

## Curriculum Map: Math Grade 1 -2019-2020\*\*\*

Course: Math Grade 1 Sub-topic: Uncategorized

Grade(s): None specified

**Course** *Students at this level will exhibit the following:*

**Description:**

**Make sense of problems and persevere in solving them**

- Realize that doing mathematics involves solving problems and discussing how they solved them
- Explain to themselves the meaning of a problem and look for ways to solve it
- Use concrete objects or pictures to help them conceptualize and solve problems
- Check their thinking by asking themselves, "Does this make sense?"
- Willing to try other approaches

**Reason abstractly and quantitatively**

- Recognize that a number represents a specific quantity
- Connect the quantity to written symbols
- Create a representation of a problem while attending to the meanings of the quantities (quantitative reasoning)

**Construct viable arguments and critique the reasoning of others**

- Construct arguments using concrete referents such as objects, pictures, drawings, and actions
- Practice their mathematical communication skills as they participate in mathematical discussions involving questions like "How did you get that?", "Explain your thinking," and "Why is that true?"
- Explain their own thinking, but listen to others' explanations
- Decide if the explanations make sense and ask questions

**Model with mathematics**

- Experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart or list, creating equations, etc.
- Connect the different representations and explain the connections
- Use all of these representations as needed

**Use appropriate tools strategically**

- Begin to consider the available tools (including estimation) when solving a mathematical problem
- Decide when certain tools might be helpful
- Decide it might be best to use colored chips to model an addition problem

**Attend to precision**

- Develop their mathematical communication skills
- Use clear and precise language in their discussions with others and when they explain their own reasoning

**Look for and make use of structure**

- Begin to discern a pattern or structure. For instance, if students recognize  $12+3=15$ , then they also know  $3+12=15$  (Commutative property of addition). To add  $4+6+4$ , the first two numbers can be added to make a ten so,  $4+6+4=10+4=14$

**Look for and express regularity in repeated reasoning**

- Notice repetitive actions in counting and computation, etc. When children have multiple opportunities to add and subtract "ten" and multiples of "ten" they notice the pattern and gain a better understanding of place value
- Continually check their work by asking themselves "Does this make sense?"

## Unit: Numerical Sequence

**Month:** January

**Skills:**

1. Count to 120 starting at any number less than 120
2. Read and write numerals up to 120 and represent a number of objects with a written numeral

**Essential Questions:**

1. How is mathematics used to quantify, compare, represent, and model numbers?
2. How can mathematics support effective communication?
3. How are relationships represented mathematically?
4. What does it mean to estimate or analyze numerical quantities?
5. What makes a tool and/or strategy appropriate for a given task?

**Content:**

1. Mathematical relationships among numbers can be represented, compared, and communicated
2. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations
3. Numerical quantities, calculations and measurements can be estimated or analyzed by using appropriate strategies and tools

**Vocabulary:**

Addend

Addition

Analog

Circle

Compare

Compose

Cone

Counting on

Cube

Cylinder

Data

Decompose

Equal to

Fourths

Fractions

Greater than

Half circles

Half-hour

Haves

Hour

Length

Less than

Making ten

Ones

Place value

Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids  
Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.1.1.B.1 \(Advanced\)](#) Extend the counting sequence to read and write numerals to represent objects.

(\* standards consolidated from Topic level)

**Topic: Lesson 64 Count and Model Numbers**

**Core Lesson Description:** Count and Model Numbers

**Core Lesson Student Learning Objectives:** The students will be able to show what they already know about counting and modeling numbers.

**Core Lesson Essential Questions:** How do I show what I already know about counting and modeling numbers?

**Core Lesson Materials:** Go Math Chapter 6 Introduction

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.1.1.B.1 \(Advanced\)](#) Extend the counting sequence to read and write numerals to represent objects.

**Topic: Lesson 65 Count by Ones to 120 (E)**

**Core Lesson Description:** Count by Ones to 120

**Core Lesson Student Learning Objectives:** The students will be able to count by ones to extend a counting sequence up to 120.

**Core Lesson Essential Questions:** How do I count by ones to extend a counting sequence to 120? (E)

**Core Lesson  
Materials:** Go Math 6.1

**Topic: Lesson 66 Count by Tens to 120 (E)**

**Core Lesson  
Description:** Count by Tens to 120

**Core Lesson  
Student Learning  
Objectives:** The students will be able to count by tens from any number to extend a counting sequence up to 120.

**Core Lesson  
Essential  
Questions:** How do I count by tens to 120? (E)

**Core Lesson  
Materials:** Go Math 6.2

**Topic: Lesson 73 Numbers from 100 to 110 (E)**

**Core Lesson  
Description:** Model, Read, and Write Numbers from 100 to 110

**Core Lesson  
Student Learning  
Objectives:** The students will be able to read and write numerals to represent a number of 100 to 110 objects.

**Core Lesson  
Essential  
Questions:** How do I read and write numbers from 100-110? (E)

**Core Lesson  
Materials:** Go Math 6.9

**Topic: Lesson 74 Numbers 110-120**

**Core Lesson  
Description:** Model, Read, and Write Numbers from 110-120

**Core Lesson  
Student Learning  
Objectives:** The students will be able to read and write numerals to represent a number of 110 to 120 objects.

**Core Lesson  
Essential  
Questions:** How do You read and write numbers from 110-120? (E)

**Core Lesson  
Materials:** Go Math 6.10

**Topic: Lesson 75 Count and Model Numbers to Solve Problems**

**Core Lesson  
Description:** Count and Model Numbers

**Core Lesson  
Student Learning  
Objectives:** The students will be able to count and model numbers to solve problems.

**Core Lesson  
Materials:** Go Math Chapter 6 Review/Test

**Topic: Lesson 76 Count and Model Numbers****Core Lesson Description:** Count and Model Numbers**Core Lesson Student Learning Objectives:** The students will be able to count and model numbers to solve problems.**Core Lesson Essential Questions:** How do I count and model numbers to solve problems? (E)**Core Lesson Materials:** Go Math Chapter 6 Review**Topic: Lesson 77 Count and Model Numbers to Solve Problems****Core Lesson Description:** Count and Model Numbers**Core Lesson Student Learning Objectives:** The students will be able to count and model numbers to solve problems.**Core Lesson Essential Questions:** How do I count and model numbers to solve problems? (E)**Core Lesson Materials:** Go Math Chapter 6 Test**Unit: Place Value****Month:** January, February, March

- Skills:**
1. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$
  2. 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. Relate the strategy to a written method and explain the reasoning used
  3. Subtract multiples of 10 in the range 10-90, using concrete models or drawings. Relate the strategy to a written method and explain the reasoning used

- Essential Questions:**
1. How is mathematics used to quantify, compare, represent, and model numbers?
  2. How can mathematics support effective communication?
  3. How are relationships represented mathematically?
  4. What does it mean to estimate or analyze numerical quantities?
  5. What makes a tool and/or strategy appropriate for a given task?
  6. How can recognizing repetition or regularity assist in solving problems more efficiently?

- Content:**
1. Mathematical relationships among numbers can be represented, compared, and communicated
  2. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations
  3. Numerical quantities, calculations and measurements can be estimated or analyzed by using appropriate strategies and tools
  4. Patterns exhibit relationships that can be extended, described, and generalized

**Vocabulary:** Addend  
Addition  
Analog

Circle  
Compare  
Compose  
Cone  
Counting on  
Cube  
Cylinder  
Data  
Decompose  
Equal to  
Fourths  
Fractions  
Greater than  
Half circles  
Half-hour  
Haves  
Hour  
Length  
Less than  
Making ten  
Ones  
Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids  
Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.1.1.B.2](#)  
[\(Advanced\)](#)

Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.

