

Fairfield Township School – 1st Grade Math Curriculum Guide

| Overview | Standards for Mathematical Content | Unit Focus | Standards for Mathematical Practice |
|--|---|--|---|
| <p>Unit 1</p> <p>Add and Subtract within 10</p> | <ul style="list-style-type: none"> ■ 1.OA.A.1* ■ 1.OA.B.3* ■ 1.OA.B.4 ■ 1.OA.C.5 ■ 1.OA.D.7* ■ 1.OA.D.8* ■ 1.NBT.A.1* | <ul style="list-style-type: none"> • Represent and solve problems involving addition and subtraction • Understand and apply properties of operations and the relationship between addition and subtraction • Add and subtract within 10 • Work with addition and subtraction equations • Extend the counting sequence | <p>MP.1 Make sense of problems and persevere in solving them.</p> |
| <p><i>Unit 1: Suggested Open Educational Resources</i></p> | <p>1.OA.A.1 Sharing Markers 1.OA.B.3 Domino Addition 1.OA.B.4 Cave Game Subtraction 1.OA.D.7 Equality Number Sentences 1.OA.D.8 Kiri's Mathematics Match Game 1.NBT.A.1 Hundred Chart Digit Game</p> | | <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> |
| <p>Unit 2</p> <p>Add and Subtract within 20</p> | <ul style="list-style-type: none"> ■ 1.OA.A.1* ■ 1.OA.D.7 ■ 1.OA.D.8 ■ 1.OA.B.3* ■ 1.OA.C.6* ■ 1.OA.A.2 □ 1.MD.C.4 ■ 1.NBT.B.2a-b ■ 1.NBT.B.3 ■ 1.NBT.A.1* | <ul style="list-style-type: none"> • Represent and solve problems involving addition and subtraction • Work with addition and subtraction equations • Understand and apply properties of operations and the relationship between addition and subtraction • Add and subtract within 20 • Represent and interpret data • Understand place value • Extend the counting sequence | <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> |
| <p><i>Unit 2: Suggested Open Educational Resources</i></p> | <p>1.OA.A.1 School Supplies 1.OA.D.7 Valid Equalities? 1.OA.D.8 Find the Missing Number 1.OA.B.3 Doubles? 1.OA.C.6 \$20 Dot Map 1.OA.A.2 Daisies in vases 1.NBT.B.2 Roll & Build 1.NBT.B.3 Ordering Numbers 1.NBT.A.1 Start/Stop Counting 2</p> | | <p>MP.8 Look for and express regularity in repeated reasoning.</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Overview | Standards for Mathematical Content | Unit Focus | Standards for Mathematical Practice |
|--|---|---|---|
| <p>Unit 3</p> <p>Place Value, Measurement & Shapes</p> | <ul style="list-style-type: none"> ■ 1.NBT.B.2c ■ 1.NBT.C.4* ■ 1.NBT.C.5 ■ 1.NBT.C.6 ■ 1.MD.A.1 ■ 1.MD.A.2 ● 1.MD.B.3 ■ 1.OA.C.6* | <ul style="list-style-type: none"> • Understand place value • Use place value understanding and properties of operations to add and subtract • Measure lengths indirectly by iterating length units • Tell and write time • Add and subtract within 20 | <p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> |
| <p><i>Unit 3:</i> <i>Suggested Open Educational Resources</i></p> | <p>1.NBT.C.4 Ford and Logan Add 45+36 1.NBT.C.5 Number Square 1.MD.A.2 Measure Me! 1.MD.A.2 Measuring Blocks 1.MD.A.2 Growing Bean Plants 1.MD.B Making a clock 1.OA.C.6 Making a ten</p> | | <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> |
| <p>Unit 4</p> <p>Reason with Shapes and their Attributes</p> | <ul style="list-style-type: none"> ● 1.G.A.1 ● 1.G.A.2 ● 1.G.A.3 ■ 1.OA.A.1* ■ 1.OA.C.6* ■ 1.NBT.A.1* ■ 1.NBT.C.4* | <ul style="list-style-type: none"> • Reason with shapes and their attributes • Represent and solve problems involving addition and subtraction. • Add and subtract within 20 • Extend the counting sequence • Use place value understanding and properties of operations to add and subtract | <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> |
| <p><i>Unit 4:</i> <i>Suggested Open Educational Resources</i></p> | <p>1.G.A.1 All vs. Only some 1.G.A.1 3-D Shape Sort 1.G.A.2 Make Your Own Puzzle 1.G.A.2 Overlapping Rectangles 1.G.A.3 Equal Shares 1.OA.A.1 Twenty Tickets 1.NBT.A.1 Where Do I Go?</p> | | <p>MP.8 Look for and express regularity in repeated reasoning.</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

