



Unit Map 2013-2014

Green Brook Township School District

/ **Math Curriculum 1 (D)** / Grade 1 (District Elementary Curriculum)

Tuesday, August 27, 2013, 2:18PM

Green Brook Township
Public Schools

Unit: Number Sense and Operations (Week 1, 9 Weeks) 📅 📄

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.

CommonCore: Mathematics, CommonCore: Grade 1, Operations & Algebraic Thinking

1.OA Represent and solve problems involving addition and subtraction.

- 1.OA.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, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA Understand and apply properties of operations and the relationship between addition and subtraction.

- 1.OA.3. Apply properties of operations as strategies to add and subtract.

1.OA Add and subtract within 20.

- 1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

1.OA Work with addition and subtraction equations.

- 1.OA.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.

CommonCore: Mathematics, CommonCore: Grade 1, Measurement & Data

1.MD Represent and interpret data.

- 1.MD.4. Organize, represent, and interpret data with up to three 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.

Description of Unit

In the Number Sense and Operations Unit, learners will review kindergarten skills of one-to-one correspondence, counting and writing numbers to 20. Building on this review, they will explore addition using the concept of adding two parts (joining) to find the whole. This will be supported through the use of concrete objects and pictures. Comparing numbers, ordinal numbers and simple graph interpretation will be introduced. Similarly, learners will explore subtraction, separating parts from the whole, with concrete objects and pictures. Problem-solving skills will be developed through graph interpretation, comparing, joining and choosing the appropriate operation for a story problem. Using concrete objects and pictures, the learners will discover the related nature of addition and subtraction sentences.

Essential Questions

- How do mathematical ideas interconnect and build on one another to produce a coherent whole?
- How can we compare and contrast numbers?
- How do operations affect numbers?
- What makes a computational strategy both effective and efficient?
- How can the collection, organization, interpretation, and display of data be used to answer questions?

Knowledge

Students will know that:

1. a graph is a representation of collected data
2. numbers have constant and reliable order
3. addition is the joining of parts to make a whole
4. adding zero to a number equals the original number
5. addends can be presented in any order and result in the same sum
6. subtracting is the separating of a whole into parts
7. there are multiple ways that a whole can be broken into parts and multiple parts that can equal the same whole
8. subtracting zero from a number equals the original number
9. subtracting a number from itself equals zero

Skills

Students will be able to:

- A. use one-to-one correspondence to compare groups
- B. count, read, and write numbers to 20
- C. compare numbers to 20
- D. order numbers to 20
- E. identify ordinal numbers
- F. solve a problem using data from a graph
- G. solve addition and subtraction problems by joining and separating concrete objects, pictures, and symbols
- H. write multiple addition sentences to express the same sum and multiple subtraction sentences to identify the parts of the same number
- I. write vertical and horizontal addition and subtraction sentences

J. identify and write related addition and subtraction facts.
 K. choose the appropriate operation (addition or subtraction) when responding to a story problem

Assessments

More, Fewer and Equal Groups

Diagnostic: Other written assessments

Mathematical Practice 1, 1.MD4:
 Compare groups to determine which one has more, fewer or if they are equal

War Card Game

Formative: Lab Assignment

Mathematica Practice 1, 3 and 7:
 Play the card game, War, identifying the greater of two numbers.

Comparing numbers to 20

Formative: Technology Project

Mathematical Practice 7: Using HSP Mega Math Chapter 1 Lesson 5 and SmartBoard technology, demonstrate ability to order numbers.

Number Sense Test

Summative: Written Test

Mathematical Practices 1 and 7, 1.MD4: HSP Chapter 1 Test

Write the Number that tells How Many

Diagnostic: Other written assessments

Mathematical Practices 1, 3 and 7: From a picture, write the number and tell how many

Use Symbols to Add

Formative: Technology Project

Mathematical Practices 1, 2, 4, 5, 6 and 7; 1.OA5, 1.OA7: Using HSP Mega Math Chapter 2 Lesson 3 and SmartBoard technology, use symbols to write addition sentences

Addition Concepts

Summative: Written Test

Mathematical Practices 1, 2, 4, 5, 6 and 7; 1.OA1, 1.OA3, 1.OA5, 1.OA7, and 1.MD4: HSP Chapter 2 Test

Use Pictures to Subtract

Diagnostic: Other written assessments

Mathematical Practices 1, 2, 3, 5, and 7; 1OA.7: Use pictures to solve how many are left

Use Symbols to Subtract

Formative: Technology Project

Mathematical Practices 1, 2, 3, 4, 5, 7; 1.OA1, 1.OA5, and 1.OA7: Using HSP Mega Math Chapter 3 Lesson 2 and SmartBoard technology, use pictures to write and solve a subtraction sentence

Whole, Part, Part

Formative: Lab Assignment

Mathematical Practices 1, 2, 3, 4, and 5, 1.OA1, 1.OA5, and 1.OA7
Using a workmat, separate part of the whole number to find the remaining part.

Subtraction Concepts

Summative: Written Test

Mathematical Practices 1, 2, 4, 5, 6, and 7; 1.OA1, 1.OA5, 1.OA7 and 1.MD4: HSP Chapter 3 Test

Use Symbols to Add and Subtract

Diagnostic: Other written assessments

Mathematical Practices 1, 2, 3, 4, 5, and 7; 1.OA5 and 1.OA7: Using pictures, write and solve addition and subtraction sentences.

Write related addition and subtraction sentences

Formative: Technology Project

Mathematical Practices 1, 2, 3, 4, 5, and 7; 1.OA3, 1.OA5, and 1.OA7: Using HSP Mega Math Chapter 4 Lesson 3 and Smart Board technology, use pictures to write and solve related addition and subtraction sentences

Related Addition and Subtraction Concepts

Summative: Written Test

Mathematical Practices 1, 2, 3, 4, 5, 6, and 7; 1.OA1, 1.OA3, 1.OA5, and 1.OA7: HSP Chapter 4 Test

Mid Year and Final Benchmarks

Summative: Benchmark Assessment

Mathematical Practices 1, 2, 3, 4, 5, 6, and 7; 1.OA1, 1.OA3, 1.OA5, 1.OA7 and 1.MD4: Mid-year and final benchmark assessments

 [HSP ThinkCentral](#)

Activities

Vocabulary shown in bold type

Activities to Differentiate Instruction

Preferential seating (Tier 1)
Reteach worksheets (Tier 1)
Manipulatives (Tier 1 and 2)
HSP on-line intervention (Tier 1)

- Match two groups to determine if they have the **same** number. If not, find which one has more or fewer and how many **more** or **fewer**.
- Count and write numbers to 10 using the word, numeral, a picture, and counters to express how many.
- Count and write the numbers from 11 to 20 using the word, numeral and counters in ten frames.
- Compare numbers up to 20 to identify one as **greater than** or **less than** the other.
- Order three numbers from 1 to 20 in order from **least** to **greatest**.
- Using ordinal numbers, identify the position of an object in a line.
- Using a pictograph, identify the object that has the least and the greatest number.
- Using concrete objects, **join** two groups to determine how many there are in all.
- With the support of pictures, make an **addition sentence** to join two groups and solve for the **sum**. (Vocabulary: **plus +, is equal to =**)
- Model and solve an addition sentence using the **part, part, whole** concept.
- With pictures supporting the concept, use the **zero** property of addition.
- Using pictures and unifix cubes, demonstrate that the **order** of **addends** will not change the sum.
- Using pictures and unifix cubes, find multiple addition sentences that all equal 7.
- Write vertical and horizontal addition sentences.
- Solve story problems by writing addition sentences.
- Model and solve **take away** problems using concrete objects and drawings. (Vocabulary: **subtract, are left**)
- With the support of pictures, make a **subtraction sentence** and solve for the **difference**. (Vocabulary: **minus -**)
- With the support of pictures, find the difference when subtracting all of the group or zero.
- Using unifix cubes, find and record ways to subtract from 7 and 8.
- Write vertical and horizontal subtraction sentences.