[CC.2.1.1.B.3](#)  
[\(Advanced\)](#)

Use place-value concepts and properties of operations to add and subtract within 100.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.1.1.B.2 \(Advanced\)](#) Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.

[CC.2.1.1.B.3 \(Advanced\)](#) Use place-value concepts and properties of operations to add and subtract within 100.

**Topic: Lesson 67 Understanding tens and Ones (E)**

**Core Lesson Description:** Understand Tens and Ones

**Core Lesson Student Learning Objectives:** The students will be able to use models and write to represent equivalent forms of ten and ones.

**Core Lesson Essential Questions:** How can you use different ways to write a number as tens and ones? (E)

**Core Lesson Materials:** Go Math 6.3

**Topic: Lesson 68 Place Value (E)**

**Core Lesson Description:** Make Ten and Ones

**Core Lesson Student Learning Objectives:** The students will be able to use objects, pictures, and numbers to represent a ten and some ones.

**Core Lesson Essential Questions:** How can you use different ways to write a number as tens and ones?(E)

**Core Lesson Materials:** Go Math 6.4

**Topic: Lesson 69 Tens (E)**

**Core Lesson Description:** Tens

**Core Lesson Student Learning Objectives:** The students will be able to use objects, pictures, and numbers to represent tens.

**Core Lesson Essential Questions:** How can you model and name groups of ten? (E)

**Core Lesson Materials:** Go Math 6.5

**Topic: Lesson 70 Tens and Ones to 50 (E)**

**Core Lesson Description:** Tens and Ones to 50

**Core Lesson Student Learning Objectives:** The students will be able to group objects to show numbers to 50 as tens and ones.

**Core Lesson Essential Questions:** How can you group cubes to show a number as tens and ones? (E)

**Core Lesson Materials:** Go Math 6.6

**Topic: Lesson 71 Tens and Ones to 100 (E)**

**Core Lesson Description:** Tens and Ones to 100

**Core Lesson Student Learning Objectives:** The students will be able to group objects to show numbers to 100 as tens and ones.

**Core Lesson Essential Questions:** How can you show numbers to 100 as tens and ones (E)

**Core Lesson Materials:** Go Math 6.7

**Topic: Lesson 72 Show numbers in Different Ways (E)**

**Core Lesson Description:** Show Numbers in Different Ways

**Core Lesson Student Learning Objectives:** The students will be able to solve problems using the strategy make a model.

**Core Lesson Essential Questions:** How can making a model help you show a number in different ways? (E)

**Core Lesson Materials:** Go Math 6.8

**Topic: Lesson**

**Topic: Lesson 78 Place Value to compare Numbers (E)**

**Core Lesson Description:** Compare Numbers

**Core Lesson Student Learning Objectives:** The students will be able to show what they already know about comparing numbers.

**Core Lesson Essential Questions:** How do you use place value to compare numbers? (E)



**Core Lesson Materials:** Go Math Chapter 7 Introduction

**Topic: Lesson 79 Greater Than**

**Core Lesson Description:** Greater Than

**Core Lesson Student Learning Objectives:** The students will be able to model and compare two digit numbers to determine which is greater.

**Core Lesson Essential Questions:** How can you compare two numbers to find which is greater? (E)

**Core Lesson Materials:** Go Math 7.1

**Topic: Lesson 80 Less Than (E)**

**Core Lesson Description:** Less Than

**Core Lesson Student Learning Objectives:** The students will be able to model and compare two digit numbers to determine which is less.

**Core Lesson Essential Questions:** How can you compare two numbers to find which is less? (E)

**Core Lesson Materials:** Go Math 7.2

**Topic: Lesson 81 Use symbols to compare (E)**

**Core Lesson Description:** Use Symbols to Compare

**Core Lesson Student Learning Objectives:** The students will be able to use the greater than, less than and equal to symbols to compare numbers.

**Core Lesson Essential Questions:** How can you use symbols to show how numbers to compare? (E)

**Core Lesson Materials:** Go math 7.3

**Topic: Lesson 82 Make a Model /Problem Solving**

**Core Lesson Description:** Compare Numbers

**Core Lesson Student Learning Objectives:** The students will be able to solve problems using the strategy make a model.

**Core Lesson Essential Questions:** How do you make a model to help you compare numbers? (E)

**Core Lesson Materials:** Go Math 7.4

**Topic: Lesson 83 Identify Ten more or Less**

**Core Lesson Description:** Ten Less, Ten More

**Core Lesson Student Learning Objectives:** The students will be able to identify numbers that are ten less or ten more than a given number.

**Core Lesson Essential Questions:** How can you identify numbers that are 10 less or ten more than a number? (E)

**Core Lesson Materials:** Go Math 7.5

**Topic: Lesson 84 Comparing Numbers (E)**

**Core Lesson Description:** Compare Numbers

**Core Lesson Student Learning Objectives:** The students will be able to compare numbers.

**Core Lesson Essential Questions:** How can you use place value to compare numbers? (E)

**Core Lesson Materials:** Chapter 7 Review/Test

**Topic: Lesson 85 Comparing Numbers (E)**

**Core Lesson Description:** Compare Numbers

**Core Lesson Student Learning Objectives:** The students will be able compare numbers.

**Core Lesson Essential Questions:** How do you use place value to compare numbers? (E)

**Core Lesson Materials:** Go Math Chapter 7 Test

**Topic: Lesson 88 Add Tens (E)**

**Core Lesson Description:** Add Tens

**Core Lesson Student Learning Objectives:** The students will be able to draw a model to add tens.

**Core Lesson Essential Questions:** How do I draw a model to add tens? (E)

**Core Lesson Materials:** Go Math 8.2

**Topic: Lesson 89 Subtract Tens (E)**

**Core Lesson Description:** Subtract Tens

**Core Lesson Student Learning Objectives:** The students will be able to draw a model to subtract tens.

**Core Lesson Essential Questions:** How do I draw a model to subtract tens? (E)

**Core Lesson Materials:** Go Math 8.3

**Topic: Lesson 90 Use a Hundred Chart to Find Sums (E)**

**Core Lesson Description:** Use a Hundred Chart to Add

**Core Lesson Student Learning Objectives:** The students will be able to use a hundred chart to find sums.

**Core Lesson Essential Questions:** How do you use a hundred chart to find sums? (E)

**Core Lesson Materials:** Go Math 8.4

**Topic: Lesson 91 Use Models to Add (E)**

**Core Lesson Description:** Use Models to Add

**Core Lesson Student Learning Objectives:** The students will be able to use concrete models to add ones or tens to a two-digit number.

**Core Lesson Essential Questions:** How do I use concrete models to add ones or tens to a two-digit number? (E)

**Core Lesson Materials:** Go Math 8.5

**Topic: Lesson 92 Make Ten to Add (E)**

**Core Lesson Description:** Make Ten to Add

**Core Lesson Student Learning Objectives:** The students will be able to make a ten to add a two-digit number and a one-digit number.

**Core Lesson Essential Questions:** How do you make a ten to add a two digit number and a one digit number? (E)

**Core Lesson  
Materials:** Go Math 8.6

**Topic: Lesson 93 Use Place Value to Add (E)**

**Core Lesson  
Description:** Use Place Value to Add

**Core Lesson  
Student Learning  
Objectives:** The students will be able to use tens and ones to add two-digit numbers.