Unit 1 Grade 1 – Add and subtract within 10

| Content Standards | Suggested Mathematical Practices | Transfer |
|---|---|--|
| <p>■ 1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i> *(benchmarked)</p> | <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Symbol (unknowns) can be in any position. <p>Students are able to:</p> <ul style="list-style-type: none"> add, using objects and drawings, to solve word problems involving situations of adding to and putting together. subtract, using objects and drawings, to solve word problems involving situations of taking from and taking apart. <p>Learning Goal 1: Use addition and subtraction <u>within 10</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.</p> |
| <p>■ 1.OA.B.3. Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</i> <i>(Students need not use formal terms for these properties)</i> *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Knowing $4 + 3$ means that $3 + 4$ is also known (commutative property/fact families). When adding, the numbers need not be added in any particular order. <p>Students are able to:</p> <ul style="list-style-type: none"> add and subtract, within 10, using properties of operations as strategies (commutative property). <p>Learning Goal 2: Apply properties of operations (commutative property) as strategies to add or subtract <u>within 10</u>.</p> |
| <p>■ 1.OA.B.4. Understand subtraction as an unknown-addend problem. <i>For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8</i></p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Subtraction can be represented as an unknown-addend problem. Finding 9 minus 3 means solving $? + 3 = 9$ or $3 + ? = 9$ (fact families). <p>Students are able to:</p> <ul style="list-style-type: none"> represent subtraction as an unknown addend problem. solve subtraction problems, <u>within 10</u>, using unknown addends. <p>Learning Goal 3: Solve subtraction problems, <u>within 10</u>, by representing subtraction as an unknown added problem and finding the unknown addend</p> |
| <p>■ 1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting 2 to add 2).</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Counting can be used to add and subtract. <p>Students are able to:</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 1 Grade 1 – Add and subtract within 10 | | |
|--|--|---|
| Content Standards | Suggested Mathematical Practices | Transfer |
| | structure. | <ul style="list-style-type: none"> count on to add. count back to subtract. <p>Learning Goal 4: Count on to add and count backwards to subtract to solve addition and subtraction problems <u>within 10</u>.</p> |
| <p>■ 1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</i></p> | <p>MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> The meaning of the equal sign True and false statements The expression can be on the right side of the equal sign (e.g. $7 = 8 - 1$). Both the left and right side of the equal sign may contain expressions (e.g. $5 + 2 = 1 + 4$). <p>Students are able to:</p> <ul style="list-style-type: none"> determine if addition equations are true or false. determine if subtraction equations are true or false. <p>Learning Goal 5: Determine if addition and subtraction equations, <u>within 10</u>, are true or false.</p> |
| <p>■ 1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$. *(benchmarked)</i></p> | <p>MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p> | <p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> determine the unknown number that makes an equation true. solve addition or subtraction equations by finding the missing whole number. <p>Learning Goal 6: Solve addition and subtraction equations, <u>within 10</u>, by finding the missing whole number in any position.</p> |
| <p>■ 1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Number names and the count sequence up to 100 <p>Students are able to:</p> <ul style="list-style-type: none"> count orally by ones <u>up to 100</u>. count up to 100 beginning at any number less than 100. read numerals up to 100. write numerals up to 100. represent a number of objects up to 100 with a written number. <p>Learning Goal 7: Count to 100 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 100</u>).</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 1 Grade 1 – Add and subtract within 10 | | |
|--|--|--|
| Content Standards | Suggested Mathematical Practices | Transfer |
| | | |
| District/School Formative Assessment Plan | | District/School Summative Assessment Plan |
| <ul style="list-style-type: none"> • Teacher-Created Assessments • Homework • Classwork • UDL's • whiteboard activities • IXL • Problem of the Day • Exit Ticket | | <ul style="list-style-type: none"> • Chapter Tests • Unit Tests • EdConnect Assessments |
| Focus Mathematical Concepts | | |
| Vocabulary | Instruction and Pacing | |
| Addition, subtraction, number line, counting forward, counting backward, altogether, tens, ones, total, missing, true , false, equal sign, blank space | Pretest | 1 day |
| | Adding within 10 | 1 week |
| | Subtracting within 10 | 1 week |
| | Apply properties to add and subtract | 1 week |
| | Fact families | 1 week |
| | Counting on and counting back to add and subtract | 1 week |
| | Working with the equal sign | 1 week |
| | Equations relating 3 whole numbers | 2 weeks |
| | Count to 120 | 1 week |
| ENDURING UNDERSTANDING | ESSENTIAL QUESTIONS | |
| <ul style="list-style-type: none"> • Numbers are sequential • Addition problems can be solved by counting forward • Subtraction problems can be solved by counting backward | <ul style="list-style-type: none"> • What is the relationship between addition and subtraction? • What strategies can be used to add and subtract? • How does understanding place value help you solve addition and | |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|---|---|
| <ul style="list-style-type: none"> • Two-digit numbers represent amounts of tens and ones • An equation must be equal on both sides • The sequence of numbers remains the same regardless of where one begins? counting • The number of objects displayed can be represented with a written numeral | <ul style="list-style-type: none"> • subtraction problems? • How can we represent and solve word problems involving addition and subtraction? • How do we manipulate addition and subtraction equations? • How can we extend the counting sequence? |
| Differentiation and Accommodations | District/School Primary and Supplementary Resources |
| <ul style="list-style-type: none"> • Provide graphic organizers • Provide additional examples and opportunities for additional problems for repetition • Provide tutoring opportunities • Provide retesting opportunities after remediation (up to teacher and district discretion) • Teach for mastery not test • Teaching concepts in different modalities • Adjust pace and homework assignments | <ul style="list-style-type: none"> • Go Math!! • IXL • Teacher created materials |
| Instructional Strategies | |
| <p>Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:</p> <ul style="list-style-type: none"> • Communicating with students • Using questioning and discussion techniques • Engaging students in learning • Using assessment in instruction • Demonstrating Flexibility and Responsiveness | |
| Common Misconceptions | Proper Conceptions |
| <ul style="list-style-type: none"> • Students count objects incorrectly • Students incorrectly write sums • A number sentence should have words • Number sentences written vertically are different • Students make errors with addition sentences • In subtraction, students move the wrong number of counters • Students become confused with objects that are left and objects taken away • Students confuse taking away zero with taking away all | <ul style="list-style-type: none"> • Practice Counting various groups of objects and/or mark objects counted • Counting and checking the total in each group will give the correct sum • Number sentences are written with numbers and signs • A number sentence can be written several ways • Counting and/or acting out the number story helps to check answers • Counting objects and rechecking can make sure numbers are correct • Cover the objects taken away to see what is left • Cover objects taken away or act out taking away zero |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|---|---|
| <ul style="list-style-type: none"> • Students incorrectly write sums • A number sentence should have words • Number sentences written vertically are different • Students make errors with addition sentences • In subtraction, students move the wrong number of counters • Students become confused with objects that are left and objects taken away • Students have difficulty matching sets of objects to see which has fewer • How many more is a clue to add two sets of objects to have more • There is only one way to write an addition or subtraction sentence • The equal sign always has to be toward the end of a number sentence | <ul style="list-style-type: none"> • Counting and checking the total in each group will give the correct sum • Number sentences are written with numbers and signs • A number sentence can be written several ways • Counting and/or acting out the number story helps to check answers • Counting objects and rechecking can make sure numbers are correct • Cover the objects taken away to see what is left • Matching or drawing lines to sets of objects helps to compare sets • How many more is a strategy to compare which group has more • There are several ways to write addition and subtraction sentence • An equal sign is used to show the same amount is on both sides of an equation |
|---|---|