Modified text pages (Tier 1 and 3)

Enrichment and Problem solving worksheets (Tier 2 and 3)

Mega Math activities (Tier 3)

Touch Math (Tier 1)

HSP Leveled Math Concept Reader (Tier 1, Tier 2, Tier 3)



[HSP ThinkCentral](#)

- Model and solve subtraction sentences using the **whole, part, part** concept.
- Using pictures, model the concept of **comparing** two groups. Write the subtraction sentence to determine how many **more** or **fewer** are in one group.
- Using manipulatives or pictures, make a model to solve subtraction story problems.
- Using unifix cubes, join two addends and then separate them. Record the related addition and subtraction sentences in a table to discover the concept of **related facts**.
- Using pictures, write the related addition and subtraction sentences.
- Choose the appropriate operation needed to solve a story problem. Write the number sentence and solve it.

Integrated/Cross-Disciplinary Instruction	Resources
<p>Language Arts: listening to trade books and reading leveled math concept readers Science: counting buds, leaves and flowers on developing plants; comparing measurement of plants over time</p>	<p>HSP Math Grade 1 Teacher's Guide and Student book HSP Math Practice Workbook (practice work and spiral review) HSP Math Teacher's Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day Manipulatives: workmats, unifix cubes and counters HSP ThinkCentral: student text; teacher's guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath)activities; iTools (link attached) with Smart Board technology Read Aloud Books: M&M Counting, Skittles Riddles, 12 Ways to Get to 11, Six Foolish Fisherman (HSP Teacher's Guide) Songs: "Five Little Ducks Went out to Play", "Ten Little Wallabies" HSP Leveled Math Concept Readers Playing Cards with picture cards removed to play the game "War" Investigations Mathematical Thinking at Grade 1 Investigations Number Games and Story Problems</p>

 [HSP web support: text, games, remedial support](#)

 [Math songs](#)

[<< Previous Year](#)

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Unit Map 2013-2014

Green Brook Township School District

/ **Math Curriculum 1 (D)** / **Grade 1 (District Elementary Curriculum)**

Tuesday, August 27, 2013, 2:18PM

Green Brook Township
Public Schools

Unit: Addition and Subtraction to 12 (Week 10, 5 Weeks)  

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
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CommonCore: Mathematics, CommonCore: Grade 1, Operations & Algebraic Thinking

1.OA Represent and solve problems involving addition and subtraction.

- 1.OA.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, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA Understand and apply properties of operations and the relationship between addition and subtraction.

- 1.OA.3. Apply properties of operations as strategies to add and subtract.
- 1.OA.4. Understand subtraction as an unknown-addend problem.

1.OA Add and subtract within 20.

- 1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
- 1.OA.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 $6 + 6 + 1 = 12 + 1 = 13$).

1.OA Work with addition and subtraction equations.

- 1.OA.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.
- 1.OA.8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.

CommonCore: Mathematics, CommonCore: Grade 1, Number & Operations in Base Ten

1.NBT Use place value understanding and properties of operations to add and subtract.

- 1.NBT.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.

Description of Unit	Essential Questions
<p>In the Addition and Subtraction to 12 Unit, learners develop strategies for adding and subtracting whole numbers on the basis of the earlier work with small numbers. They use a variety of models, including discrete objects, length-based models, and number lines to model "part-whole," "adding to," "taking away from," and "comparing". These efforts develop an understanding of the meanings of addition and subtraction and strategies available to solve such arithmetic problems. Learners will understand the connections between counting and the operations of addition and subtraction. They will use properties of addition to add whole numbers and will create and use sophisticated strategies based on these properties in order to solve addition and subtraction problems involving basic facts. By comparing a variety of solution strategies, learners relate addition and subtraction as inverse operations.</p>	<ul style="list-style-type: none"> • How do mathematical ideas interconnect and build on one another to produce a coherent whole? • How can we compare and contrast numbers? • How do operations affect numbers? • What makes a computational strategy both effective and efficient? • How do operations affect numbers?
Knowledge	Skills
<p>Students will know that:</p>	<p>Students will be able to:</p> <p>A. count on by ones or twos</p>

1. counting on is an efficient strategy when the numbers are close in value
2. "doubles" includes facts in which both addends are the same
3. "doubles plus one" is related to the count on strategy and includes facts in which one addend is greater than the other
4. the commutative property, or order property, allows one to add numbers in any order

- B. use doubles to add and subtract other facts
- C. Use near doubles to add and subtract other facts
- D. connect addition to subtraction problems
- E. build fact families
- F. choose strategies that help them add and subtract

Assessments

Write two addition sentences using the numbers 4 and 2

Diagnostic: Other written assessments

Mathematical Practices 4, 7, and 8, 1.OA.3:

Write two addition sentences using the given numbers 4 and 2

Count on from the greater number

Formative: Lab Assignment

Mathematical Practices 1, 4, and 5:

Using number cards and dice, one partner rolls the dice for the first addend. The other partner chooses a numeral card for the second addend. Partners work together to write addition problem, count on, and find the sum.

