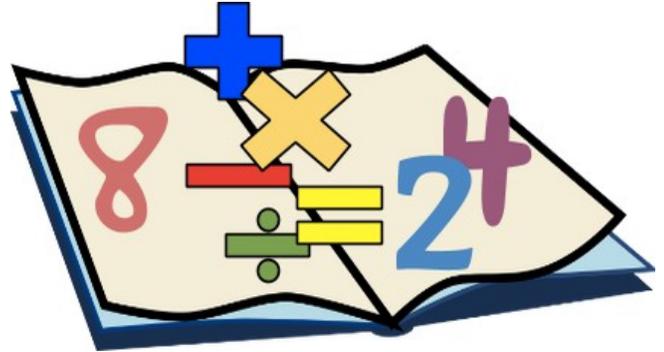


Math Parent Roadmap

Supporting your child in third 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!

Benton Elementary School is constantly working to improve math instruction for students.

Benton Elementary School (BES) is constantly working to improve mathematics instruction for students. Teachers intentionally plan lessons that engage students in problem solving, conceptual understanding, and mathematical applications. Using grade level math standards, BES teachers are able 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 BES 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

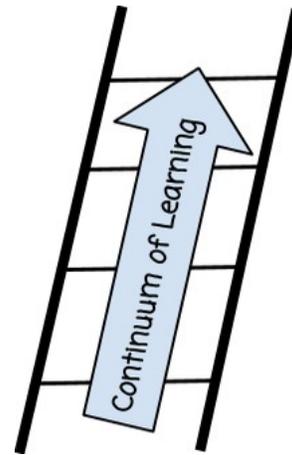


Academic standards are important because they help ensure that all students, no matter where they live, are prepared for success in college and the workforce. They help set clear and consistent expectations for students, parents, and teachers; build a child's knowledge and skills; and help set high goals 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 grade two students developed deeper understanding of their number and operation skills, using mental strategies to add and subtract within 20, solving word problems through addition and subtraction within 100 and building foundational skills for multiplication by working with equal groups of objects. They also engaged in learning about linear measurement and reasoning about two and three-dimensional shapes. Third grade math continues to build off of these and other skills.



In third grade students will develop understanding of multiplication and division as well as the relationship between the two operations. They will use problem solving skills and strategies to solve multiplication and division problems within 100 involving equal groups, arrays, and area models. Third grade students will use their understanding of multiplication and division as well as their skills with addition and subtraction to solve two step problems. Students will also develop an understanding of fractions, using visual models and strategies to solve problems involving fractions. In addition to the critical areas described below, third grade students will also begin to explore the structure of rectangular arrays and of area as well as recognize, describe, and analyze the attributes of two-dimensional shapes.

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

Multiplication/Division and Problem Solving		
Earlier Learning <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 	Grade Three Math <ul style="list-style-type: none"> Fluently multiply and divide within 100 ($8 \times 5 = 40$, $24/6 = 4$) Solve multiplication and division word problems within 100 Solve two-step word problems using addition, subtraction, multiplication and division 	Next Steps <ul style="list-style-type: none"> Use place value and properties to multiply and divide whole numbers Solve multiplication and division word problems involving multiplicative comparison Solve multi-step word problems with whole numbers involving addition, subtraction, multiplication and/or division

Examples of Grade Three Word Problems	
Multiplication -Equal sized groups	There are 5 bags with 3 bananas in each bag. How many bananas in all?
Multiplication -Arrays	My bookshelf has 8 rows of books with 7 books in each row. How many books in all?
Division -Unknown factor	Bart has 24 pencils. They are packed 6 pencils to a box. How many boxes of pencils does he have?
Two step word problem - two operations	Rose, John, and Sara went to an apple orchard and picked 35 apples. They gave 8 apples to their friend Bill and shared the rest evenly among themselves. How many apples did Rose, John, and Sara each get?

Fractions

Earlier Learning

- Use a number line to represent whole numbers with equally spaced points
- Partition shapes into equal shares and describe each share

Grade Three Math

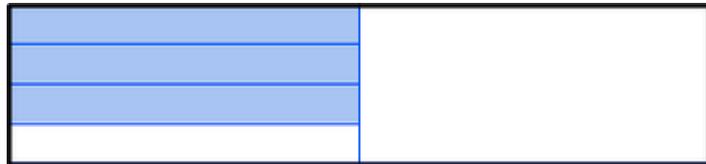
- Recognize unit fractions as a number, representing part of a whole
- Determine a fraction's place on a number line
- Compare the size of fractions
- Explain and find simple equivalent fractions

Next Steps

- Explain, recognize, and generate equivalent fractions
- Compare fractions with different numerators and denominators using $>$, $=$, and $<$
- Add and subtract fractions with same denominators
- Use understanding of fractions and whole numbers to multiply a fraction by a whole number

Examples of Grade Three Fraction Problems

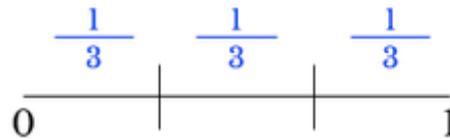
Representing unit fractions of a whole



$$\frac{3}{8}$$

↙ Numerator
↙ Denominator

Using a number line to represent a fraction



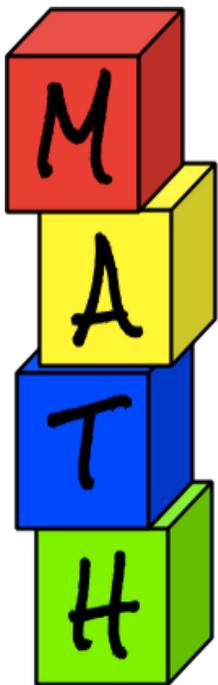
Comparing fractions



Comparing fractions



One half of a large pie is greater than one half of a small pie.



Third Grade Math Experiences Include:



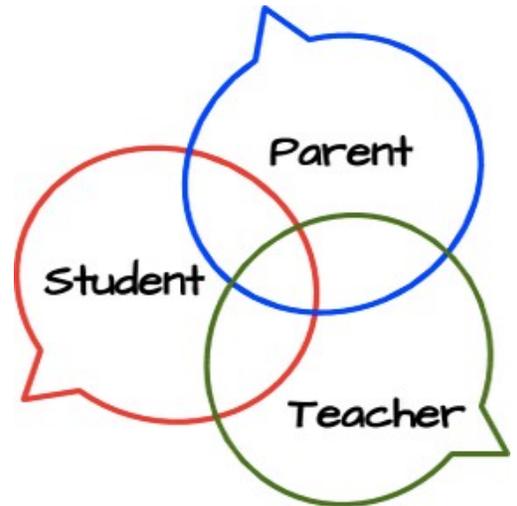
- students participating in lessons in small and whole group situations daily
- students modeling mathematics using a variety of tools such as ten frames, bead racks, counters, base ten blocks, tape diagrams, etc.
- students using technology to investigate and apply mathematics
- students discussing 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.
- Encourage your child to notice math problems all around you (at the grocery store, cooking/baking, sports, etc.) and practice solving the problems together. (For example, "If I get two cartons of eggs, how many total eggs will I get?")
- Play board games where your child needs to add, subtract, multiply, divide and use strategies (Yahtzee, CONNECT, Cribbage, Chess, etc.)
- Play the "I'm thinking of a number" game. ("I'm thinking of a number that makes 32 when multiplied by 4")
- Play the "What's the question" game. ("The answer is 24. What's the question?")