Performance Task

- **You are in charge of getting the apples from the cafeteria for your class. There are 13 students in the class now. The teacher says that 4 more students will be arriving later. You must figure out how many apples to get from the cafeteria. Draw a picture that shows how many apples you need altogether. Write a number sentence to show how many are needed.**
- **The teacher has asked you to sharpen 18 pencils before lunch break. So far you have sharpened 12 pencils. How many pencils still need to be sharpened? Draw a picture to show how many are left to be sharpened. Write a number sentence to show how many pencils still need to be sharpened.**

Rubric

3 point answer: Student is able to complete entire task correctly

2 point answer: Student is able to complete 2 of the 4 tasks correctly

1 point answer: Student is unable to complete 2 of the 4 tasks correctly

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 2 Grade 1 – Add and subtract within 20 | | |
|--|--|--|
| Content Standards | Suggested Standards for Mathematical Practice | Transfer |
| <p>■ 1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i> *(benchmarked)</p> | <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. <p>Students are able to:</p> <ul style="list-style-type: none"> • add, using drawings and equations, to solve word problems involving situations of adding to and putting together. • subtract, using drawings and equations, to solve world problems involving situations of taking from and taking apart. <p>Learning Goal 1: Use addition and subtraction <u>within 20</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.</p> |
| <p>■ 1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</i> *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p> | <p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> • determine if addition equations are true or false • determine if subtraction equations are true or false <p>Learning Goal 2: Determine if addition and subtraction equations, <u>within 20</u>, are true or false.</p> |
| <p>■ 1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.</i> *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p> | <p>Concept(s): No new concept(s) introduced</p> <p>Students are able to:</p> <ul style="list-style-type: none"> • determine the unknown number that makes an equation true. • solve addition or subtraction equations by finding the missing whole number. <p>Learning Goal 3: Solve addition and subtraction equations, <u>within 20</u>, by finding the missing whole number in any position.</p> |
| <p>■ 1.OA.B.3. Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also</i></p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • When adding, the numbers need not be added in order. • To add $2 + 6 + 4$, the second two numbers can be added first to make a ten. [e.g., $2 + 6 + 4 = 2 + 10 = 12$ (Associative Property)] |

Fairfield Township School – 1st Grade Math Curriculum Guide

Unit 2 Grade 1 – Add and subtract within 20

| Content Standards | Suggested Standards for Mathematical Practice | Transfer |
|---|---|--|
| <p><i>known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.) (Students need not use formal terms for these properties)</i> *(benchmarked)</p> | <p>MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Students are able to:</p> <ul style="list-style-type: none"> add and subtract, within 20, using properties of operations as strategies. (Associative Property) <p>Learning Goal 4: Apply properties of operations as strategies (Associative Property) to add or subtract <u>within 20</u>.</p> |
| <p>■ 1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as <u>counting on</u>; <u>making ten</u> (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); <u>decomposing a number leading to a ten</u> (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); <u>using the relationship between addition and subtraction</u> (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and <u>creating equivalent but easier or known sums</u> (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Different strategies can be used to add and subtract. <p>Students will be able to:</p> <ul style="list-style-type: none"> add and subtract <u>within 20</u>, using the following strategies: <ul style="list-style-type: none"> counting on; making ten; composing numbers; decomposing numbers leading to a ten; relationship between addition and subtraction, and creating equivalent but easier or known sums. fluently add or subtract whole numbers <u>within 20</u>. <p>Learning Goal 5: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.</p> |
| <p>■ 1.OA.A.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., <i>by using objects, drawings, and equations with a symbol for the unknown number to represent the problem</i></p> | <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Symbols can be used to represent unknown numbers. The symbol (unknowns) can be in any position. <p>Students are able to:</p> <ul style="list-style-type: none"> use <i>objects and drawings</i> to represent word problems that call for less than or equal to 20. <p>Learning Goal 6: Solve addition word problems with three whole numbers with sums less than or equal to 20.</p> |
| <p>□ 1.MD.C.4. Organize, represent, and interpret data with up to three</p> | <p>MP.2 Reason abstractly and quantitatively.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Numbers can be organized to represent data. |