Draw a Picture

Formative: Other written assessments

Mathematical Practices 1, 2, 4, 5, and 6, 1.OA.1, 1.OA.3:

Solve problems by using the strategy, draw a picture

Chapter 5 Test

Summative: Written Test

Mathematical Practices 1, 2, 4, and 5, 1.OA.3:

HSP Math Chapter 5 Test

Count Back

Diagnostic: Other written assessments

Mathematical Practices 4, 5, and 6, 1.OA.3:

Count back to subtract

Think addition to subtract

Formative: Technology Project

Mathematical Practices 1, 4, 5, 6, and 8, 1.OA.5, 1.OA.6:
Using HSP Mega Math, Country Countdown, Chapter 6, lesson 3

Chapter 6 Test

Summative: Written Test

Mathematical Practices
HSP Chapter 6 Test

Related Addition and Subtraction Facts

Diagnostic: Other written assessments

Mathematical Practices 8, 1.OA.3, 1.OA.5, 1.OA.6:
Identify related addition and subtraction facts to 12

Build Fact Families

Formative: Lab Assignment

Mathematical Practices 7, and 8, 1.OA.3, 1.OA.6:
Identify and record fact families

Follow the Rule

Formative: Lab Assignment

Mathematical Practices: 1, 2, 6 and 8, 1.OA.6:
Complete a table by using a rule

Chapter 7 Test

Summative: Written Test

Mathematical Practices
HSP Chapter 7 test

Mid year and final benchmark

Summative: Benchmark Assessment

Mathematical Practices 1, 2, 3, 4, 5, 6, 7, and 8, 1.OA.1, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.8, 1.NBT.6:
Mid-year and final benchmark assessment

Activities

Vocabulary shown in bold type

- **Count on** one or two numbers to find sums
- Use a **number line** to count on using small numbers to find sums to 12

Activities to Differentiate Instruction

Preferential seating (Tier 1)
Reteach worksheets (Tier 1)
Manipulatives (available to all, and then as needed)
HSP on-line intervention (Tier 1)
Modified text pages (Tier 1 and 3)
Enrichment and Problem solving worksheets (Tier 3)

- Count on from the greater number
- Use **doubles** as a strategy to solve addition facts through 12
- Use doubles and near doubles as strategies to find sums to 12
- Use the strategies, count on, doubles, and near doubles, to practice facts to 12
- Solve problems by using the strategy, draw a picture
- **Count back** one or two numbers to subtract from 12 or less
- **Subtract** from 12 or less using a number line to count back
- Use addition as a strategy to subtract numbers from 12 or less
- Use the strategies, count back and think addition to subtract, to practice subtraction facts
- Solve problems by using the strategy, write a number sentence
- Identify **related addition facts** to 12
- Identify **related subtraction facts** to 12
- Identify **fact families**
- Record fact families
- Complete a table by using a **rule**
- Represent equivalent forms of numbers to 12
- Create addition and subtraction situations, and write the corresponding number sentence
- Solve problems by using the strategy, draw a picture

Mega Math activities (Tier 3)
 Touch Math (Tier 1)
 HSP Leveled Math Concept Reader (Tier 1, Tier 2, Tier 3)

Integrated/Cross-Disciplinary Instruction	Resources
Language Arts: listening to trade books and reading leveled math concept readers	<p>HSP Math Grade 1 Teacher’s Guide and Student book HSP Math Practice Workbook (practice work and spiral review) HSP Math Teacher’s Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day Manipulatives: workmats, unifix cubes and counters</p>

HSP ThinkCentral: student text; teacher's guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath) activities; iTools (link attached) with **Smart Board technology:** HSP Mega Math
Read Aloud Books: Hershey's Kisses Addition Book, Reese's Pieces Math Fun
Songs: Addition and Subtraction Songs - see link
HSP Leveled Math Concept Readers
Investigations: Mathematical Thinking at Grade 1, Number Games and Story Problems

 [Addition and Subtractions Songs](#)

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Unit Map 2013-2014

Green Brook Township School District

/ **Math Curriculum 1 (D)** / **Grade 1 (District Elementary Curriculum)**

Tuesday, August 27, 2013, 2:18PM

Green Brook Township
Public Schools

Unit: Graphs, Probability and Numbers to 100 (Week 15, 9 Weeks) 📅 📄

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

CommonCore: Mathematics, CommonCore: Grade 1, Number & Operations in Base Ten

1.NBT Extend the counting sequence.

- 1.NBT.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.

1.NBT Understand place value.

- 1.NBT.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.2a. 10 can be thought of as a bundle of ten ones — called a “ten.”
 - 1.NBT.2b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
 - 1.NBT.2c. 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).
- 1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

1.NBT Use place value understanding and properties of operations to add and subtract.

- 1.NBT.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

CommonCore: Mathematics, CommonCore: Grade 1, Measurement & Data

1.MD Represent and interpret data.

- 1.MD.4. Organize, represent, and interpret data with up to three 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.

Description of Unit

In the Graphs, Probability and Numbers to 100 Unit, learners will gather, sort, organize, and analyze data to enhance their mathematical understandings. The learners will use their understandings to model situations, solve problems, analyze, and draw appropriate inferences from data. The learners will develop an understanding of whole number relationships through comparing and ordering whole numbers. The learners will solve problems involving the relative size of numbers. They will understand the sequential order of the counting numbers and their relative magnitudes and will represent numbers on a number line.

Essential Questions

- How can the collection, organization, interpretation, and display of data be used to answer questions?
- How can experimental and theoretical probabilities be used to make predictions or draw conclusions?
- How can attributes be used to classify data/objects?
- How can you display information logically?

Knowledge

Students will know that:

1. a collection of objects with various attributes can be classified or sorted in different ways
2. data is gathered and organized in order to answer questions about the populations from which the data came
3. sets of ten can be thought of as single entities, and these sets can then be counted and used as a means of describing quantities
4. the size relationship one number has with another is determined by comparing and ordering numbers
5. patterns can be recognized, extended, and generalized with both words and symbols

Skills

Students will be able to:

- A. sort objects in a variety of ways
- B. organize and gather data to answer questions
- C. count groups of tens as single sets
- D. put numbers in order from least to greatest
- E. create a pattern
- F. extend a pattern

Assessments

Tally Ho

Diagnostic: Other visual assessments

Mathematical Practices 2, 4, 5, and 6, 1.MD.4:
"How Many Pets Do You Have?" graph

Graphs

Formative: Technology Project

Mathematical Practices 2, 4, 5, 6, and 7, 1.MD.4:
Using Hsp Mega Math Chapter 8, Lesson 3 and 4, White Water Graphing

Data and Graphs Test

Summative: Written Test

Mathematical Practices 2, 4, 5, 6, and 7, 1.MD.4
HSP Chapter 8 Test

Lunch Time!

Diagnostic: Other visual assessments

Mathematical Practice: 2, 3, 4, and 6, 1.MD.4:
Develop Lunchtime Class Graph

Possible or Impossible

Formative: Instructional/Assessment Focus

Mathematical Practice 2 and 3
Determine if an event is possible or impossible

Data, Graphs, and Probability Test

Summative: Written Test

Mathematical Practice 2, and 3, 1.MD.4
HSP Chapter 9 Test

How Many Cubes?