**Core Lesson  
Essential  
Questions:** How do I use tens and ones to add two- digit numbers? (E)

**Core Lesson  
Materials:** Go Math 8.7

**Topic: Lesson 94 Addition Word Problems (E)**

**Core Lesson  
Description:** Addition Word Problems

**Core Lesson  
Student Learning  
Objectives:** The students will be able to solve and explain two-digit addition word problems using the strategy draw a picture.

**Core Lesson  
Essential  
Questions:** How do you solve and explain two-digit addition word problems using the draw a picture strategy? (E)

**Core Lesson  
Materials:** Go Math 8.8

**Topic: Lesson 95 Related Addition and Subtraction (E)**

**Core Lesson  
Description:** Related Addition and Subtraction

**Core Lesson  
Student Learning  
Objectives:** The students will be able to use a hundred chart to find sums and differences.

**Core Lesson  
Essential  
Questions:** How do you use a hundred chart to find sums and differences? (E)

**Core Lesson  
Materials:** Go Math 8.9

**Topic: Lesson 96 Practice Addition and Subtraction (E)**

**Core Lesson  
Description:** Practice Addition and Subtraction

**Core Lesson  
Student Learning  
Objectives:** The students will be able to add and subtract within 100, including continued practice with facts within 20.

**Core Lesson**

**Essential Questions:** How do you add and subtract within 100? (E)

**Core Lesson Materials:** Go Math 8.10

**Topic: Lesson 97 Review (E)**

**Core Lesson Description:** Two-digit Addition and Subtraction Review/Test

**Core Lesson Student Learning Objectives:** The students will be able to use two-digit addition and subtraction strategies to solve problems.

**Core Lesson Essential Questions:** How do you use two digit addition and subtraction strategies to solve problems? (E)

**Core Lesson Materials:** Go Math Chapter Review Test

**Topic: Lesson 98 Two Digit Addition and Subtraction Test (E)**

**Core Lesson Description:** Chapter 8 Test

**Core Lesson Student Learning Objectives:** The students will be able to use two-digit addition and subtraction strategies to solve problems.

**Core Lesson Essential Questions:** How do I use two digit addition and subtraction strategies to solve problems? (E)

**Core Lesson Materials:** Go Math Chapter 8 Test

**Unit: Addition and Subtraction**

**Month:** September, October, November, December, January, March

- Skills:**
1. Use addition and subtraction within 20 to solve word problems by using objects, drawings, and equations with a symbol for the unknown number to represent the problem
  2. Add and subtract within 20. Use strategies such as counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction and creating equivalent but easier or known sums
  3. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20

- Essential Questions:**
1. How is mathematics used to quantify, compare, represent, and model numbers?
  2. How can mathematics support effective communication?
  3. How are relationships represented mathematically?
  4. How can expressions, equations and inequalities be used to quantify, solve, model, and/or analyze mathematical situations?
  5. How can recognizing repetition or regularity assist in solving problems more efficiently?

- Content:**
1. Mathematical relationships among numbers can be represented, compared, and communicated
  2. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations
  3. Patterns exhibit relationships that can be extended, described, and generalized

**Vocabulary:** Addend  
Addition  
Analog  
Circle  
Compare  
Compose  
Cone  
Counting on  
Cube  
Cylinder  
Data  
Decompose  
Equal to  
Fourths  
Fractions  
Greater than  
Half circles  
Half-hour  
Haves  
Hour  
Length  
Less than  
Making ten  
Ones  
Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids  
Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.2.1.A.1](#)  
(Advanced)

Represent and solve problems involving addition and subtraction within 20.

(\* standards consolidated from Topic level)

**Topic: Lesson 1 Use Pictures to Add E**

**Core Lesson Description:** Addition Concepts

**Core Lesson**

**Student Learning Objectives:** Students will show what they already know about addition.

**Core Lesson Materials:** Go Math Chapter 1

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.2.1.A.1](#) (Advanced)

Represent and solve problems involving addition and subtraction within 20.

**Topic: Lesson 2 Model Adding To (E)**

**Core Lesson Description:** Use Pictures to Add to

**Core Lesson**

**Student Learning Objectives:** Students will be able to use pictures to "add to" and find sums.

**Core Lesson Materials:** Go Math 1.1

**Topic: Lesson 3 Model Putting Together (E)**

**Core Lesson Description:** Model Adding to

**Core Lesson Student Learning Objectives:** The students will use concrete objects to solve "adding to" addition problems.

**Core Lesson Materials:** Go Math 1.2

**Topic: Lesson 4 Model Addition (E)**

**Core Lesson Description:** Model Putting Together

**Core Lesson**

**Student Learning Objectives:** The students will use concrete objects to solve "adding to" addition problems.

**Core Lesson Materials:** Go Math 1.3

**Topic: Lesson 5 - Add Zero (E)**

**Core Lesson Description:** Model Addition

**Core Lesson Student Learning Objectives:** The students will solve adding to and putting together situations using the strategy make a model.

**Core Lesson Materials:** Go Math 1.4

**Topic: Lesson 6 - Add in Any Order (E)**

**Core Lesson Description:** Add Zero

**Core Lesson Student Learning Objectives:**

**Core Lesson Materials:** Go Math 1.5

**Topic: Lesson 8 -Addition to Ten -(E)**

**Core Lesson Description:** Put Together Numbers to Ten

**Core Lesson Student Learning Objectives:** The students will model and record all the ways to put together numbers within ten.

**Core Lesson Materials:** Go Math 1.7

**Topic: Lesson 9 - Addition Facts to 10 (E)**

**Core Lesson Description:** Addition to 10

**Core Lesson Student Learning Objectives:** The students will build fluency for addition within 10.

**Core Lesson Materials:** Go Math 1.8

**Topic: Lesson 10 Addition Problem Solving Strategies Review**

**Core Lesson Description:** Addition Concepts

**Core Lesson Student Learning Objectives:** The students will use addition strategies to solve problems.

**Core Lesson Essential Questions:** How can you model adding within ten? E

**Core Lesson Materials:** Go Math Chapter 1/Review Test



**Topic: Lesson 11 - Addition Strategies Chapter Test**

**Core Lesson Description:** Addition Concepts

**Core Lesson Student Learning Objectives:** The students will use addition strategies to solve problems.

**Core Lesson Essential Questions:** How can you model adding within ten? E

**Core Lesson Materials:** Go Math Chapter 1 Test

**Topic: Lesson 12 Intro**

**Core Lesson Description:** Subtraction Concepts

**Core Lesson Student Learning Objectives:** The students will be able to show what they already know about subtraction.

**Core Lesson Essential Questions:** How can you subtract numbers from 10 or less? E

**Core Lesson Materials:** Go Math Chapter 2

**Topic: Lesson 13 - Use pictures to Show Taking From (E)**

**Core Lesson Description:** Use Pictures to Show Taking From

**Core Lesson Student Learning Objectives:** The students will use pictures to show "taking from" and find differences.

**Core Lesson Essential Questions:** How can you show taking from with pictures? E

**Core Lesson Materials:** Go Math 2.1

**Topic: Lesson 14 Model -Taking From with Concrete Objects (E)**

**Core Lesson Description:** Model Taking From

**Core Lesson Student Learning Objectives:** The students will use concrete objects to solve "taking from" subtraction problems.