Fairfield Township School – 1st Grade Math Curriculum Guide

Unit 2 Grade 1 – Add and subtract within 20

| Content Standards | Suggested Standards for Mathematical Practice | Transfer |
|--|--|---|
| <p>categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p> | <p>MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.</p> | <p>Students are able to:</p> <ul style="list-style-type: none"> • organize objects, representing data, in up to three categories. • represent data with objects, drawings, or numerals, in up to three categories. • ask and answer questions about: <ul style="list-style-type: none"> – the total number of data points; – the number of data points in each category, and – how many more or less are in one category than in another. <p>Learning Goal 7: Organize, represent, and interpret data with up to three categories, compare the number of data points among the categories, and find the total number of data points.</p> |
| <p>■ 1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.B.2. a. 10 can be thought of as a bundle of ten ones — called a "ten." 1.NBT.B.2. b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • Two digits represent amounts of tens and ones. • 10 can be thought of as a bundle of ten ones — called a <i>ten</i>. <p>Students are able to:</p> <ul style="list-style-type: none"> • compose numbers to 20. • decompose numbers to 20. • identify the value of the number in the tens or ones place. <p>Learning Goal 8: Compose and decompose numbers <u>to 20</u> to identify the value of the number in the tens and ones place.</p> |
| <p>■ 1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.</p> | <p>MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • Use place value understanding to compare two digit numbers. • Comparing numbers using symbols. <p>Students are able to:</p> <ul style="list-style-type: none"> • use the meaning of tens and ones digits to compare 2 two-digit numbers using $>$, $=$, and $<$ symbols. <p>Learning Goal 9: Use the meaning of tens and ones digits to record comparisons of 2 two-digit numbers using $>$, $=$, and $<$ symbols.</p> |
| <p>■ 1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • Number names and the count sequence up to 120. <p>Students are able to:</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

Unit 2 Grade 1 – Add and subtract within 20

| Unit 2 Grade 1 – Add and subtract within 20 | | |
|--|---|---|
| Content Standards | Suggested Standards for Mathematical Practice | Transfer |
| represent a number of objects with a written numeral *(benchmarked) | structure. MP.8 Look for and express regularity in repeated reasoning. | <ul style="list-style-type: none"> count orally by ones <u>up to 120</u>. count up to 120 beginning at any number less than 120. read numerals up to 120. write numerals up to 120. represent a number of objects up to 120 with a written number. Learning Goal 10: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 120</u>). |
| District/School Formative Assessment Plan | | District/School Summative Assessment Plan |
| <ul style="list-style-type: none"> Teacher-Created Assessments Homework Classwork UDL's whiteboard activities IXL Problem of the Day Exit Ticket | | <ul style="list-style-type: none"> Chapter Tests Unit Tests EdConnect Assessments |
| Focus Mathematical Concepts | | |
| Vocabulary | Instruction and Pacing | |
| Addition, subtraction, number line, counting forward, counting backward, altogether, tens, ones, total, missing, true, false, equal sign, blank space, comparing | Pretest | 1 day |
| | Adding within 20 | 1 week |
| | Subtracting within 20 | 1 week |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | | |
|---|--|---------|
| | Review equal sign problems (now within 20) | 1 week |
| | Equations relating 3 whole numbers | 2 weeks |
| | Tens and ones | 1 week |
| | Comparing 2-digit numbers | 2 weeks |
| | Counting to 120 | 1 week |
| | Count to 120 | 1 week |
| Enduring Understanding | Essential Questions | |
| <ul style="list-style-type: none"> • Numbers are sequential • Addition problems can be solved by counting forward • Subtraction problems can be solved by counting backward • Two-digit numbers represent amounts of tens and ones • An equation must be equal on both sides • The sequence of numbers remains the same regardless of where one begins? counting • The number of objects displayed can be represented with a written numeral | <ul style="list-style-type: none"> • What is the relationship between addition and subtraction? • What strategies can be used to add and subtract? • How does understanding place value help you solve addition and subtraction problems? • How can we represent and solve word problems involving addition and subtraction? • How do we manipulate addition and subtraction equations? • How can we extend the counting sequence? | |
| Differentiation and Accommodations | District/School Primary and Supplementary Resources | |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|--|---|
| <ul style="list-style-type: none"> • Provide graphic organizers • Provide additional examples and opportunities for additional problems for repetition • Provide tutoring opportunities • Provide retesting opportunities after remediation (up to teacher and district discretion) • Teach for mastery not test • Teaching concepts in different modalities • Adjust pace and homework assignments | <ul style="list-style-type: none"> • Go Math!! • IXL • Teacher created materials |
|--|---|

Instructional Strategies

Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:

- Communicating with students
- Using questioning and discussion techniques
- Engaging students in learning
- Using assessment in instruction
- Demonstrating Flexibility and Responsiveness

| Common Misconceptions | Proper Conceptions |
|---|--|
| <ul style="list-style-type: none"> • Students count objects incorrectly • Students incorrectly write sums | <ul style="list-style-type: none"> • Practice Counting various groups of objects and/or mark objects counted • Counting and checking the total in each group will give the correct sum |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|--|---|
| <ul style="list-style-type: none">• A number sentence should have words• Number sentences written vertically are different• Students make errors with addition sentences• In subtraction, students move the wrong number of counters• Students become confused with objects that are left and objects taken away• Students confuse taking away zero with taking away all• Students incorrectly write sums• A number sentence should have words• Number sentences written vertically are different• Students make errors with addition sentences• In subtraction, students move the wrong number of counters• Students become confused with objects that are left and objects taken away• Students have difficulty matching sets of objects to see which has fewer• How many more is a clue to add two sets of objects to have more• There is only one way to write an addition or subtraction sentence• The equal sign always has to be toward the end of a number sentence | <ul style="list-style-type: none">• Number sentences are written with numbers and signs• A number sentence can be written several ways• Counting and/or acting out the number story helps to check answers• Counting objects and rechecking can make sure numbers are correct• Cover the objects taken away to see what is left• Cover objects taken away or act out taking away zero• Counting and checking the total in each group will give the correct sum• Number sentences are written with numbers and signs• A number sentence can be written several ways• Counting and/or acting out the number story helps to check answers• Counting objects and rechecking can make sure numbers are correct• Cover the objects taken away to see what is left• Matching or drawing lines to sets of objects helps to compare sets• How many more is a strategy to compare which group has more• There are several ways to write addition and subtraction sentence• An equal sign is used to show the same amount is on both sides of an equation |
|--|---|

| | |
|-------------------------|--|
| | |
| Performance Task | |

You have been selected to be the teacher for a day. Show how you would teach the class how to solve the following problems. Include pictures and a number sentence for each. Solve the number sentences.

Bob has 5 toy cars. Jim has 8 toy cars. How many toy cars do Bob and Jim have altogether?

Jane came to school with 12 cookies. She gave 7 cookies to her friends. How many cookies does Jane have left?

The farm had 2 horses, 5 cows, and 4 pigs. How many animals are at the farm altogether?

Mary had some pencils. She gave 8 of her pencils to Bill and the other 7 pencils to Sue. How many pencils did she have at first?