Diagnostic: Lab Assignment

Mathematical Practice 2, 4, and 8, 1 NBT.2c, 1.MD.4:
Count cubes; prove easiest, accurate ways to count cubes

Groups of 10

Formative: Exhibition

Mathematical Practices 4, 6, and 8, 1NBT.2, 1NBT.2a, 1NBT.2c:
Rotation Station, model and count groups of tens

Ways to Expand Numbers

Formative: Technology Project

Mathematical Practices 4, and 8, 1.NBT.2, 1.NBT.2b:
Using HSP Mega Math, Chapter 10, Lesson 5

Place Value to 100 Test

Summative: Written Test

Mathematical Practice 1, 2, 3, 4 and 6, 1.NBT.2, 1.NBT.2a, 1.NBT.2b, 1.NBT.2c, 1.NBT.3:
HSP Chapte 10 Test

Compare and Order Sets

Diagnostic: Lab Assignment

Mathematical Practice 2, 4, amd 7, 1.NBT.3:
Compare and order groups of connecting cubes

Comparing with Symbols

Formative: Lab Assignment

Mathematical Practices 2, and 6, 1NBT.3:
Use symbols to compare numbers

More and Less

Formative: Technology Project

Mathematical Practices 2, and 8, 1.NBT.5:
Using HSP Mega Math, Numberopolis, Chapter 11, Lesson 4-5

Order 3 Numbers

Formative: Lab Assignment

Mathematical Practices 1, 2, 6, and 8, 1.NBT.3:
Compare and order whole numbers

Comparing and Ordering Numbers Test

Summative: Written Test

Mathematical Practices 1, 2, 3, 4, 6, and 8, 1.NBT.2, 1.NBT.2a, 1.NBT.2b, 1.NBT.2c, 1.NBT.3, 1.NBT.5:
HSP Chapter 11 Test

What's Next?

Diagnostic: Other written assessments

Mathematical Practices: 1, 2, 4, 6, and 8:
Identify and extend number patterns

Skip Count

Formative: Lab Assignment

Mathematical Practices 2, 4, 6, and 8, 1.NBT.1:
Use patterns to skip count by twos, fives and tens

Odds and Evens

Formative: Technology Project

Mathematical Practices 2, 3, 4, 6, and 8
Using HSP Mega Math Chapter 12, Lesson 6

Number Patterns Test

Summative: Written Test

Mathematical Practices 1, 2, 3, 4, 5, 6, 7, and 8, 1.NBT.1, 1.NBT.2, 1.NBT.2a, 1.NBT.2b, 1.NBT.2c, 1.NBT.3, 1.NBT.5:
HSP Chapter 12 Test

Mid year and Final Benchmarks

Summative: Written Test

Mathematical Practices 1, 2, 3, 4, 5, 6, 7, and 8, 1.NBT.1, 1.NBT.2, 1.NBT.2a, 1.NBT.2b, 1.NBT.2c, 1.NBT.3, 1.NBT.5, 1.MD.4:
Mid-year and final benchmark assessments

Activities

Vocabulary shown in bold type:

- Use Venn diagrams to **sort** and classify objects by common attributes
- Sort and classify objects into three groups by common attributes
- Make **concrete graphs** from organized data and use the data to make comparisons
- Read and compare data from a **picture graph**
- Solve problems by using the skill, make and use a graph
- Read a **tally chart** and interpret the data
- Read a **bar graph** to compare data
- Determine if an event is **possible** or **impossible**
- Determine whether events are **more likely** or **less likely**
- Solve problems by using the strategy, predict and test
- Count, group, and describe objects using **tens** and **ones**
- Model and count groups of tens
- Count and group objects to 50 as tens and ones
- Count and group objects to **100** as tens and ones
- Write two-digit numbers in expanded forms

Activities to Differentiate Instruction

- Preferential seating (Tier 1)
- Reteach worksheets (Tier 1)
- Manipulatives (available to all, and then as needed)
- HSP on-line intervention (Tier 1)
- Modified text pages (Tier 1 and 3)
- Enrichment and Problem solving worksheets (Tier 3)
- Mega Math activities (Tier 3)
- Large 100 chart with transparent stone (Tier 1)
- HSP Leveled Math Concept Readers (Tier 1, Tier 2, Tier 3)

- Solve problems by using the skill, make reasonable estimates
- Model and compare two-digit numbers to determine which is greater
- Model and compare two-digit numbers to determine which is less
- Use the symbols for **greater than**, **less than**, and **equal to**, to compare
- Identify **one more** than and **one less** than a given number
- Identify **ten more** than and **ten less** than a given number
- Use a number line to determine **before**, **between**, and **after**
- Order numbers from **least** to **greatest**, or greatest to least
- Solve problems by using a table

Integrated/Cross-Disciplinary Instruction	Resources
<p>Language Arts: listening to and discussing trade books and reading leveled math concept readers</p>	<p>HSP Math Grade 1 Teacher’s Guide and Student book HSP Math Practice Workbook (practice work and spiral review) HSP Math Teacher’s Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day Manipulatives: workmats, place value cubes, 100 chart HSP ThinkCentral: student text; teacher’s guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath) activities; iTools (link attached) with Smart Board technology: HSP Mega Math Read Aloud Books: Lemonade for Sale, Tiger Math: Learning Math from a Baby Tiger, No Fair, 100th Day Worries, How Many Ants Songs: Probability, Bar Graph Dance -see links HSP Leveled Math Concept Readers</p> <p> probability and graphing songs  Math songs</p>

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Unit Map 2013-2014

Green Brook Township School District

/ Math Curriculum 1 (D) / Grade 1 (District Elementary Curriculum)

Tuesday, August 27, 2013, 2:19PM

Green Brook Township
Public Schools

Unit: Geometry, Patterns, and Fractions (Week 24, 4 Weeks) 📅 📄

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

CommonCore: Mathematics, CommonCore: Grade 1, Geometry

1.G Reason with shapes and their attributes.

- 1.G.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.
- 1.G.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.
- 1.G.3. Partition circles and 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.

Description of Unit

In the Geometry, Patterns and Fractions Unit, learners will identify, sort and classify plane and solid figures. They will be able to recognize and use regularly-repeating patterns, including the identification of the repeating pattern unit.

Essential Questions

- How can attributes be used to classify objects?
- How can visual tools be used to answer questions?
- How can patterns, relations, and functions be used as tools to best describe and help explain real life situations?

Spatial relationships will be explored through the use of positional words and map grids. As each skill is mastered, an opportunity will be presented to use the skill and logical reasoning to solve problems by eliminating options that do not meet the defined criteria and by identifying those that do meet the criteria. Building upon the concept of congruent equal shares and lines of symmetry, fractions will be explored to $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$ of a whole plane figure. Fractions will also be introduced as a part of a group.

- How can spatial relationships be described by careful use of geometric language?
- How do geometric relationships help to solve problems and/or make sense of phenomena?
- What situations can be analyzed using transformations and symmetries?
- How can we best represent and verify geometric relationships?

Knowledge	Skills
<p>Students will know that:</p> <ol style="list-style-type: none"> 1. attributes relating to surfaces, sides, and corners define specific plane figures (circle, triangle, rectangle, square, rhombus, hexagon, and trapezoid) and solid figures (sphere, cone, cylinder, cube, rectangular prism, and pyramid). 2. the flat surface of a solid figure is a plane figure. 3. different groups of plane figures can be combined to compose the same new plane figure. 4. positional words define spatial relationships. 5. congruent shapes are the same size and shape. 6. the appearance of a plane figure may change if it is flipped, slid, or turned. 7. a line of symmetry provides a plane figure with two equal parts. 8. equal parts of a plane figure are fractions of the figure. 9. one out of many in a group is a fraction of the group. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> A. Identify, sort and classify plane and solid figures. B. Identify the pattern unit and extend a pattern. C. Transfer a pattern from one representation to another. D. Use logical reasoning and positional words to identify objects and/or places. E. Identify congruent plane figures and lines of symmetry. F. Slide, flip, or turn a plane figure. G. Identify and name $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$ of a plane figure. H. Identify and name $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a group.
<p><u>Assessments</u></p> <p>Sort by Color, Size and Shape Diagnostic: Other written assessments Mathematical Practices 1 and 6, 1.G1: Identify what belongs in a given group.</p> <p>Solid and Plane Figure Hunt Formative: Dramatization</p>	

Mathematical Practices 1, 3 and 6, 1.G1:

Hunt for solid figures or plane figures in the classroom given their name or their attributes.

