First Grade Mathematics

Dear First Grade Families;

Welcome to the Ann Arbor Public Schools Family Pages. We hope the information you find here assists you in supporting your child while s/he is learning important skills and concepts throughout the first grade year.

Everyday Mathematics provides the core learning resource for Mathematics in the Ann Arbor Public Schools elementary grades. ***Everyday Mathematics*** (EDM) supports teachers in providing students with the mathematical instruction and experiences they need to ensure that their learning focuses on the major work of each grade. Units of study are based on grade level goals for mathematical content and mathematical practice supported by aligned instruction and assessment. Information below is from *Everyday Mathematics, Goals for Mathematical Practice*, McGraw Hill Education.

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction	Solve number stories by adding and subtracting. Model parts-and-total, change, and comparison situations. Model and solve number stories involving the addition of 3 addends.
Understand and apply properties of operations and the relationship between addition and subtraction.	Apply properties of operations to add or subtract. Understand subtraction as an unknown-addend problem.
Add and subtract within 20	Relate counting to addition and subtraction. Recognize and decompose quantities up to 20 using visual patterns. Add within 10 fluently. Subtract within 10 fluently. Add doubles automatically. Subtract doubles. Add combinations of 10 automatically. Subtract combination of 10. Add and subtract within 20 using strategies.
Work with addition and subtraction equations	Understand the meaning of the equal sign. Determine whether equations involving addition or subtraction are true or false. Find the unknown in addition and subtraction equations.

Number and Operations in Base 10

Extend the counting sequence	Count on from any number. Read and write numbers. Count and represent collections of objects with numerals.
Understand place value	Understand place value. Represent whole numbers as tens and ones. Understand exchanging tens and ones. Understand 11-19 as tens and some ones. Understand 10, 20, … 90 as some tens and no ones. Compare and order numbers. Record comparisons using >,=, or <.
Use place value understanding and properties of operations to add and subtract	Understand adding 2-digit numbers and 1-digit numbers. Understand adding 2-digit numbers and multiples of 10. Understand adding 2-digit numbers. Mentally find 10 more or 10 less than a 2-digit number. Subtract multiples of 10 from multiples of 10.

Measurement and Data

Measure lengths indirectly and by iterating length units	Order objects by length Compare the lengths of objects indirectly. Measure length using same-size units with gaps or overlaps. Express length as a whole number of units.
Tell and write time.	Tell and write time using analog clocks. Tell and write time using digital clocks.
Represent and interpret data	Organize and represent data. Ask questions about data. Answer questions about data.

Geometry

Reason with shapes and their attributes	Distinguish between defining and nondefining attributes Build and draw shapes to possess defining attributes. Build composite shapes. Compose new shapes from composite shapes. Partition shapes into equal shares. Describe equal shares using fraction words. Describe the whole as a number of shares. Understand that more equal shares means smaller equal shares.

Mathematical Practice

Make sense of problems and persevere in solving them	Make sense of your problem. Reflect on your thinking as you solve your problem. Keep trying when your problem is hard. Check whether your answer makes sense. Solve problems in more than one way. Compare the strategies you and others use.
Reason abstractly and quantitatively	Create mathematical representations using numbers, words, pictures, symbols, gestures, tables, graphs, and concrete objects. Make sense of the representations you and others use. Make connections between representations.

The Council of Great City Schools provides information on such topics as: 1) the progression of student learning across grade levels; 2) suggestions for helping your child at home; 3) questions to ask your child's teacher for a better understanding of your child's growth; and 4) parents may find ways to enrich a child's work at home by understanding the learning that will happen in the following year.
Great City Schools Parent Roadmap - 1st Grade
Great City Schools Parent Roadmap in Spanish - 1st Grade

Suggestions from *The Council of Great City Schools*:
Partnering with Teachers
Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Is my child at the level where he/she should be at this point of the school year?
- Where is my child excelling?
- What do you think is giving my child the most trouble?
- How can I help my child improve in this area?
- What can I do to help my child with upcoming work?

Helping Your Child Learn Outside of School
1. Use everyday objects to allow your child to count and group a collection of objects.
2. Encourage your child to construct numbers in multiple ways. For example, what are some ways that you can make 10? Answers might include 5+5, 6+4, 8+2, etc. Have your child explain his or her thinking.

3. Have your child create story problems to represent addition and subtraction of small numbers. For example, “Ann had eight balloons. Then she gave three away, so she only had five left.”