Rubric

3 point answer At least three problems are correct

2 point answer At least one part of two problems is correct

1 point answer Fewer of one part of two problems is correct

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 3 Grade 1 | | |
|---|---|--|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| <p>■ 1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.B.2.c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Two digits represent amounts of tens and ones. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). <p>Students are able to:</p> <ul style="list-style-type: none"> compose tens to make numbers up to 90. decompose numbers up to 90, into tens. identify the value of the number in the tens or ones place. <p>Learning Goal 1: Compose and decompose numbers <u>to 90</u> into tens, identifying the value of the number in the tens and ones place.</p> |
| <p>■ 1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g. base ten blocks) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> In adding two-digit numbers, add tens with tens and ones with ones. In adding two-digit numbers, sometimes it is necessary to compose a ten. <p>Students are able to:</p> <ul style="list-style-type: none"> use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number. use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number. use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10. use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10. explain or show how the model relates to the strategy. <p>Learning Goal 2: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100).</p> <p>Learning Goal 3: Add a 2-digit number and a multiple of 10, using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).</p> |
| <p>■ 1.NBT.C.5. Given a two-digit</p> | <p>MP.2 Reason abstractly and</p> | <p>Concept(s): No new concept(s) introduced</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 3 Grade 1 | | |
|---|---|---|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. | quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.7 Look for and make use of structure. | Students are able to: <ul style="list-style-type: none"> given a two-digit number, find 10 more than the number without counting. given a two-digit number, find 10 less than the number without counting. explain, given a two-digit number, how to find 10 more or ten less than the number without counting. Learning Goal 4: Explain, given a two-digit number, how to find 10 more or ten less than the number without having to count. |
| ■ 1.NBT.C.6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. | MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically MP.7 Look for and make use of structure. | Concept(s): No new concept(s) introduced Students are able to: <ul style="list-style-type: none"> use concrete models and drawings with a strategy based on place value to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90). use concrete models and drawings with properties of operations to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90). explain or show how the model relates to the strategy. Learning Goal 5: Subtract a multiple of 10 from a multiple of 10 (both within the range 10-90) using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100). |
| ■ 1.MD.A.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object | MP.6 Attend to precision. MP.7 Look for and make use of structure. | Concept(s): <ul style="list-style-type: none"> Objects can be compared and ordered based on length. Students will be able to: <ul style="list-style-type: none"> compare the length of two objects. compare the length of two objects by using a third object as a measuring tool. order three objects by length. Learning Goal 6: Order three objects by length and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than the pencil). |
| ■ 1.MD.A.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length | MP.6 Attend to precision. MP.7 Look for and make use of structure. | Concept(s): <ul style="list-style-type: none"> The length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Students will be able to: <ul style="list-style-type: none"> lay multiple copies of a shorter object (the length unit) end to end. use a shorter object to express the length of a longer object. |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 3 Grade 1 | | |
|--|--|---|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| <p>measurement of an object is the number of same-size length units that span it with no gaps or overlaps.</p> <p><i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i></p> | | <p>Learning Goal 7: Order three objects by length and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than the pencil).</p> |
| <p>1.MD.B.3. Tell and write time in hours and half-hours using analog and digital clocks</p> | <p>MP.6 Attend to precision. MP.7 Look for and make use of structure.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Time is represented on analog and on digital clocks. Analog clocks have <i>hands</i> that indicate the time in hours and minutes. <p>Students are able to:</p> <ul style="list-style-type: none"> tell and write time in hours using analog and digital clocks. tell and write time in half-hours using analog and digital clocks. use the term <i>o'clock</i> in reporting time to the hour. <p>Learning Goal 8: Tell and write time to the half-hour using the term <i>o'clock</i> and using digital notation (include both analog and digital clocks).</p> |
| <p>1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). *(benchmarked)</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Different strategies can be used to add and subtract . <p>Students will be able to:</p> <ul style="list-style-type: none"> add and subtract <u>within 20</u>, using the following strategies: <ul style="list-style-type: none"> counting on; making ten; composing numbers; decomposing numbers; relationship between addition and subtraction, and creating equivalent but easier or known sums. fluently add or subtract whole numbers <u>within 20</u>. <p>Learning Goal 9: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 3 Grade 1 | | |
|--|---|--|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| | | |
| District/School Formative Assessment Plan | | District/School Summative Assessment Plan |
| <ul style="list-style-type: none"> • Teacher-Created Assessments • Homework • Classwork • UDL's • whiteboard activities • IXL • Problem of the Day • Exit Ticket | | <ul style="list-style-type: none"> • Chapter Tests • Unit Tests • EdConnect Assessments |
| Focus Mathematical Concepts | | |
| Vocabulary | Instruction and Pacing | |
| Tens ones digit break -apart decompose pattern Greater than less than equal to sum skip count Hundred chart mental math basic facts difference More than multiples ordering comparing length Time hours half-hours o'clock | Pretest | 1 day |
| | Tens and ones up to 90 | 1 week |
| | Add within 100 | 1 week |
| | 10 more or 10 less than a given number | 1 week |
| | Subtract multiples of 10 | 2 weeks |
| | Ordering and comparing lengths of objects | 1 week |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | | |
|--|--|--------|
| | Lengths of objects | 1 week |
| | Time | 1 week |
| | Add and subtract within 20 | 1 week |
| Enduring Understanding | Essential Questions | |
| <ul style="list-style-type: none"> Sets can be perceived as single entities. The decade numbers to 100 can be separated into sets of ten. Numbers can be used to tell how many. Numbers greater than 10 can be represented as the sum of tens and ones. Place value can be used to compare and order numbers. When adding and subtracting ten to a 2 digit number only the ten changes. Traditional algorithm when adding and subtracting a 2 digit number by a 2 digit number starts with the ones.two digits of a two digit number represent amounts of tens and ones | <ul style="list-style-type: none"> How does grouping by ten help us understand place value? How can we use tens and ones to add and subtract two digit number? | |
| Differentiation and Accommodations | District/School Primary and Supplementary Resources | |
| <ul style="list-style-type: none"> Provide graphic organizers Provide additional examples and opportunities for additional problems for repetition Provide tutoring opportunities Provide retesting opportunities after remediation (up to teacher and district discretion) | <ul style="list-style-type: none"> Go Math!! IXL Teacher created materials | |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|---|---|
| <ul style="list-style-type: none"> • Teach for mastery not test • Teaching concepts in different modalities • Adjust pace and homework assignments | |
| <p>Instructional Strategies</p> | |
| <p>Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:</p> <ul style="list-style-type: none"> • Communicating with students • Using questioning and discussion techniques • Engaging students in learning • Using assessment in instruction • Demonstrating Flexibility and Responsiveness | |
| <p>Common Misconceptions</p> | <p>Proper Conceptions</p> |
| <ul style="list-style-type: none"> • Students have difficulty seeing ten objects as one group of ten • Students miscount on a Hundreds Chart • Students miscount when counting larger numbers for grouping in tens • When estimating - the larger the manipulative the larger the quantity • Students write the number of tens instead of the value (4 instead of 40) • Students incorrectly regroup tens and ones | <ul style="list-style-type: none"> • Our number system organizes numbers in groups of ten • Always point and say each number when using a Hundreds Chart • Mark or separate objects being counted when working with larger numbers • Consider the size of objects being counted or use a benchmark/anchor to compare • Practice saying and writing 4 tens is 40 or 7 tens is 70 • Models/Drawings of tens and ones can show us how to regroup |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|---|--|
| <ul style="list-style-type: none"> • Students add in the tens column before the ones column • Students use the number in the ones column to compare greater or less • Students mix up the greater and less than signs • Students have difficulty understanding how long or short an activity may take • Students have difficulty with intervals (5 min) on a clock and 60 minutes as a total • Students confuse the hour and minute hand • Students incorrectly write the time • Students are not sure when to regroup • Students are not sure how to record the new numbers once they regroup • Students add or subtract in the tens column first • Dependency on clue words in story problems • Students lose count or cannot track when measuring • Students become confused when the measurement falls between two numbers • Students confuse inches/centimeters on a ruler | <ul style="list-style-type: none"> • Steps for add/sub help us to add and subtract correctly • Always use the largest place value when comparing numbers • Emphasize the first number is either greater > or less < than the second • Act out activities that take short amounts of time (tying a shoe, writing their name) • Time is grouped and measured in a different ways • The hands on a clock move differently and have different functions • Time is recorded by hour : minute • Using place value blocks and cubes can help us to see when to regroup • Connecting place value blocks and cubes show the connection to the written number • Steps to adding and subtracting 2 and 3 digit numbers start in the ones column • Visualizing or acting out or drawing and reading to a partner can to “see” the problem. • Marking and writing down measurements help you keep track • Use the number that is closer to the “end” of the object • Inches are larger than centimeters. Before measuring always find the correct side of the ruler marked cm. or in. |
|---|--|