Solid Figures and Plane Figures Test

Summative: Written Test

Mathematical Practices 1, 3, and 6, 1.G1:

HSP Chapter 13 Test

Identify Patterns

Diagnostic: Lab Assignment

Mathematical Practices 1, 3, 5, 6, 7, and 8, 1.G1:

Using plane figures, make a pattern. Extend an existing pattern.

Patterns

Summative: Written Test

Mathematical Practices 1, 3, 6, 7, and 8, 1.G1:

HSP Chapter 14 Test

Using Position Words

Diagnostic: Dramatization

Mathematical Practices 1, 3, and 6:

Respond to directions placing real objects in the appropriate position.

Line of Symmetry and Equal Shares

Formative: Other visual assessments

Mathematical Practices 1, 3, and 7, 1.G1, 1.G2:

Thumbs up/thumbs down to identify shapes with or without a line of symmetry and two congruent equal shares.

Spatial Sense

Summative: Written Test

Mathematical Practices 1, 2, 3, 6, and 7, 1.G1, 1.G2

HSP Chapter 15 Test

Equal Parts

Diagnostic: Other written assessments

Mathematical Practices 1, 2, and 6, 1.G1, 1.G3:

Identify equal shares

Identify and name One Fourth

Formative: Technology Project

Mathematical Practices 1, 2, 3, 5, 6, and 7, 1.G1, 1.G3:

Using HSP Mega Math Chapter 16 Lesson 3, identify plane figures that are divided into fourths and identify one fourth.

Fractions

Summative: Written Test

Mathematical Practices 1, 2, 3, 5, 6, and 7, 1.G1, 1.G3:
HSP Chapter 16 Test

Summative: Benchmark Assessment

Mathematical Practices 1, 2, 3, 5, 6, 7, and 8, 1.G1, 1.G2, 1.G3:
Mid-year and final benchmark assessment

 [HSP ThinkCentral](#)

Activities

Vocabulary shown in bold type.

- Identify and sort the following solid figures by their **flat and curved surfaces: sphere, cone, cylinder, cube, rectangular prism, pyramid.**
- Classify solid figures by the number of flat surfaces and **corners** they have.
- Identify the following plane figures that are found by tracing a flat surface of a solid figure: **circle, triangle, rectangle, and square.**
- Identify and sort plane figures (circle, rectangle, square and triangle) recognizing the square as a special rectangle.
- Classify the following plane figures by the number of **straight sides** and corners they have: square, triangle, **hexagon, rhombus, and trapezoid.**
- Use attributes and logical reasoning to identify the appropriate plane figure and discount the inappropriate figure.
- Use different combinations of plane figures to compose the same new plane figure.
- Identify and describe a **repeating pattern**, including the identification of the **pattern unit.**
- Transfer a pattern from one representation to another.
- Identify and describe spatial relationships using the following position words: **first, last, far, near,**

Activities to Differentiate Instruction

- Preferential seating (Tier 1)
- Reteach worksheets (Tier 1)
- Manipulatives (available to all, and then as needed)
- HSP on-line intervention (Tier 1)
- Modified text pages (Tier 1 and 3)
- Enrichment and Problem solving worksheets (Tier 2 and 3)
- Mega Math activities (Tier 3)
- Sorting shapes and solid figures by shared attributes (Tier 1 and 2)
- Touch Math (Tier 1)
- HSP Leveled Math Concept Reader (Tier 1, Tier 2, Tier 3)

 [HSP ThinkCentral](#)

between, beside, before, after, inside, outside, above, below, behind, in front of.

- Use the position words **left, right, up and down** to give and follow directions on a grid map.
- Identify and match **congruent** plane figures recognizing that they are the **same shape** and the **same size** even if they are not in the same position.
- Make and identify plane figures that have a **line of symmetry**.
- Identify the effect on a plane figure when it **slides, flips, or turns**.
- Use positional words and logical reasoning to identify the appropriate object and discount the inappropriate object.
- Identify **equal parts** and **unequal parts** of a **whole** (congruent pieces and incongruent pieces).
- Identify, describe and name **halves** as one of two equal parts (**1/2, one half**) of a plane figure.
- Identify, describe and name **fourths** or **quarters** as one of four equal parts (**1/4, one fourth**) of a plane figure.
- Identify, describe and name **thirds** as one of three equal parts (**1/3, one third**) of a plane figure.
- Identify, describe and name **fractions** as a part of a group.

Integrated/Cross-Disciplinary Instruction	Resources
<p>Art: making "symme-trees"</p> <p>Language Arts: listening to trade books and reading leveled math concept readers</p> <p>Science: the concept of attributes and identifying those attributes that are shared and unique (Solids and Liquids)</p> <p>Social Studies: map skills, positional words</p>	<p>HSP Math Grade 1 Teacher's Guide and Student book</p> <p>HSP Math Practice Workbook (practice work and spiral review)</p> <p>HSP Math Teacher's Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day</p> <p>Manipulatives: pattern blocks, solid figures</p> <p>HSP ThinkCentral: student text; teacher's guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath)activities; iTools (link attached) using Smart Board technology</p> <p>Read Aloud Books: The Greedy Triangle, The Door Bell Rang, Frog and Toad: The Lost Button</p>

Songs: "My Hat, It Has Three Corners", "Hokey Pokey", "The Pattern Train"

Poems: "The Shape of Things" by Meish Goldish

I Spy books

HSP Leveled Math Concept Readers

Investigations: Survey Questions and Secret Rules

Investigations: Mathematical Thinking at Grade 1

 [HSP ThinkCentral](#)

 [Math songs](#)

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Unit Map 2013-2014

Green Brook Township School District

/ **Math Curriculum 1 (D)** / **Grade 1 (District Elementary Curriculum)**

Tuesday, August 27, 2013, 2:19PM



Unit: Measurement (Week 28, 3 Weeks) 📅 📌

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.

CommonCore: Mathematics, CommonCore: Grade 1, Measurement & Data

1.MD Measure lengths indirectly and by iterating length units.

- 1.MD.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- 1.MD.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 measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

1.MD Tell and write time.

- 1.MD.3. Tell and write time in hours and half-hours using analog and digital clocks.

1.MD Represent and interpret data.

- 1.MD.4. Organize, represent, and interpret data with up to three 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.

