

Curriculum Map: Common Core Math First Grade

Course: First-Math Subtopic: General

Grade(s): None specified

Course Description: First grade students learn problem solving through mathematical concepts that include knowledge, skills and strategies in addition and subtraction within 20. They develop understanding of whole number relationships and place value including grouping in tens and ones. Students also learn linear measurements and reason about attributes of and composing and decomposing geometric shapes. Students learn Operations and Algebraic Thinking and Operations in Base Ten, Measurement and Data, and Geometry through whole group instruction, small group instruction, including flexible learning groups, cooperative learning, and learning centers. The Mathematical Practice Standards apply across all mathematics courses and together with the content standards, prescribe that students experience mathematics as a coherent, useful and logical subject that makes use of their ability to make sense of problem situations.

Course Textbooks, Workbooks, Materials Citations: McGraw- Hill Mathematics Workbook 2002

Unit: Unit 1 Standards for Mathematical Practice

Unit/Module Description: Students investigate, practice and apply the varieties of expertise that they should develop and demonstrate in their study of mathematics. Students apply these Standards to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.

Unit/Module Key Terminology & Definitions:

- Addition** – an operation that combines two or more addends to find the sum
- Afternoon** – the time of day between noon and evening
- Angle** – the figure formed by two rays extending from a common endpoint
- Area** – the number of square units needed to cover a surface: $\text{area} = \text{length} \times \text{width}$
- Associative Property of Addition** – the property that states that changing the grouping of the addends does not affect the sum
- Balance** – a scale used to determine which of the two objects weighs more
- Bar Graph** – a graph that displays data using parallel rectangles, or bars, whose lengths are proportional to the quantities they represent
- Calculator** – a tool used to quickly work math problems
- Calendar** – a chart that shows the month, day, year, and day of the week
- Capacity** – the amount that a container can hold
- Cent** – one of 100 equal parts of a U.S. dollar; a value of money
- Cent Symbol** – the symbol for the word “cent” or “cents” – ¢
- Center** – the point that is equidistant from all points on the border of a circle or sphere; the middle
- Centimeter** – a small metric unit used to measure length; cm.
- Certain** – absolutely sure to happen
- Chart** – an organized display of information
- Circle** – a closed plane figure with a curved edge, the center of which is equidistant from every point on the edge
- Clock** – a tool that shows and measures time by hands moving on a dial; a digital clock is a tool that shows and measures time using digits instead of hands

Coin – a piece of metal with a specific value used as money

Column – a vertical arrangement of items

Commutative Property of Addition – the property that states that changing the order of the addends does not affect the sum

Compare – to examine the likenesses and differences of objects; to determine which number is greater or whether the numbers are equal

Comparison Symbols – symbols that show whether a number is greater than ($>$), less than ($<$), or equal to ($=$) another number

Cone – a geometric solid bounded by a circular base and the surface formed by line segments joining all points on the edge of the circular base to one common vertex

Congruent – having the same size and shape

Corner – the point where lines, edges, or sides meet

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Cube – a geometric solid with six congruent square faces

Cylinder – a geometric solid bounded by congruent circular bases and the surface formed by parallel line segments joining all points on the edges of the one base to the edges of the other base

Date – the month, day, and year

Day – the time between sunrise and sunset; the 24-hour time period from one midnight to the next; the word corresponding to the day of the week (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday); the number corresponding to the day of the month

Decimal Point – the point that separates the dollars from the cents when writing an amount of money; the point that separates the whole number from the decimal part of a number; the point that separates the ones' place from the tenths' place

Degree – a unit used to measure temperature; $^{\circ}$

Difference – the answer to a subtraction problem

Digit – any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 used to write numbers

Digital – using digits

Digital Time – the time shown on a clock using digits instead of using a dial and hands

Dime – a U.S. coin worth 10 cents

Distance – the length of space between two points

Divide – to separate into equal groups

Dollar – the basic unit in the U.S. money system that is equal to 100 cents

Dollar Sign – the symbol for the word "dollar" or "dollars" - \$

Doubles – two of the same number

Doubles Facts – addition facts in which the two addends are the same number

Dozen – a set of twelve

Edge – the line segment where two faces of a geometric solid intersect; the border of a closed figure

Eighths – eight equal parts that combine to make one whole

Endpoint – a point at the beginning or the end of a line segment

Equal Groups – sets of objects having the same number or value; a way of talking about multiplication and division

Equal Parts – parts that are exactly the same size

Equal Pieces – Pieces that are exactly the same

Equals Sign – the symbol that shows that two quantities have the same value - =

Estimate – to approximate, or guess, the value or measurement based on given information

Even – every number divisible by 2; every number ending in 0, 2, 4, 6, or 8

Evening – a time of day between late afternoon and sunset

Face – a flat surface of a geometric solid

Fact Family – a group of addition facts and subtraction facts that all use the same three numbers; a group of multiplication facts and division facts that all use the same three numbers

Fahrenheit – a scale for measuring temperature named for Gabriel Fahrenheit; on the Fahrenheit scale, the freezing point of water is 32 degrees and the boiling point of water is 212 degrees

Fifth – the ordinal number that tells the number five position

First – the ordinal number that tells which one is before all the others

Flip – to turn over a figure from front to back or from back to front along a fixed line or point; reflect

Foot – a U.S. Customary System unit used to measure length, height, or distance; ft.

