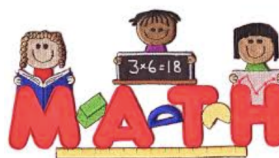




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Grade 2 – Unit 1

Setting Expectations



We are excited to be using a math curriculum that reflects research-based teaching practices and the New York State Next Generation Mathematics Learning Standards (NGMLS). Education is always evolving to prepare our students for a future that will likely be quite different from today. As such, we strive to build a strong foundation in problem solving, conceptual understanding, and procedural fluency. Topics will be taught so that they build on previous understanding and prepare students for future math learning.

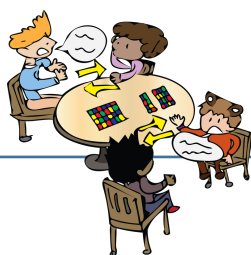
In Grade 2, we will focus on four critical content areas:

1. Extending understanding of base-10 notation:
 - Writing numbers up to 1,000, and understanding the value of each digit.
2. Building fluency with addition and subtraction:
 - Representing and solving problems involving addition and subtraction.
 - Adding and subtracting within 20.
 - Working with equal groups to build a foundation for multiplication.
3. Using standard units of measure:
 - Measuring and estimating lengths in standard units (such as centimeter or inch).
 - Working with time, money, and data.
4. Describing and analyzing shapes:
 - Reasoning with shapes and their attributes (such as number of sides or angles).
 - Composing and decomposing, or putting together and pulling apart shapes.

Unit 1

First 15 Days of Math Instruction:

- Establish norms for a positive learning environment
- Introduce the concept of time, money, and data
- Introduce number routines and expectations for transitions



Math Assessments:

- **Baseline** – 1st week of October
- **Middle of the Year Benchmark** – 1st week of February
- **End of the Year Benchmark** – 1st week of June
- **End of Unit Assessments** – end of each unit
- **Word Problems** – every Friday
- **Quizzes and Exit Tickets** – used throughout the year

Math Websites for Families:

<https://www.k5learning.com/>
<https://learnzillion.com/p/>
<https://www.khanacademy.org/signup?isparent=1>
<https://illuminations.nctm.org/Default.aspx>



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Math Norms

As a school, we have taken on building a positive attitude towards mathematics learning. We have adapted our own set of 'Math Norms' based on the research of Jo Boaler*.



Here are the norms your child will be expected to follow in math class this year:

- 1) Everyone can learn math to the highest level
- 2) Mistakes are valuable
- 3) Questions are really important
- 4) Math is about creativity and making sense
- 5) Math is connections and communicating
- 6) Math class is learning and performing
- 7) Depth is more important than speed



What to Expect in Math Class:

Number Routines:

Number Routines are teacher-facilitated, student-centered techniques for building math thinking and the use of precise math vocabulary. They encourage students to value the thinking of others, so that they can expand and build a better understanding of their own thinking. Number routines support students in developing their mental math skills, in gaining greater fluency in finding patterns, and in using those patterns to make connections and deepen understanding of concepts.

Partner/Group Work:

Students will work a lot with partners and groups throughout the year. Students will be developing skills in effectively communicating their mathematical thinking to others and building on the thinking of others. They will also have opportunities to defend their ideas and critique the reasoning of others.

Math Journals/Notebooks:

Students will write notes to develop their understanding of concepts, and extend that understanding with multiple representations and precise mathematical vocabulary. Notes are also used for small group and independent review and study.



Centers/Games:

As students learn to cooperatively work with their peers, they engage in student-led centers and games that allow them to reinforce skills previously learned. Mathematics takes time to internalize and really understand, so we have dedicated time for centers to provide students fun and intellectually engaging work that corresponds to the skills and concepts they need to practice.

Problem of the Week:

Meaningful problem solving takes time and requires consistent practice. Our 'Problem of the Week' has been structured to give students time to 'comprehend' the context of the story before they try to 'do' anything with the numbers. Each Friday they are given an assessment problem similar to what they have seen throughout the week.