Description of Unit

Essential Questions

In the Measurement Unit, learners will recognize that calendars and clocks "measure" time. They will be given opportunities to use digital and analog clocks to tell time to the hour and half hour. Through hands-on activities, students will use nonstandard and standard units of measurement when making estimates and measuring length, weight and capacity. They will use standard tools and units of measurement and be able to identify the correct tool and unit for each kind of measurement.

- How can measurement be used to solve problems?
- When can and cannot nonstandard units of measurement be used?
- Without standard measurement, what problems would society encounter?

Knowledge	Skills
<p>Students will know that:</p> <ol style="list-style-type: none"> 1. calendars, analog and digital clocks express and record time 2. the minute hand moves a "distance" of 60 minutes for the hour hand to move to the next hour on an analog clock 3. a monthly calendar represents the days of a month as a compilation of days in a week 4. time passes as we go about our daily activities 5. length is measured in inches and in centimeters 6. weight is measured in pounds 7. capacity is measured in cups, pints and quarts 8. measurement can be accomplished with nonstandard units as long as they are equal. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> A. tell and write the time to the hour and half hour using analog and digital clocks B. show the time to the hour and half hour on analog and digital clocks C. read and use a calendar D. read a table and quantify lapsed time for an activity E. estimate and measure length, weight, and capacity using standard and nonstandard units F. use a balance, a ruler, and a cup to measure F. read a thermometer and associate the temperature with the weather
<p><u>Assessments</u></p> <p>Morning, Afternoon, Evening Diagnostic: Other written assessments Mathematical Practices 3 and 5; 1.MD 3: Determine the time of day that an activity occurs and read analog clocks to the hour.</p> <p>Time to the Half Hour Formative: Technology Project Mathematical Practices 1, 3 and 5; 1.MD3: Using HSP Mega Math Chapter 21 Lesson 3 and SmartBoard technology, tell time to the half hour using analog and digital clocks.</p> <p>Digital/Analog Time Memory Game Formative: Lab Assignment</p>	

Mathematical Practices 1, 3, and 5, 1.MD3: Play memory games matching cards with the same time on an analog and on a digital clock.

Time and Calendar Test

Summative: Written Test

Mathematical Practices 1, 3, 5, and 6; 1.MD3: HSP Chapter 21 Test.

Compare Length

Diagnostic: Other written assessments

Mathematical Practice 1; 1.MD1: Order pictures of objects from shortest to longest.

Estimate and Measure with Non-standard Units

Formative: Technology Project

Mathematical Practices 1, 3, and 5; 1.MD2: Using HSP Mega Math Chapter 22 Lesson 3 and SmartBoard technology, estimate and measure using paperclips.

Length and Temperature

Summative: Written Test

Mathematical Practices 1, 3, 4, 5, and 6; 1.MD1 and 1.MD2: HSP Chapter 22 Test.

Compare Weight and Capacity

Diagnostic: Other written assessments

Mathematical Practices 1 and 3: Assess comparative weight and capacity of pictured objects.

Measurement Summary Chart

Formative: Other visual assessments

Mathematical Practices 5 and 6, 1.MD4:

Contribute to discussions resulting in a visual summary of measurement tools, type of measurement and units.

Using a Balance Scale

Formative: Technology Project

Mathematical Practices 1, 3, and 5: Using HSP Mega Math Chapter 23 Lesson 2 and SmartBoard technology, model equal weights with different objects on a balance.

Weight and Capacity

Summative: Written Test

Mathematical Practices 1, 3, 4, 5, and 6: HSP Chapter 23 Test.

Mid Year and Final Benchmarks

Summative: Benchmark Assessment

Mathematical Practices 1, 3, 4, 5 and 6; 1.MD1, 1.MD2, 1.MD3, and 1.MD4: Mid-year and final benchmark assessments.

 [HSP ThinkCentral](#)

Activities	Activities to Differentiate Instruction
<p>Vocabulary shown in bold type.</p> <ul style="list-style-type: none"> • Tell and write time to the hour on an analog and on a digital clock. (Vocabulary: hour, minute hand, hour hand, minutes) • After reading the time on a digital clock, draw the same time to the hour and half hour on an analog clock. • Read and use a calendar. (Vocabulary: month, year) • Using data from a table, assess the lapsed time for an activity as expressed on digital and analog clocks. • Using real objects, compare length and order from shortest to longest. • Estimate and measure length using tiles and paper clips as non-standard units. • Estimate and measure length in inches using a ruler. • Estimate and measure length in centimeters using a ruler. • Read the temperature to the nearest degree using a Fahrenheit and a Celsius thermometer. Associate the temperature with the appropriate corresponding weather. • Evaluate two estimates of length to choose the better estimate. • Estimate the weight of objects. Using a balance and nonstandard units, measure the weight. • Estimate and measure the weight of objects using pounds. • Estimate and measure capacity in nonstandard units. • Estimate and measure capacity to the nearest cup, pint, or quart. • Using a table, record the appropriate tool to measure different characteristics of an object. 	<p>Preferential seating (Tier 1) Reteach worksheets (Tier 1) Manipulatives (Tier 1 and 2) HSP on-line intervention (Tier 1) Modified text pages (Tier 1 and 3) Enrichment and Problem solving worksheets (Tier 2 and 3) Mega Math activities (Tier 3) Measurement project: measure and record many attributes of a favorite object/stuffed toy (Tier 3) Touch Math (Tier 1) HSP Leveled Math Concept Reader (Tier 1, Tier 2, Tier 3)</p> <p> HSP ThinkCentral</p>
Integrated/Cross-Disciplinary Instruction	Resources

Language Arts: listening to trade books and reading leveled math concept readers
Science: "Temperature" in *Air and Weather* unit and *Chick Hatching* unit, measuring plant growth in *New Plants* unit
Social Studies: calendar

HSP Math Grade 1 Teacher's Guide and Student book
HSP Math Practice Workbook (practice work and spiral review)

HSP Math Teacher's Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day

Manipulatives: unifix cubes, paperclips, balance, ruler, rice, containers, Judy Clock, practice clocks, thermometer

HSP ThinkCentral: student text; teacher's guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath)activities; iTools (link attached) with **Smart Board technology**

Read Aloud Books: [How Big is a Foot?](#), [Measuring Penny](#), [Nine O'Clock Lullaby](#), [The Grouchy Ladybug](#), [The Very Hungry Caterpillar](#)

HSP Leveled Math Concept Readers

Investigations: Bigger, Taller, Heavier, Smaller

 [HSP ThinkCentral](#)

 [Math songs](#)

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Unit Map 2013-2014

Green Brook Township School District

/ **Math Curriculum 1 (D)** / **Grade 1 (District Elementary Curriculum)**

Tuesday, August 27, 2013, 2:20PM

Green Brook Township
Public Schools

Unit: Operations to 20/Two-Digit Addition & Subtraction (Week 31, 6 Weeks) 📅 📄

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

CommonCore: Mathematics, CommonCore: Grade 1, Operations & Algebraic Thinking

1.OA Represent and solve problems involving addition and subtraction.