Fourth – the ordinal number that tells the number four position; (also see one fourth)

Gallon – a U.S. Customary System unit used to measure liquids; gal.

Geoband – a rubber band used to make geometric shapes on a geoboard

Geoboard – a board used to make geometric shapes by placing rubber bands over pegs

Geometric Solid – a three-dimensional object (e.g., sphere, cone, cylinder, cube, pyramid)

Gram – a small metric unit used to measure weight or mass; g

Graph – a chart that displays one variable in relation to another variable using symbols, points, bars, or lines

Greater Than – more than

Half – one of two equal parts; (also see one half)

Half Dozen – a set of six

Half Hour – 30 minutes

Half Past – 30 minutes after the hour

Height – a vertical distance

Hexagon – a six-sided figure

Hour – 60 minutes

Hour Hand - the short hand on the clock that tells what hour it is

Impossible – cannot happen

Inch – a small U.S. Customary System unit used to measure length, height, or distance; in.

Length – the distance from one end to the other end

Less Than – not as many as

Likely – probably will happen

Line – a straight path extending in both directions without end; a line is marked with an arrowhead at each end

Line of Symmetry – an imaginary line that divides a figure into two identical sides

Line Segment – a straight line usually marked with two endpoints

Liter – a metric unit used to measure capacity; l

Mathematician – one who studies the science of numbers and their operations

Measure – to determine the length, weight, height, temperature, capacity, time, or other quantifiable characteristic

Minus – a word used between numbers that means to subtract the second number from the first number

Minus Sign – the symbol for subtraction; sometimes used to indicate a negative quantity

Minute – a unit used to measure time; min

Minute Hand – the long hand on the clock that tells the number of minutes before and after the hour

Month – the period of time equal to about four weeks or 30-31 days; January, February, March, April, May, June, July, August, September, October, November, December

Morning – the time of day between sunrise and noon

Multiples of 10 – the numbers obtained by multiplying 10 by every counting number

Nickel – a U.S. coin worth five cents

Night – the time of day between sunset and sunrise when it is dark outside

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Number Sentence – a sentence that uses numbers and symbols but not words

O'clock – as shown on the clock

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

One fourth – $\frac{1}{4}$; one of four equal parts

One half – $\frac{1}{2}$; one of two equal parts

One sixth – $\frac{1}{6}$; one of six equal parts

One third – $\frac{1}{3}$; one of three equal parts

Order – to place things in a specific way, often from least to greatest

Ordinal – describing a position or an order

Ordinal Number – a number that describes position or order

Pair – two items that are usually together, such as shoes and glove

Parallelogram – a four-sided figure with two pairs of parallel sides

Pattern – a repeating arrangement of something

Penny – a U.S. coin worth one cent

Pentagon – a five-sided figure

Pictograph – a graph that uses pictures or symbols to display information

Place Value – the value of a digit based on its position within a number

Plus Sign – the symbol for addition; sometimes used to indicate a positive quantity - +

Polygon – a closed, flat figure bounded by line segments

Pound – a U.S. Customary System unit used to measure weight (mass); lb.

Property – a rule that is true for all numbers in a set

Quarter – a U.S. coin worth 25 cents; one fourth

Rectangle – a four sided figure with four right angles

Rectangular Prism – a geometric solid with six rectangular faces

Repeating Pattern – an arrangement of items in a specific order over and over such that the next item can be predicted

Right – a direction; the opposite of left; correct

Rounding – changing a number to show the nearest ten, hundred, and so on

Row – a horizontal arrangement of items

Ruler – a tool with a straight edge that is used to measure length

Second – the ordinal number that tells the number two position; a short measure of time

Set – a collection of items

Shape – a closed form or outline

Side – a flat edge of a shape; a flat surface of an object

Single-Digit Number – a number that has only one digit

Sixth – the ordinal number that tells the number six position; (also see one sixth)

Size – the magnitude of an object relative to another

Slide – to transform a shape by moving it from one place to another on a flat surface without turning it from one place to another on a flat surface without turning it; translate

Solid – a three-dimensional object

Some, Some more – a story problem that has an addition pattern

Some, some went away – a story problem that has a subtraction pattern

Sort – to separate items into groups based on a common attribute

Sphere – a geometric solid bounded by all points that are given distance from the center point

Square – a rectangle with all sides of equal length; a four-sided figure with all sides of equal length and four right angles

Story problem – a math problem that is written as a story

Subtract – to count backwards; take away

Subtraction – an operation that deducts the value of one number from the value of another to find the difference

Sum – the answer to an addition problem

Symbol – a sign that represents a number or word

Symmetrical – having an imaginary line such that all corresponding parts on either side of the line are identical