| | |
|---|--|
| | |
| Performance Task | |
| <p>Suggested 100 Day Project Read Aloud: Set, 100th Day, Go.</p> <p>Students will Create a poster of 100 items organized in groups of ten. Students will present their 100 Day Projects to the class.</p> <p>Use hundred poster to develop comparison problems.</p> <p>Use 100 posters to develop a word problem book with addition and subtractions of a 2-digit and 1-digit numbers, and a 2-digit number and a multiple of ten.</p> <p>Students record a number sentence and solve the problem.</p> <p>Rubric</p> <p>•3 point response: The student correctly groups 100 items by ten. Develops a correct comparison problem, creates an addition and subtraction problem and includes a number sentence and solves problem correctly.</p> <p>* 2 point response: The student correctly groups 100 items by ten. Develops a correct comparison problem, creates an addition and subtraction problem and includes a number sentence and solves problem incorrectly.</p> <p>* 1 point response: Able to groups items by 100. Unable to make a comparison. Creates an addition and subtraction problem but does not include a number sentence and solves problem incorrectly.</p> | |

Fairfield Township School – 1st Grade Math Curriculum Guide

0 point response: No understanding of place value and is unable to complete the task.

Unit 4 Grade 1

| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
|--|--|---|
| <p>1.G.A.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p> | <p>MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Defining attributes versus non defining attributes. <p>Students are able to:</p> <ul style="list-style-type: none"> name attributes that define two-dimensional shapes (square, triangle, rectangle, regular hexagon). name attributes that do not two-dimensional shapes. build and draw shapes when given defining attributes. <p>Learning Goal 1: Name the attributes of a given two-dimensional shape (square, triangle, rectangle, regular hexagon), distinguishing between defining and non-defining attributes. Learning Goal 2: Build and draw shapes when given defining attributes.</p> |
| <p>1.G.A.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.</p> | <p>MP.4 Model with mathematics. MP.7 Look for and make use of structure.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> Shapes can be composed from other shapes (e.g. trapezoids can be composed from triangles). New shapes can be composed from composite shapes. <p>Students are able to:</p> <ul style="list-style-type: none"> create a composite shape using two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles). create a composite shape using three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders). compose <i>new</i> shapes from the <i>composite</i> shapes. <p>Learning Goal 3: Create a composite shape by composing two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders), and compose new shapes from the composite shape.</p> |
| <p>1.G.A.3. Partition circles and</p> | <p>MP.2 Reason abstractly and</p> | <p>Concept(s):</p> |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 4 Grade 1 | | |
|--|--|---|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| <p>rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares</p> | <p>quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.4 Model with mathematics. MP.7 Look for and make use of structure.</p> | <ul style="list-style-type: none"> • Shapes can be partitioned into equal parts or shares. • Equal shares are named based on the number of shares that make the whole (e.g. halves, fourths, quarters). • Shares can be described based on their relation to the whole (e.g. <i>half of, fourth of, quarter of</i>). • The whole can be described based on the number of shares. • Decomposing a whole into more equal shares creates smaller shares. <p>Students are able to:</p> <ul style="list-style-type: none"> • partition circles and rectangles into two or four equal shares. • distinguish equal shares from those that are not equal. • describe shares using the words halves, fourths, and quarters. • describe the relationship between the whole and the share using the phrases <i>half of, fourth of, and quarter of</i>. • describe the whole as <i>two of, or four of</i> the shares. • decompose a whole into a greater number of equal shares and identify the new shares as smaller. <p>Learning Goal 4: Partition circles and rectangles into two or four equal shares, describing the shares using halves, fourths, and quarters and use the phrases <i>half of, fourth of, and quarter of</i>. Describe the whole circle (or rectangle) partitioned into two or four equal shares as <i>two of, or four of</i> the shares.</p> |
| <p>■ 1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i> *(benchmarked)</p> | <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. <p>Students are able to:</p> <ul style="list-style-type: none"> • add, using objects and drawings, to solve word problems involving situations of adding to and putting together. • subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart. <p>Learning Goal 5: Use addition and subtraction <u>within 20</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.</p> |
| <p>■ 1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use</p> | <p>MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.</p> | <p>Concept(s):</p> <ul style="list-style-type: none"> • Different strategies can be used to add and subtract. <p>Students will be able to:</p> <ul style="list-style-type: none"> • add and subtract <u>within 20</u>, using the following strategies: |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 4 Grade 1 | | |
|---|--|--|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$) *(benchmarked) | MP.8 Look for and express regularity in repeated reasoning. | <ul style="list-style-type: none"> – counting on; – making ten; – composing numbers; – decomposing numbers; – relationship between addition and subtraction, and – creating equivalent but easier or known sums. <ul style="list-style-type: none"> • fluently add or subtract whole numbers <u>within 20</u>. <p>Learning Goal 6: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.</p> |
| <ul style="list-style-type: none"> ■ 1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. *(benchmarked) | MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. | <p>Concept(s):</p> <ul style="list-style-type: none"> • Number names and the count sequence up to 120. <p>Students are able to:</p> <ul style="list-style-type: none"> • count orally by ones <u>up to 120</u>. • count up to 120 beginning at any number less than 120. • read numerals up to 120. • write numerals up to 120. • represent a number of objects up to 120 with a written number. <p>Learning Goal 7: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 120</u>).</p> |
| <ul style="list-style-type: none"> ■ 1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g. base ten blocks) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the | MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning. | <p>Concept(s):</p> <ul style="list-style-type: none"> • In adding two-digit numbers, add tens with tens and ones with ones. • In adding two-digit numbers, sometimes it is necessary to compose a ten. <p>Students are able to:</p> <ul style="list-style-type: none"> • use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number. • use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number. • use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10. • use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10. |

