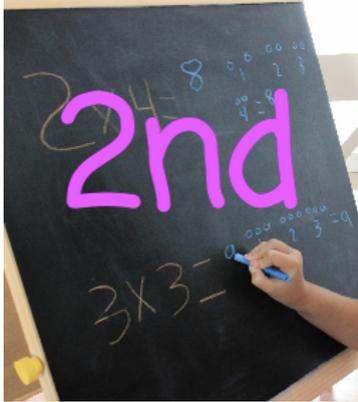
This table shows how many people visited some parks last year.

Green Park	478
Red Line Park	854
Washington Park	754
Rockaway Park	457

Which park had the most visitors last year?
Which park had the fewest visitors last year?



Second Grade Math Experiences Include:



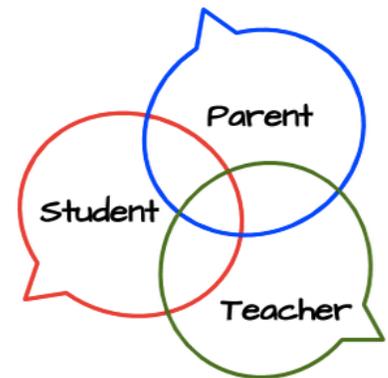
- students participating in lessons in small and whole group situations daily
- students modeling mathematics using a variety of tools such as ten frames, bead racks, counters, base ten blocks, tape diagrams, etc.
- students using technology to investigate and apply mathematics
- students discussing their mathematical thinking with others
- students completing work within varying formats: whole group, small group, partner, and individual
- students working on mathematical tasks that connect math to real world situations

Partnering to reflect on your child's learning:

Please check in with your child and your child's teacher whenever you have questions. Working together is the best way to ensure success for your child.

Possible conversation starters could be:

- What is the best thing that happened in math class today?
- What would you be interested in learning more about in math?
- What is something that was challenging for you in math class? Why do you think it is challenging?
- What websites, apps or other technology are you using to support your math learning?
- In what ways do you prefer to practice your math skills? (examples: using technology, paper/pencil, math tools, working on your own, working with others, etc.)



Possible questions to ask your child's teacher include:

- What are my child's strengths?
- Is my child at the level where he/she should be at this point of the school year?
- In what areas is my child most successful in math?
- What challenges my child?
- How can I help my child in math?

Helping your child learn outside of school:

There are many ways you can help your child at home. Try some of the following ideas:



- Praise your child for his/her effort in solving problems and for sticking with a problem that seems difficult.
- Look for math problems in real life. (“For example, if you need 100 paper plates and you have 32 at home, how many more do you need to buy?”)
- Play games where your child needs to count, add, and use strategies. (Uno, Monopoly, Connect Four)
- Play the “I’m thinking of a number” game. (“I’m thinking of a number that makes 99 when added to 19. What is my number?”)
- Play the “What’s the question?” game. (“The answer is 52. What’s the question?”)
- Have your child sort and identify coins and bills.
- While at the store, ask your child to find two items that add up to less than \$1.00.

Additional Resources

- [SDW Parent Math Help Site](http://goo.gl/5yJdgk)
<http://goo.gl/5yJdgk>
- [School District of Waukesha’s Website](http://goo.gl/fgsVji)
<http://goo.gl/fgsVji>
- [Mathematical Practices](http://goo.gl/WZ8CFO)
<http://goo.gl/WZ8CFO>