- 1.OA.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, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- 1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA Understand and apply properties of operations and the relationship between addition and subtraction.

- 1.OA.3. Apply properties of operations as strategies to add and subtract.
- 1.OA.4. Understand subtraction as an unknown-addend problem.

1.OA Add and subtract within 20.

- 1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
- 1.OA.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 $6 + 6 + 1 = 12 + 1 = 13$).

1.OA Work with addition and subtraction equations.

- 1.OA.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.
- 1.OA.8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.

CommonCore: Mathematics, CommonCore: Grade 1, Number & Operations in Base Ten

1.NBT Understand place value.

- 1.NBT.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 Use place value understanding and properties of operations to add and subtract.

- 1.NBT.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 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.
- 1.NBT.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- 1.NBT.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.

Description of Unit	Essential Questions
<p>In the Operations to 20 and Two-Digit Addition and Subtraction Unit, learners will build on their previous experience with basic-fact strategies to learn the facts with sums to twenty. Learners will informally explore the Associative Property and Commutative Property and will use strategies from these properties to aid in addition and subtraction. The learners will commit basic facts to memory and become computationally fluent. The learners will use inverse relationships to generate facts in a fact family. The learners will make important connections regarding addition and subtraction. The work in</p>	<ul style="list-style-type: none"> • How do mathematical ideas interconnect and build on one another to produce a coherent whole? • How can we compare and contrast numbers? • How do operations affect numbers? • What makes a computational strategy both effective and efficient? • How do operations affect numbers?

this unit will help children integrate their base-ten and place-value understanding with the operations of addition and subtraction.

Knowledge	Skills
<p>Students will know that:</p> <ol style="list-style-type: none"> 1. basic fact strategies for addition are based on number relationships 2. basic fact strategies for subtraction are based on counting back 3. there is an inverse relationship between addition and subtraction 4. flexible methods of computation involve taking apart and combining numbers in various ways 5. there are many different strategies that can be used to add and subtract 	<p>Students will be able to:</p> <ol style="list-style-type: none"> A. use 'doubles' strategy to find sums B. use 'make a ten' strategy to find sums C. identify order property D. use order property to add three numbers E. add facts to 20 F. model and compare to find differences G. use addition to solve subtraction problems H. subtract from 20 or less I. use fact families to solve problems with sums to 20 J. represent numbers by using sums to 20 K. represent numbers by using differences to 20 L. follow a rule to complete a function table M. add one-digit numbers N. add two-digit numbers O. subtract from two-digit numbers P. use mental math to add and subtract
<p><u>Assessments</u></p> <p>Add three numbers Diagnostic: Other written assessments Mathematical Practices: 5, 7 1.OA.6, 1.OA.8: Add three numbers and explain strategy used to add</p> <p>Make a Ten Formative: Technology Project Mathematical Practices: 4, 5: Using HSP Mega Math, Country Count Down Chapter 17 Lesson 3 Counting Critters-Level Q</p> <p>Around the World-Addition</p>	

Formative: Other oral assessments

Mathematical Practices: 6 1.OA.5:
Practice Addition facts to 20

Addition Facts and Strategies to 20 Test

Summative: Written Test

Mathematical Practices 1, 2, 4, 5, and 6, 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.5, 1.OA.6:
HSP Chapter 17 Test

Make a Match

Diagnostic: Dramatization

Math Practices 4, 1OA.1:
Use models to show a math story, and make a match to solve

Add, then Subtract

Formative: Other written assessments

Mathematical Practices 6, and 8, 1.OA.1, 1.OA.3:
Add, then subtract a series of related problems

Around the World-Subtraction

Formative: Other oral assessments

Mathematical Practices 5, 6, and 8, 1.OA.4:
Practice subtraction facts to 20

Subtraction Facts and Strategies to 20 Test

Summative: Written Test

Mathematical Practices 1, 6, and 8, 1.OA.1, 1.OA.3:
HSP Chapter 18 Test

Follow the Rule

Diagnostic: Other written assessments

Mathematical Practices 2, 1.OA.3:
Complete a function table

Missing Number

Formative: Technology Project

Mathematical Practices 2, and 8, 1OA.5
Use HSP Mega Math, Numberopolis Carnival Stories Chapter 19, Lesson 2, Level N

Basic Facts Race

Formative: Lab Assignment

Mathematical Practices 5, and 6, 1.OA.3, 1.OA.4, 1.OA.6:
Practice finding missing numbers in addition and subtraction sentences

Relate Addition and Subtraction to 20 Test

Summative: Written Test

Mathematical Practices 5, 6, and 8, 1.OA.1, 1.OA.3, 1.OA.5, 1.OA.6:
HSP Chapter 19 Test

Subtract Tens and Ones

Diagnostic: Other written assessments

Mathematical Practices 4, 1.NBT.6:
Subtract two-digit numbers to find differences

Add 2-digit numbers

Formative: Technology Project

Mathematical Practices 4, 1.NBT.4:
Use HSP Mega Math Country Countdown, Chapter 24, Lesson 3, Level M

Place Value and 2-Digit Addition and Subtraction Test

Summative: Written Test

Mathematical Practices 1, 4, 5, and 6 1.NBT.2, 1.NBT.4, 1.NBT.5, 1.NBT.6:
HSP Chapter 24 Test

Mid year and Final Benchmarks

Summative: Benchmark Assessment

Mathematical Practices 1, 2, 3, 4, 5, 6, 7, and 8, 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.7, 1.OA.8, 1.NBT.2, 1.NBT.4, 1.NBT.5, 1.NBT.6:
Mid-year and Final benchmark assesments

Activities	Activities to Differentiate Instruction
<p>Vocabulary shown in bold type</p> <ul style="list-style-type: none"> • Add by using the strategies doubles and near doubles • Use a ten frame to add 10 and a number less than 10 • Use the strategy make-a-ten to find sums • Use the Order Property and addition strategies to add three numbers • Practice addition facts to 20 • Solve problems by writing a number sentence • Subtract from 20 or less using a number line to count back • Model and compare to show the meaning of subtraction 	<p>Preferential seating (Tier 1) Reteach worksheets (Tier 1) Manipulatives (available to all, and then as needed) HSP on-line intervention (Tier 1) Modified text pages (Tier 1 and 3) Enrichment and Problem solving worksheets (Tier 3) Mega Math activities (Tier 3) Enlarged 100 chart with transparent stone (Tier 1) HSP Leveled Math Concept Reader (Tier 1, Tier 2, Tier 3)</p>

- Use 'think addition' as a strategy to subtract numbers from 20 or less
- Practice subtraction facts from 20 or less
- Solve problems by choosing an appropriate method
- Use **fact families** to find sums and differences to 20
- Identify the missing number in a number sentence
- Represent numbers by using sums and **differences** to 20
- Complete a function table
- Use pictures to create addition and subtraction problems
- Solve problems by choosing the appropriate operation
- Use mental math to add tens and find sums
- Add tens and ones to find sums
- Add two-digit numbers to find sums
- Use mental math to subtract tens and find differences
- Subtract tens and ones to find differences
- Subtract two-digit numbers to find differences
- Solve problems by making reasonable estimates