Fairfield Township School – 1st Grade Math Curriculum Guide

| Unit 4 Grade 1 | | |
|--|---|---|
| Content Standards | Suggested Standards for Mathematical Practice | Critical Knowledge & Skills |
| strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. *(benchmarked) | | <ul style="list-style-type: none"> explain or show how the model relates to the strategy. Learning Goal 8: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100). Learning Goal 9: Add a 2-digit number and a multiple of 10, using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100). |
| District/School Formative Assessment Plan | | District/School Summative Assessment Plan |

Fairfield Township School – 1st Grade Math Curriculum Guide

- Teacher-Created Assessments
- Homework
- Classwork
- UDL's
- whiteboard activities
- IXL
- Problem of the Day
- Exit Ticket

- Chapter Tests
- Unit Tests
- EdConnect Assessments

Focus Mathematical Concepts

Fairfield Township School – 1st Grade Math Curriculum Guide

| Vocabulary | Instruction and Pacing | |
|--|--|---------|
| solid figure sphere cylinder cone rectangular prism pyramid cube face flat surface edge vertex angle side vertices plane shapes circle square triangle rectangle trapezoid parallelogram quadrilateral pentagon hexagon polygon rows columns equal unequal halves thirds fourths quarters | Pretest | 1 day |
| | Defining attributes of shapes | 2 weeks |
| | 2-d shapes | 2 weeks |
| | Partitioning shapes | 2 weeks |
| | Add and subtract within 20 | 1 week |
| | Count to 120 | 1 week |
| | Add within 100 | 1 week |
| | Add and subtract within 20 | 1 week |
| Enduring Understanding | Essential Questions | |
| <ul style="list-style-type: none"> Two and three dimensional objects can be described, classified, and analyzed by their attributes. Identical wholes can be partitioned in various ways and still be identified as equal shares. Data can be collected and represented using various tables, charts, and graphs chosen appropriately. Three digit numbers can be added and subtracted using a variety of strategies | <ul style="list-style-type: none"> How would you describe or classify a given object? What ways can you divide a given shape into equal shares? How should you show your data using a chart, table, or graph? What is a strategy used to add or subtract three digit numbers | |
| Differentiation and Accommodations | District/School Primary and Supplementary Resources | |

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|--|---|
| <ul style="list-style-type: none"> • Provide graphic organizers • Provide additional examples and opportunities for additional problems for repetition • Provide tutoring opportunities • Provide retesting opportunities after remediation (up to teacher and district discretion) • Teach for mastery not test • Teaching concepts in different modalities • Adjust pace and homework assignments | <ul style="list-style-type: none"> • Go Math!! • IXL • Teacher created materials |
|--|---|

Instructional Strategies

Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:

- Communicating with students
- Using questioning and discussion techniques
- Engaging students in learning
- Using assessment in instruction
- Demonstrating Flexibility and Responsiveness

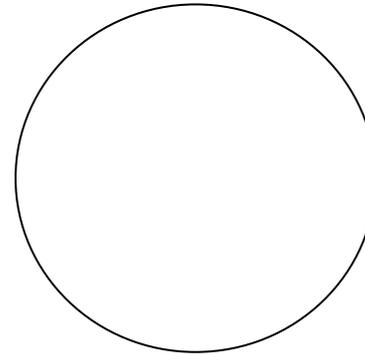
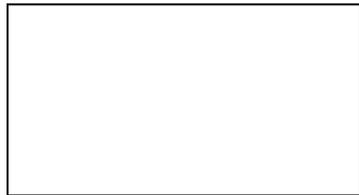
| | |
|------------------------------|---------------------------|
| Common Misconceptions | Proper Conceptions |
|------------------------------|---------------------------|

Fairfield Township School – 1st Grade Math Curriculum Guide

| | |
|--|---|
| <ul style="list-style-type: none">• Students have difficulty visualizing all sides of solid• A sphere has one flat surface• Different shaped rectangles are altogether different shapes• Students lose track when counting sides• Students have difficulty dividing shapes into equal parts• All halves and fourths are the same size• Students have difficulty remembering all of the names of solid/plane shapes | <p>Using objects the everyday world can help us see attributes of solid figures</p> <p>A Sphere has one curved surface</p> <p>Shapes can be different sizes but the same shape</p> <p>Mark or track the sides of objects when counting sides</p> <p>Divide shapes in half first, then see if it can be divided again equally.</p> <p>A half is equal to two equal parts and fourths are four equal parts divided</p> <p>Shapes have a mathematical name to distinguish their attributes</p> |
|--|---|

Performance Task

Using the 2 shapes below, divide one into halves and the other into quarters. Label each part with the correct term: one-half or one-fourth.



Rubric: 3 point for all correct work