**Core Lesson Essential Questions:** How do you model taking from in a group? E

**Core Lesson Materials:** Go Math 2.2

**Topic: Lesson 15 Model Taking Apart (E)**

**Core Lesson Description:** Model Taking Apart

**Core Lesson Student Learning Objectives:** The students will use concrete objects to solve "taking apart" subtraction problems.

**Core Lesson Essential Questions:** How do you model taking apart? E

**Core Lesson Materials:** Go Math 2.3

**Topic: Lesson 16 Model Subtraction (E)**

**Core Lesson Description:** Model Subtraction

**Core Lesson Student Learning Objectives:** The students will solve taking from and taking apart subtraction problems using the strategy make a model.

**Core Lesson Essential Questions:** How do you use the "make a model strategy" to solve taking from and taking apart subtraction problems? E

**Core Lesson Materials:** Go Math 2.4

**Topic: Lesson 17 Using Pictures to Subtract to Compare (E)**

**Core Lesson Description:** Use Pictures and Subtraction to Compare

**Core Lesson Student Learning Objectives:** The students will compare pictorial groups to understand subtraction.

**Core Lesson Essential Questions:** How can you use pictures to compare and subtract? E

**Core Lesson Materials:** Go Math 2.5

**Topic: Lesson 18 Subtract to Compare (E)**

**Core Lesson Description:** Subtract to Compare

**Core Lesson Student Learning Objectives:** The students will model and compare groups to show the meaning of subtractions.

**Core Lesson Essential Questions:** How can you use models to compare and subtract? E

**Core Lesson Materials:** Go Math 2.6

**Topic: Lesson 19 Subtracting All or Zero (E)**

**Core Lesson Description:** Subtract All or Zero

**Core Lesson Student Learning Objectives:** The students will identify how many are left when subtracting all or 0.

**Core Lesson Essential Questions:** What happens when you subtract 0 from a number? E

**Core Lesson Materials:** Go Math 2.7

**Topic: Lesson 20 Take Apart Numbers (E)**

**Core Lesson Description:** Take Apart Numbers

**Core Lesson Student Learning Objectives:** The students will model and record all the ways to take apart numbers within ten.

**Core Lesson Essential Questions:** How can you show all the ways to take apart a number? E

**Core Lesson Materials:** Go Math 2.8

**Topic: Lesson 21 Subtracting from Ten or Less (E)**

**Core Lesson Description:** Subtract from 10 or Less

**Core Lesson Student Learning Objectives:** The students will build fluency to subtract within ten.

**Core Lesson Essential Questions:** Why are some subtraction facts easy to subtract? E

**Core Lesson Materials:** Go Math 2.9

**Topic: Lesson 22 Chapter Review**

**Core Lesson Description:** Subtraction Concepts

**Core Lesson Student Learning Objectives:** The students will be able to use subtraction strategies to solve problems.

**Core Lesson Essential Questions:** How can you subtract numbers from 10 or less? E

**Core Lesson Materials:** Go Math Chapter Review/Test 2

**Topic: Lesson 23 Chapter Test**

**Core Lesson Description:** Subtraction Concepts

**Core Lesson Student Learning Objectives:** The students will be able to use subtraction strategies to solve problems.

**Core Lesson Essential Questions:** How can I use strategies to subtract numbers from 10 or less? E

**Core Lesson Materials:** Chapter 2 Test

**Topic: Lesson 24 - Introduction to Addition Strategies (E)**

**Core Lesson Description:** Addition Strategies

**Core Lesson Student Learning Objectives:** The students will show what they already know about addition strategies.

**Core Lesson Essential Questions:** How do you solve addition problems? E

**Core Lesson Materials:** Go Math Chapter 3

**Topic: Lesson 26 Count on Strategy (E)**

**Core Lesson Description:** Count On

**Core Lesson Student Learning Objectives:** The students will be able to use count on 1, 2, or 3 as a strategy to find sums within 20.

**Core Lesson Essential Questions:** How do you count on 1, 2, 3?

**Core Lesson Materials:** Go Math 3.2

**Topic: Lesson 27 Doubles Strategy (E)**

**Core Lesson Description:** Add Doubles

**Core Lesson Student Learning Objectives:** The students will be able to use doubles as a strategy to solve addition facts with sums within 20.

**Core Lesson Essential Questions:** What are doubles facts? E

**Core Lesson Materials:** Go Math 3.3

**Topic: Lesson 28 Using Doubles to Add (E)**

**Core Lesson Description:** Use Doubles to Add

**Core Lesson Student Learning Objectives:** The students will be able to use doubles to create equivalent but easier sums.

**Core Lesson Essential Questions:** How can you use doubles facts to help you add? E

**Core Lesson Materials:** Go Math 3.4

**Topic: Lesson 29 Doubles Plus and Doubles Minus 1 (E)**

**Core Lesson Description:** Doubles Plus 1 and Doubles Minus 1

**Core Lesson Student Learning Objectives:** The students will be able to use doubles plus 1 and doubles minus 1 as strategies to find sums within 20.

**Core Lesson Essential Questions:** How can you use what you learned about doubles? E

**Core Lesson Materials:** Go Math 3.5

**Topic: Lesson 30 Using Addition Strategies (E)**

**Core Lesson Description:** Practice Strategies

**Core Lesson Student Learning Objectives:** The students will be able to use the strategies to practice addition facts.

**Core Lesson Essential Questions:** What strategies can you use to solve addition problems? E

**Core Lesson Materials:** Go math 3.6

**Topic: Lesson 31 Using a ten Frame to Add Ten (E)**

**Core Lesson Description:** Add 10 and More

**Core Lesson Student Learning Objectives:** The students will be able to use a ten frame to add 10 and an addend less than ten.

**Core Lesson Essential Questions:** How can you use a 10-frame to add 10 and some more? E

**Core Lesson Materials:** Go Math 3.7

**Topic: Lesson 32 Using the Make a Ten Strategy to Find Sums Within 20 (E)**

**Core Lesson Description:** Make a Ten to Add

**Core Lesson Student Learning Objectives:** The students will be able to use make a ten as a strategy to find sums within 20.

**Core Lesson Essential Questions:** How do you use the make a ten strategy to add?

**Core Lesson Materials:** Go Math 3.8

**Topic: Lesson 33 Make a Ten to Add (E)**

**Core Lesson Description:** Use Make a Ten to Add

**Core Lesson Student Learning Objectives:** The students will be able to use numbers to show how to use the make a ten strategy to add.

**Core Lesson Essential Questions:** How can you make a ten to help you add? E

**Core Lesson Materials:** Go Math 3.9

**Topic: Lesson 36 Using the Draw a Picture Strategy to solve Adding to and Putting Together (E)**

**Core Lesson Description:** Use Addition Strategies

**Core Lesson Student Learning Objectives:** The students will be able to solve adding to and putting together situations using the strategy draw a picture.

**Core Lesson Essential Questions:** How do you solve addition word problems by drawing a picture? E

**Core Lesson Materials:** Go Math 3.12

**Topic: Lesson 37 Using Addition Strategies to Solve Problems (E)**

**Core Lesson Description:** Addition Strategies

**Core Lesson Student Learning Objectives:** The students will be able to use addition strategies to solve problems.

**Core Lesson Essential Questions:** How do you use addition strategies to solve problems? E

**Core Lesson Materials:** Go Math Chapter 3 Review/Test

**Topic: Lesson 38 Using Addition Strategies to Solve Problems (E)**

**Core Lesson Description:** Addition Strategies

**Core Lesson Student Learning Objectives:** The students will be able to use addition strategies to solve problems.

**Core Lesson Essential Questions:** How do you use addition strategies to solve problems? E

**Core Lesson Materials:** Go Math Chapter 3 Test

**Topic: Lesson 39 - Introduction**

**Core Lesson Description:** Subtraction Strategies

**Core Lesson Student Learning Objectives:** The students will be able to use what they already know about subtraction to solve problems.