Integrated/Cross-Disciplinary Instruction	Resources
<p>Language Arts: listening to trade books and reading leveled math concept readers</p>	<p>HSP Math Grade 1 Teacher's Guide and Student book HSP Math Practice Workbook (practice work and spiral review) HSP Math Teacher's Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day Manipulatives: workmats, place value cubes, 100 chart HSP ThinkCentral: student text; teacher's guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath) activities; iTools (link attached) with Smart Board technology Read Aloud Books: 2 of Everything, Math Appeal Mind Stretching Math Riddles Songs: Doubles Plus One, Double It Up Investigations: Number Games and Story Problems HSP Leveled Math Concept Readers</p> <p> doubles plus one song</p>

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Unit Map 2013-2014

Green Brook Township School District

/ **Math Curriculum 1 (D)** / **Grade 1 (District Elementary Curriculum)**

Tuesday, August 27, 2013, 2:21PM

Green Brook Township
Public Schools

Unit: Money (Week 37, 1 Week) 📅 📄

New Jersey Core Curriculum Standards

CommonCore: Mathematics, CommonCore: Grade 1, Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

CommonCore: Mathematics, CommonCore: Grade 1, Number & Operations in Base Ten

1.NBT Extend the counting sequence.

- 1.NBT.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.

1.NBT Understand place value.

- 1.NBT.2a. 10 can be thought of as a bundle of ten ones — called a “ten.”
- 1.NBT.2c. 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).
- 1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.

1.NBT Use place value understanding and properties of operations to add and subtract.

- 1.NBT.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

Description of Unit	Essential Questions
<p>In the Money Unit, students will learn to identify, name, and value pennies, nickels, dimes, quarters and one-dollar bills. They will be able to add groups of coins and represent the groups needed to obtain a given value. Given two groups of coins, they will be able to compare the values and determine which is 'greater than' and 'less than'.</p>	<ul style="list-style-type: none"> • How can we compare and contrast numbers? • How do mathematical representations reflect the needs of society across cultures? • How can a modern society be viable without a common monetary system?
Knowledge	Skills
<p>Students will know that:</p> <ol style="list-style-type: none"> 1. the penny is one cent, brown in color, and has Abraham Lincoln on one side. 2. the nickel is five cents, silver in color, and has Thomas Jefferson on one side. 3. the dime is ten cents, the smallest of the coins, silver in color, and has Franklin Roosevelt on one side. 4. the quarter is twenty-five cents, silver in color, and has George Washington on one side. 5. the one-dollar bill is one-hundred cents, green in color, rectangular in shape, made from paper, and has George Washington on one side. 	<p>Students will be able to:</p> <ol style="list-style-type: none"> A. describe and identify pennies, nickels, dimes, quarters and one-dollar bills. B. know the value of a penny, nickel, dime, quarter and one-dollar bill. C. accurately count groups of pennies, nickels, dimes and quarters. D. use different combinations of coins to equal the same value. E. compare the value of two groups of coins to determine which is 'greater than' (>) or 'less than' (<).
<u>Assessments</u>	
<p>Skip count by 5's and 10's Diagnostic: Other written assessments Mathematical Practices 1 and 8, 1.NBT2c, 1.NBT5: Skip count by 5's and 10's. Identify and count how many pennies, nickels and dimes are represented.</p> <p>Describe coins Formative: Other oral assessments Mathematical Practices 5 and 6: Thumbs up/thumbs down as classmates describe attributes of the penny, nickel, dime, and quarter, including the value of each one.</p> <p>Gather Coins for a Specified Value</p>	

Formative: Lab Assignment

Mathematical Practices 1, 2, 3, 4, 5, and 6, 1.NBT1, 1.NBT2a, 1.NBT2c, 1.NBT3, and 1.NBT5:
 Given an amount, identify and count the value of the coins needed to equal the amount. Represent the total with a different group of coins.

Pay the Price

Formative: Technology Project

Mathematical Practices 1, 2, 3, 4, 5, and 6, 1.NBT1, 1.NBT2a, 1.NBT2c, 1.NBT3, and 1.NBT5:
 Using HSP iTools and the SmartBoard, identify and count coins for a given price.

Money

Summative: Written Test

Mathematical Practices 1, 2, 3, 4, 5, 6, 7 and 8, 1.NBT1, 1.NBT2a, 1.NBT2c, 1.NBT3 and 1.NBT5:
 Chapter 20 Test

Summative: Benchmark Assessment

Mathematical Practices 1, 2, 3, 4, 5, 6, 7 and 8, 1.NBT1, 1.NBT2a, 1.NBT2c, 1.NBT3 and 1.NBT5:
 Mid-year and final benchmark assessment

 [HSP ThinkCentral](#)

Activities	Activities to Differentiate Instruction
<p>Vocabulary shown in bold type</p> <ul style="list-style-type: none"> • Identify and know the value of pennies and nickels including the concept of cents. • Accurately count groups of pennies and groups of nickels. • Identify and know the value of dimes and accurately count groups of dimes. • Identify and total the value of a group of coins including pennies, nickels, and/or dimes. • Identify and know the value of a quarter. Using a chart, identify and record multiple ways to combine coins to equal twenty-five cents. • Identify and know the value of a one-dollar bill. Show different ways to make 100 cents. • Identify and total two groups of coins including pennies, nickels, dimes, and quarters to determine which group is greater than or less than the other. 	<p>Preferential seating (Tier 1) Reteach worksheets (Tier 1) Manipulatives (available to all, and then as needed) HSP on-line intervention (Tier 1) Modified text pages (Tier 1 and 3) Enrichment and Problem-solving worksheets (Tier 3) Mega Math activities (Tier 3) Touch Math (Tier 1) HSP Leveled Math Concept Reader (Tier 1, Tier 2, Tier 3)</p> <p> HSP ThinkCentral</p>

- Determine and make a representations of different groups of coins equal to the same specified value.

Integrated/Cross-Disciplinary Instruction	Resources
<p>Language Arts: listening to trade books and reading leveled math concept readers; interactive writing about money on chart paper</p> <p>Social Studies: <i>The World of Work</i> and <i>Junior Achievement</i> Holocaust/Character Ed: helping those less fortunate through community service and donations</p>	<p>HSP Math Grade 1 Teacher’s Guide and Student book HSP Math Practice Workbook (practice work and spiral review) HSP Math Teacher’s Resource Book: masters for enrichment, problem-solving, reteach activities; problem of the day Manipulatives: workmats, practice coins, 100 chart HSP ThinkCentral: student text; teacher’s guide; enrichment, reteach, problem-solving and practice worksheets; on-line intervention and enrichment (MegaMath) activities; iTools (link attached) using Smart Board technology Read Aloud Books: The Purse, A Chair for My Mother Poem: Money’s Funny by Mary Ann Hoberman HSP Leveled Math Concept Readers Investigations Number Games and Story Problems (Investigation 2 Session 3)</p> <p> HSP ThinkCentral  Math Songs</p>

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