**Core Lesson Essential Questions:** How do you solve subtraction problems? E

**Core Lesson Materials:** Go Math Chapter 4 Introduction

**Topic: Lesson 40 Count Back 1, 2, 3, Strategies (E)**

**Core Lesson Description:** Count Back

**Core Lesson Student Learning Objectives:** The students will be able to use count back 1, 2, or 3 as a strategy to subtract.

**Core Lesson Essential Questions:** How can you count back 1, 2, or 3? E

**Core Lesson Materials:** Go Math 4.1

**Topic: Lesson 41 Think Addition to Subtract (E)**

**Core Lesson Description:** Think Addition to Subtract

**Core Lesson Student Learning Objectives:** The students will be able to recall addition facts to subtract numbers within 20.

**Core Lesson Essential Questions:** How can you use an addition fact to find the answer to a subtraction fact? E

**Core Lesson Materials:** Go Math 4.2

**Topic: Lesson 42 Think Addition to Subtract (E)**

**Core Lesson Description:** Use Think Addition to Subtract

**Core Lesson Student Learning Objectives:** The students will be able to use addition as a strategy to subtract numbers within 20.

**Core Lesson Essential Questions:** How can you use addition to help you find the answer to a subtraction fact? E

**Core Lesson Materials:** Go Math 4.3

**Topic: Lesson 43 Use Addition as a Strategy to Subtract (E)**

**Core Lesson Description:** The students will be able to use addition as a strategy to subtract numbers within 20.

**Core Lesson Essential Questions:** How can you use addition to help you find the answer to a subtraction fact? E

**Core Lesson Materials:** Go Math 4.3

**Topic: Lesson 44 Make a Ten to Subtract (E)**

**Core Lesson Description:** Use 10 to Subtract

**Core Lesson Student Learning Objectives:** The students will be able to use make a ten as a strategy to subtract.

**Core Lesson Essential Questions:** How do I use the make a 10 strategy to subtract? (E)

**Core Lesson Materials:** Go math 4.4

**Topic: Lesson 45 Break apart to Subtract (E)**

**Core Lesson Description:** Break Apart to Subtract

**Core Lesson Student Learning Objectives:** The students will be able to subtract by breaking apart to make a ten.

**Core Lesson Essential Questions:** How do you break apart a number to subtract? (E)

**Core Lesson Materials:** Go Math 4.5

**Topic: Lesson 46 Using Subtraction Strategies (E)**

**Core Lesson Description:** Use Subtraction Strategies



**Core Lesson Student Learning Objectives:** The students will be able to solve subtraction problem situations using the strategy act it out.

**Core Lesson Essential Questions:** How do you use the Act it Out strategy to subtract? (E)

**Core Lesson Materials:** Go Math 4.6

**Topic: Lesson 47 Review Subtraction Strategies (E)**

**Core Lesson Description:** Subtraction Strategies

**Core Lesson Student Learning Objectives:** The students will be able to use subtraction strategies to solve problems.

**Core Lesson Essential Questions:** How do I use subtraction strategies to solve problems? (E)

**Core Lesson Materials:** Go Math Chapter 4 Review/Test

**Topic: Lesson 48 Subtraction Strategies Test (E)**

**Core Lesson Description:** Subtraction Strategies

**Core Lesson Student Learning Objectives:** The students will be able to use subtraction strategies to solve problems.

**Core Lesson Essential Questions:** How do you use strategies to solve subtraction problems? (E)

**Core Lesson Materials:** Go Math Chapter 4 Test

**Topic: Lesson 49 Addition and Subtraction Relationships (E)**

**Core Lesson Description:** Addition and Subtraction Relationships

**Core Lesson Essential Questions:** How can relating addition and subtraction help you learn and understand facts within 20? (E)

**Core Lesson Materials:** Go Math Chapter 5 Introduction

**Topic: Lesson 50 Make a Model Strategy to Add and Subtract (E)**

**Core Lesson Description:** Add or Subtract

**Core Lesson Student Learning Objectives:** The students will be able to solve addition and subtraction problem situations using the strategy make a model.

**Core Lesson Essential Questions:** How do you use the "make a model" strategy to solve addition and subtraction problems? (E)

**Core Lesson Materials:** Go Math 5.1

**Topic: Lesson 51 Record Related Facts (E)**

**Core Lesson Description:** Record Related Facts

**Core Lesson Student Learning Objectives:** The students will be able to record related facts within 20.

**Core Lesson Essential Questions:** How do related facts help you find missing numbers? (E)

**Core Lesson Materials:** Go Math 5.2

**Topic: Lesson 52 Identify Related Facts (E)**

**Core Lesson Description:** Identify Related Facts

**Core Lesson Student Learning Objectives:** The students will be able to identify related addition and subtraction facts within 20.

**Core Lesson Essential Questions:** How do you know if addition and subtraction facts are related? (E)

**Core Lesson Materials:** Go Math 5.3

**Topic: Lesson 53 Using Addition to check Subtraction (E)**

**Core Lesson Description:** Use Addition to Check Subtraction

**Core Lesson Student Learning Objectives:** The students will be able to apply the inverse relationship of addition and subtraction.

**Core Lesson Essential Questions:** How can you use addition to check subtraction? (E)

**Core Lesson Materials:** Go Math 5.4

**Topic: Lesson 57 Ways to Make Numbers to 20**

**Core Lesson Description:** Ways to Make Numbers to 20

**Core Lesson Student Learning Objectives:** The students will be able to represent equivalent forms of numbers using sums and differences within 20.

**Core Lesson Essential Questions:** How can you add and subtract in different ways to make the same number? (E)

**Core Lesson Materials:** Go Math 5.8

**Topic: Lesson 58**

**Topic: Lesson 59 Equal and not Equal (E)**

**Core Lesson Description:** Equal and Not Equal

**Core Lesson Student Learning Objectives:** The students will be able to determine if an equation is true or false.

**Core Lesson Essential Questions:** How can you decide if a number sentence is true or false? (E)

**Core Lesson Materials:** Go Math 5.9

**Topic: Lesson 60 Addition and Subtraction Facts to 20 (E)**

**Core Lesson Description:** Fact Practice to 20

**Core Lesson Student Learning Objectives:** The students will be able to add and subtract facts within 20 and demonstrate fluency for addition and subtraction within ten.

**Core Lesson Essential Questions:** How do you add and subtract numbers within 20? (E)

**Core Lesson Materials:** Go Math 5.10

**Topic: Lesson 61 Addition and Subtraction Relationships (E)**

**Core Lesson Description:** Addition and Subtraction Relationships

**Core Lesson Student Learning Objectives:** The students will be able to use addition and subtraction relationships to solve problems.

**Core Lesson Essential Questions:** How do I use addition and subtraction relationships to solve problems? (E)

**Core Lesson Materials:** Go Math Chapter 5 Review/Test

**Topic: Lesson 62 Addition and Subtraction Relationships (E)**

**Core Lesson Description:** Addition and Subtract Relationships

**Core Lesson Student Learning Objectives:** The students will be able to use addition and subtraction relationships to solve problems.

**Core Lesson Essential Questions:** How can relating addition and subtraction help you to learn and understand facts within 20? (E)

**Core Lesson Materials:** Go Math Chapter 5 Test

#### **Topic: Lesson 86 Adding and Subtracting 2 -digit numbers (E)**

**Core Lesson Description:** Two-digit Addition and Subtraction

**Core Lesson Student Learning Objectives:** The students will be able to show what they already know about two-digit addition and subtraction.

**Core Lesson Essential Questions:** How can you add and subtract two-digit numbers? (E)

**Core Lesson Materials:** Go Math Chapter 8 Introduction

#### **Topic: Lesson 87 Adding and Subtracting 2-Digit Numbers (E)**

**Core Lesson Description:** Add and Subtract Within 20

**Core Lesson Student Learning Objectives:** The students will be able to add and subtract within 20.

**Core Lesson Essential Questions:** What strategies can you use to add and subtract 2-digit numbers? (E)

**Core Lesson Materials:** Go Math 8.1

#### **Unit: Properties of Operations**

**Month:** September, November, December, January

**Skills:**

1. Apply properties of operations as strategies to add and subtract (commutative property of addition; associative property of addition)
2. Understand subtraction as an unknown-addend problem. For example, subtract  $10-8$  by finding the number that makes 10 when added to 8

**Essential Questions:**

1. How is mathematics used to quantify, compare, represent, and model numbers?
2. How can mathematics support effective communication?
3. How are relationships represented mathematically?
4. How can expressions, equations and inequalities be used to quantify, solve, model and/or analyze mathematical situations?
5. How can patterns be used to describe relationships in mathematical situations?

- Content:**
1. Mathematical relationships among numbers can be represented, compared, and communicated
  2. Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations
  3. Patterns exhibit relationships that can be extended, described, and generalized

**Vocabulary:**

Addend

Addition

Analog

Circle

Compare

Compose

Cone

Counting on

Cube

Cylinder

Data

Decompose

Equal to

Fourths

Fractions

Greater than

Half circles

Half-hour

Haves

Hour

Length

Less than

Making ten

Ones

Place value

Quarter-circles

Quarters

Rectangle

Rectangular Prism

Square

Subtraction

Sum

Tens

Trapezoids

Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.2.1.A.2 \(Advanced\)](#) Understand and apply properties of operations and the relationship between addition and subtraction.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.2.1.A.2 \(Advanced\)](#) Understand and apply properties of operations and the relationship between addition and subtraction.

**Topic: Lesson 6 Add Zero (E)**

**Core Lesson Description:** Add Zero

**Core Lesson Student Learning Objectives:** The students will understand and apply the Additive Identity Property for Addition.

**Core Lesson Essential Questions:** What happens to a number when you add zero? (E)

**Core Lesson Materials:** Go Math 1.5

**Topic: Lesson 7 Add in Any Order (E)**

**Core Lesson Description:** Add in Any Order

**Core Lesson Student Learning Objectives:** The students will explore Commutative Property of Addition.

**Core Lesson Essential Questions:** Why can you add addends in any order? (E)

**Core Lesson Materials:** Go Math 1.6

**Topic: Lesson 25 Add in Any Order (E)**

**Core Lesson Description:** Add in Any Order

**Core Lesson Student Learning Objectives:** The students will be able to understand and apply the Commutative Property of Addition for sums within 20.

**Core Lesson**

**Essential Questions:** Why can you add addends in any order? (E)

**Core Lesson Materials:** Go Math 3.1

**Topic: Lesson 34 Add Three Numbers (E)**

**Core Lesson Description:** Add 3 Numbers

**Core Lesson Student Learning Objectives:** The students will be able to use the associative property of Addition to add three addends.

**Core Lesson Essential Questions:** How do you add three numbers together? (E)

**Core Lesson Materials:** Go Math 3.10

**Topic: Lesson 35 Adding Three Addends (E)**

**Core Lesson Description:** Add 3 Numbers

**Core Lesson Student Learning Objectives:** The students will be able to understand and apply the Associative and Commutative Property of Addition to add three addends.

**Core Lesson Essential Questions:** How do you use the commutative and associative property to add three numbers? (E)

**Core Lesson Materials:** Go Math 3.11

**Topic: Lesson 54 Using Related Facts (E)**

**Core Lesson Description:** Unknown Numbers

**Core Lesson Student Learning Objectives:** The students will be able to use related facts to determine unknown numbers.

**Core Lesson Essential Questions:** How do you use related facts to find unknown numbers? (E)

**Core Lesson Materials:** Go Math 5.5

**Topic: Lesson 55 Using Related Facts to Subtract (E)**

**Core Lesson Description:** Use Related Facts

**Core Lesson Student Learning Objectives:** The students will be able use a related fact to subtract.

**Core Lesson Essential Questions:** How do you use a related fact to subtract? (E)

**Core Lesson Materials:** Go Math 5.6

**Topic: Lesson 56 Choosing an Operation and Strategy for Addition and Subtraction Word Problems? (E) or Subtract (E)**

**Core Lesson Description:** Choose an Operation

**Core Lesson Student Learning Objectives:** The students will be able to choose an operation and strategy to solve an addition or subtraction word problem.

**Core Lesson Essential Questions:** How do you choose an operation and strategy to add or subtract? (E)

**Core Lesson Materials:** Go Math 5.7

**Topic:**

**Unit: Two- and Three- Dimensional**

**Month:** April

**Skills:**

1. Compose two and three-dimensional shapes and distinguish between attributes
2. Build and draw shapes to possess attributes

**Essential Questions:**

1. How can recognizing repetition or regularity assist in solving problems more efficiently?
2. How are spatial relationships, including shape and dimension, used to draw, construct, model and represent real situations or solve problems?
3. How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?
4. How can geometric properties and theorems be used to describe, model, and analyze situations?

**Content:**

1. Patterns exhibit relationships that can be extended, described, and generalized
2. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization

**Vocabulary:**

- Addend
- Addition
- Analog
- Circle
- Compare
- Compose
- Cone
- Counting on
- Cube
- Cylinder
- Data



Decompose  
Equal to  
Fourths  
Fractions  
Greater than  
Half circles  
Half-hour  
Haves  
Hour  
Length  
Less than  
Making ten  
Ones  
Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids  
Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.3.1.A.1](#)  
(Advanced)

Compose and distinguish between two- and three-dimensional shapes based on their attributes.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.3.1.A.1](#) (Advanced)

Compose and distinguish between two- and three-dimensional shapes based on their attributes.

**Topic: Lesson 121 Intro**

**Core Lesson Description:** Three-Dimensional Geometry Introduction

**Core Lesson Student Learning Objectives:** The students will be able to show what they already know about three-dimensional geometry.

**Core Lesson Essential Questions:** How do you show what you know about Three- dimensional geometry?

**Core Lesson Materials:** Go Math Chapter 11 Introduction

**Topic: Lesson 122 3- D Shapes (I)**

**Core Lesson Description:** 3-D Shapes

**Core Lesson Student Learning Objectives:** The students will be able to identify and describe 3-D shapes according to defining attributes.

**Core Lesson Essential Questions:** How do I identify and describe 3-d shapes according to defining attributes? (I)

**Core Lesson Materials:** Go Math 11.1

**Topic: Lesson 123 Combine 3-D Shapes (I)**

**Core Lesson Description:** Combine 3-D Shapes

**Core Lesson Student Learning Objectives:** The students will be able to compose a new shape by combining 3-D shapes.

**Core Lesson Essential Questions:** How do I compose a new shape by combining 3-D shapes? (I)

**Core Lesson Materials:** Go Math 11.2

**Topic: Lesson 124 Make new 3 D Shapes (I)**

**Core Lesson Description:** Make new 3-D Shapes

**Core Lesson Student Learning Objectives:** The students will be able to use composite 3-D shapes to build new shapes.

**Core Lesson Essential Questions:** How do I use composite 3-D shapes to build new shapes? (I)

**Core Lesson Materials:** Go Math 11.3

**Topic: Lesson 125 Take Apart 3 D Shapes (I)**

**Core Lesson Description:** Take Apart 3-D Shapes

**Core Lesson Student Learning Objectives:** The students will be able to identify 3-D shapes used to build a composite shape using the strategy act it out.

**Core Lesson Essential Questions:** How do you identify 3-D Shapes used to build a composite shape using the strategy "Act it Out"? (I)-

**Core Lesson Materials:** Go math 11.4

**Topic: Lesson 126 2-D Shapes on 3-D Shapes (I)**

**Core Lesson Description:** 2-D Shapes on 3-D Shapes

**Core Lesson Student Learning Objectives:** The students will be able to identify 2-D shapes on 3-D shapes.

**Core Lesson Essential Questions:** How do I identify 2-D shapes on 3-D shapes? (I)

**Core Lesson Materials:** Go Math 11.5

**Topic: Lesson 127 Two and Three- Dimensional Shapes (E)**

**Core Lesson Description:** 2-D and 3-D Shapes Chapter Review

**Core Lesson Student Learning Objectives:** The students will be able to identify 2-D and 3-D shapes.

**Core Lesson Essential Questions:** How do you identify 2-D and 3-D shapes? (E)

**Core Lesson Materials:** Go Math Chapter 11 Review

**Topic: Lesson 128 2-D and 3-D Shapes**

**Core Lesson Description:** 2-D and 3-D Shapes

**Core Lesson Student Learning Objectives:** The students will be able to identify 2-D and 3-D shapes.

**Core Lesson Essential Questions:** How do I identify 2-D and 3-D shapes? (E)

**Core Lesson Materials:** Chapter 11 Test

**Topic: Lesson 129 Fractions (I)**

**Core Lesson  
Essential  
Questions:**

How do I partition circles and rectangles into two and four equal shares? (I)

**Unit: Fractions**

**Month:** May

**Skills:** 1. Partition circles and rectangles into two and four equal shares. Understanding that decomposing into more equal shares creates smaller shares.

**Essential Questions:**

1. How can patterns be used to describe relationships in mathematical situations?
2. How can recognizing repetition or regularity assist in solving problems more efficiently?
3. How are spatial relationships, including shape and dimension, used to draw, construct, model and represent real situations or solve problems?
4. How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?

**Content:**

1. Patterns exhibit relationships that can be extended, described, and generalized
2. Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization

**Vocabulary:**

- Addend
- Addition
- Analog
- Circle
- Compare
- Compose
- Cone
- Counting on
- Cube
- Cylinder
- Data
- Decompose
- Equal to
- Fourths
- Fractions
- Greater than
- Half circles
- Half-hour
- Haves
- Hour
- Length
- Less than
- Making ten
- Ones

Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids  
Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.3.1.A.2 \(Advanced\)](#) Use the understanding of fractions to partition shapes into halves and quarters.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.3.1.A.2 \(Advanced\)](#) Use the understanding of fractions to partition shapes into halves and quarters.

**Unit: Measurement**

**Month:** March

- Skills:**
1. Order three objects by length; compare the lengths of two objects indirectly by using a third object
  2. Use standard and non-standard units of measure to express the length of an object in a whole number of length units
  3. Understand that the length measurement of an object is the number of same-size length units

- Essential Questions:**
1. What does it mean to estimate or analyze numerical quantities?
  2. When is it appropriate to estimate versus calculate?
  3. What makes a tool and/or strategy appropriate for a given task?
  4. Why does "what" we measure influence "how" we measure?
  5. In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?
  6. How precise do measurements and calculations need to be?

- Content:**
1. Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools

2. Measurement attributes can be quantified, and estimated using customary and non-customary units of measure

**Vocabulary:**

Addend  
Addition  
Analog  
Circle  
Compare  
Compose  
Cone  
Counting on  
Cube  
Cylinder  
Data  
Decompose  
Equal to  
Fourths  
Fractions  
Greater than  
Half circles  
Half-hour  
Haves  
Hour  
Length  
Less than  
Making ten  
Ones  
Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids  
Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.4.1.A.1](#)  
(Advanced)

Order lengths and measure them both indirectly and by repeating length units.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.4.1.A.1](#) (Advanced)

Order lengths and measure them both indirectly and by repeating length units.

**Topic: Lesson 99 Introduction of Measurement and Data**

**Core Lesson Description:** Introduction of Measurement and Data

**Core Lesson**

**Student Learning Objectives:** The students will be able to show what they already know about measurement.

**Core Lesson**

**Essential Questions:** How can you measure length and tell time? (E)

**Core Lesson Materials:** Go Math Chapter 9 Introduction

**Topic: Lesson 100 Order Length (E)**

**Core Lesson Description:** Order Length

**Core Lesson**

**Student Learning Objectives:** The students will be able to order objects by length.

**Core Lesson**

**Essential Questions:** How do I order objects by length? (E)

**Core Lesson Materials:** Go Math 9.1

**Topic: Lesson 101 Indirect Measurement (E)**

**Core Lesson Description:** Indirect Measurement

**Core Lesson**

**Student Learning Objectives:** The students will be able to use the transitivity principle to measure indirectly.

**Core Lesson**

**Essential Questions:** How do I use the transitivity principle to measure indirectly ? (E)

**Core Lesson Materials:** 9.2

**Topic: Lesson 102 Use non-standard units to measure length (E)**

**Core Lesson Description:** Use Nonstandard Units to Measure Length

**Core Lesson Student Learning Objectives:** The students will be able to measure length using nonstandard units.

**Core Lesson Essential Questions:** How do I measure length using non -standard units? (E)

**Core Lesson Materials:** 9.3

**Topic: Lesson 103 How do I make a non- standard measuring tool? (I)**

**Core Lesson Description:** Make a Nonstandard Measuring Tool

**Core Lesson Student Learning Objectives:** The students will be able to make a nonstandard measuring tool to measure length.

**Core Lesson Essential Questions:** How do you make a non-standard measuring tool to measure length? (E)

**Core Lesson Materials:** Go Math 9.4

**Topic: Lesson 104 Measure and Compare (E)**

**Core Lesson Description:** Measure and Compare

**Core Lesson Student Learning Objectives:** The students will be able to solve measurement problems using the strategy act it out.

**Core Lesson Essential Questions:** How do I solve measurement problems using the "act it out" strategy? (E)

**Core Lesson Materials:** Go Math 9.5

**Unit: Time**

**Month:** March

**Skills:** 1. Tell and write time in hours and half hours using analog and digital clocks

**Essential Questions:**

1. What does it mean to estimate or analyze numerical quantities?
2. When is it appropriate to estimate versus calculate?
3. What makes a tool and/or strategy appropriate for a given task?
4. How precise do measurements and calculations need to be?

**Content:** 1. Numerical quantities, calculations, and measurements can be estimated or analyzed by



using appropriate strategies and tools

**Vocabulary:**

Addend  
Addition  
Analog  
Circle  
Compare  
Compose  
Cone  
Counting on  
Cube  
Cylinder  
Data  
Decompose  
Equal to  
Fourths  
Fractions  
Greater than  
Half circles  
Half-hour  
Haves  
Hour  
Length  
Less than  
Making ten  
Ones  
Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum  
Tens  
Trapezoids

Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.4.1.A.2](#)  
(Advanced)

Tell and write time to the nearest half hour using both analog and digital clocks.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.4.1.A.2](#) (Advanced)

Tell and write time to the nearest half hour using both analog and digital clocks.

**Topic: Lesson 105 Time to the Hour (E)**

**Core Lesson Description:** Time to the hour

**Core Lesson Student Learning Objectives:** The students will be able to write times to the hour shown on analog clocks.

**Core Lesson Essential Questions:** How do I tell time to the hour? (E)

**Topic: Lesson 106 Time to the Half Hour (E)**

**Core Lesson Description:** Time to the Half Hour

**Core Lesson Student Learning Objectives:** The students will be able to write times to the half hour shown on analog clocks.

**Core Lesson Essential Questions:** How do I tell time to the half-hour? (E)

**Core Lesson Materials:** Go Math 9.6

**Topic: Lesson 107 Time to the half-hour and hour? (E)**

**Core Lesson Description:** Tell Time to the Hour and Half Hour

**Core Lesson Student Learning Objectives:** The students will be able to tell time to the hour and half hour using analog and digital clocks.

**Core Lesson Essential Questions:** How do I tell time to the hour and half hour? (E)

**Core Lesson Materials:** Go Math 9.8

**Topic: Lesson 108 Practice Time to Hour and Half Hour (E)**

**Core Lesson Description:** Practice Time to the Hour and Half Hour

**Core Lesson Student Learning Objectives:** The students will be able to use the hour hand to draw and write times on analog and digital clocks.

**Core Lesson Essential Questions:** How do I practice telling time to the hour and half hour? (E)

**Core Lesson Materials:** Go Math 9.9

**Topic: Lesson 109 Using Measurement and Telling Time**

**Core Lesson Description:** Chapter 9 Review/Test

**Core Lesson Student Learning Objectives:** The students will be able to use measurement and tell time.

**Core Lesson Essential Questions:** How do I use measurement and tell time?

**Core Lesson Materials:** Go Math Chapter 9 Review/Test

**Topic: Lesson 110 Measure Length and Telling Time**

**Core Lesson Description:** Chapter 9 Test

**Core Lesson Student Learning Objectives:** The students will be able to use measurement and tell time.

**Core Lesson Essential Questions:** How do I use measurement and tell time?

**Core Lesson Materials:** Chapter 9 Test

**Unit: Represent and Interpret Data (E)**

**Month:** April

**Skills:**

1. Organize, represent, and interpret data with up to three categories.
2. Ask and answer questions about the data

**Essential Questions:**

1. What does it mean to estimate or analyze numerical quantities?
2. What makes a tool and/or strategy appropriate for a given task?
3. Why does "what" we measure influence "how" we measure?
4. How can data be organized and represented to provide insight into the relationship between quantities?

5. How does the type of data influence the choice of display?
6. How can probability and data analysis be used to make predictions?

**Content:**

1. Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools
2. Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions
3. Data can be modeled and used to make inferences

**Vocabulary:**

Addend  
Addition  
Analog  
Circle  
Compare  
Compose  
Cone  
Counting on  
Cube  
Cylinder  
Data  
Decompose  
Equal to  
Fourths  
Fractions  
Greater than  
Half circles  
Half-hour  
Haves  
Hour  
Length  
Less than  
Making ten  
Ones  
Place value  
Quarter-circles  
Quarters  
Rectangle  
Rectangular Prism  
Square  
Subtraction  
Sum

Tens

Trapezoids

Triangle

**STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.4.1.A.4](#)  
(Advanced)

Represent and interpret data using tables/charts.

(\* standards consolidated from Topic level)

**Topic: Lesson**

**STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.4.1.A.4](#) (Advanced)

Represent and interpret data using tables/charts.

**Topic: Lesson 111 Represent Data**

**Core Lesson Description:** Represent Data Chapter Introduction

**Core Lesson Student Learning Objectives:** The students will be able to show what they already know about representing data.

**Core Lesson Essential Questions:** How can graphs and charts help you organize, represent and interpret data? (E)

**Core Lesson Materials:** Go Math Chapter 10 Introduction

**Topic: Lesson 112 Read Picture Graphs (E)**

**Core Lesson Description:** Read Picture Graphs

**Core Lesson Student Learning Objectives:** The students will be able to analyze and compare data shown in a picture graph where each symbol represents one.

**Core Lesson Essential Questions:** How do I analyze and compare data shown in a picture graph? (E)

**Core Lesson Materials:** Go Math 10.1

**Topic: lesson 113 Make Picture Graphs (E)**

**Core Lesson Description:** Make Picture Graphs

**Core Lesson Student Learning Objectives:** The students will be able to make a picture graph where each symbol represents one and interpret the information.

**Core Lesson Essential Questions:** How do I make a picture graph where each symbol represents one , and interpret information? (E)

**Core Lesson Materials:** Go Math 10.2

**Topic: Lesson 114 Read Bar Graphs (E)**

**Core Lesson Description:** Read Bar Graphs

**Core Lesson Student Learning Objectives:** The students will be able to analyze and compare data shown in a bar graph.

**Core Lesson Essential Questions:** How do I analyze and compare data in a bar graph? (E)

**Core Lesson Materials:** Go Math 10.3

**Topic: Lesson 115 Make a Bar Graph (I)**

**Core Lesson Description:** Make Bar Graphs

**Core Lesson Student Learning Objectives:** The students will be able to make a bar graph and interpret the information.

**Core Lesson Essential Questions:** How do I make a bar graph and interpret the information? (I)

**Core Lesson Materials:** Go Math 10.4

**Topic: Lesson 116 Read Tally Charts (I)**

**Core Lesson Description:** Read Tally Charts

**Core Lesson Student Learning Objectives:** The students will be able to analyze and compare data shown in a tally chart.

**Core Lesson Essential Questions:** How do I analyze and compare data in a tally chart? (I)

**Core Lesson Materials:** Go math 10.5

**Topic: Lesson 117 Make a Tally Chart (I)**

**Core Lesson Description:** Make Tally Charts

**Core Lesson Student Learning Objectives:** The students will be able to make a tally chart and the interpret the information.

**Core Lesson Essential Questions:** How do I analyze and compare data shown in a tally chart? (I)

**Core Lesson Materials:** Go Math 10.6

**Topic: Lesson 118 Represent Data (I)**

**Core Lesson Description:** Represent Data

**Core Lesson Student Learning Objectives:** The students will be able to solve problem situations using strategy make a graph.

**Core Lesson Essential Questions:** How do I solve problems using the make a graph strategy? (I)

**Core Lesson Materials:** Go Math 10.7

**Topic: Lesson 119 Represent Data Chapter Review**

**Core Lesson Description:** Represent Data Chapter Review/Test

**Core Lesson Student Learning Objectives:** The students will be able to represent data.

**Core Lesson Essential Questions:** How do I represent data?

**Core Lesson Materials:** Go Math Chapter 10 Review

**Topic: Lesson 120 Represent Data**

**Core Lesson Description:** Represent Data

**Core Lesson Student Learning Objectives:** The students will be able to represent data.

**Core Lesson Essential Questions:** How can graphs and charts help you organize, represent, and interpret data

**Core Lesson Materials:** Chapter 10 Test