Take away – subtract

Tally – to keep track while counting by writing small vertical and oblique marks

Temperature – the measurement by degree of hot or cold something is

Tenths – ten equal parts that combine to make one whole

Thermometer – a tool used to measure temperature

Third – the ordinal number that tells the number three position; (also see one third)

Trapezoid – a four sided figure with one pair of parallel sides

Triangle – a figure with three sides

Turn – to rotate a shape around a fixed point

Week – seven consecutive days; (also see day)

Weight – the measure of how heavy something is

Year – the time period of about 365 days required for the earth to revolve once around the sun

This Curriculum Map Unit has no Topics to display

Unit: Unit 2 Numbers and Operations in Base Ten

Unit/Module Description: Students study counting, numbers and operations in base ten, the number system to attain a solid foundation in whole numbers, addition, and subtraction.

Unit/Module Big Ideas: The base ten number system is a way to organize, represent and compare numbers using groups of ten and place value.

Unit/Module Essential Questions: How, when, and why do we represent, compare, and order numbers?
How can one identify, write, order, and compare numbers through 120?
How does one count and regroup tens and ones?
How does one identify place value through 99?
How does one use the properties of addition and subtraction to solve problems within 100?

Unit/Module Key Terminology & Definitions:

Addition – an operation that combines two or more addends to find the sum

Associative Property of Addition – the property that states that changing the grouping of the addends does not affect the sum

Column – a vertical arrangement of items

Commutative Property of Addition – the property that states that changing the order of the addends does not affect the sum

Compare – to examine the likenesses and differences of objects; to determine which number is greater or whether the numbers are equal

Comparison Symbols – symbols that show whether a number is greater than ($>$), less than ($<$), or equal to ($=$) another number

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Cube – a geometric solid with six congruent square faces

Difference – the answer to a subtraction problem

Digit – any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 used to write numbers

Doubles – two of the same number

Doubles Facts – addition facts in which the two addends are the same number

Dozen – a set of twelve

Equals Sign – the symbol that shows that two quantities have the same value - =

Estimate – to approximate, or guess, the value or measurement based on given information

Even – every number divisible by 2; every number ending in 0, 2, 4, 6, or 8

Fact Family – a group of addition facts and subtraction facts that all use the same three numbers; a group of multiplication facts and division facts that all use the same three numbers

Greater Than – more than

Minus – a word used between numbers that means to subtract the second number from the first number

Minus Sign – the symbol for subtraction; sometimes used to indicate a negative quantity

Multiples of 10 – the numbers obtained by multiplying 10 by every counting number

Nickel – a U.S. coin worth five cents

Night – the time of day between sunset and sunrise when it is dark outside

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Number Sentence – a sentence that uses numbers and symbols but not words

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

Ordinal – describing a position or an order

Ordinal Number – a number that describes position or order

Place Value – the value of a digit based on its position within a number

Plus Sign – the symbol for addition; sometimes used to indicate a positive quantity - +

Rounding – changing a number to show the nearest ten, hundred, and so on

Row – a horizontal arrangement of items

Some, Some more – a story problem that has an addition pattern

Some, some went away – a story problem that has a subtraction pattern

Subtract – to count backwards; take away

Subtraction – an operation that deducts the value of one number from the value of another to find the difference

Sum – the answer to an addition problem

Unit/Module

Student

Learning

Outcomes:

Identify, write order, and compare numbers through 100.

Count groups of tens and ones.

Identify place value through 99.

Extend the counting sequence to read and write numerals to represent objects.

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

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

Unit/Module

Student

Performance

Tasks:

Teacher generated handouts

Hands on activities

Lesson reviews

Interactive Online games and activities

Unit/Module

Materials:

McGraw Hill Textbook

Hundreds Chart

Base Ten Blocks

Counting Cubes

Tens and ones chart

Tens frame

STANDARDS

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

Lesson Topic: Lesson 1 Counting

- Core Lesson/Topic Description:** Students will count, write and order numbers to 120.
- Core Lesson/Topic Big Ideas:** The base ten number system is a way to organize, represent and compare numbers using groups of ten and place value.
- Core Lesson/Topic Essential Questions:** How can one identify , write, order, and compare numbers through 100?
- Core Lesson/Topic Key Terminology & Definitions:**
- Addition** – an operation that combines two or more addends to find the sum
 - Associative Property of Addition** – the property that states that changing the grouping of the addends does not affect the sum
 - Count Backward** – to count down by subtracting
 - Count On** – to count by adding one each time
 - Greater Than** – more than
 - Multiples of 10** – the numbers obtained by multiplying 10 by every counting number
 - Number** – one or more digits representing an amount
 - Number Line** – a line that continues in both directions without end and is marked with numbers in order from least to greatest
 - Odd** – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9
 - Place Value** – the value of a digit based on its position within a number
 - Rounding** – changing a number to show the nearest ten, hundred, and so on
 - Row** – a horizontal arrangement of items
- Core Lesson/Topic Student Learning Outcomes:**
- Count numbers to 120.
 - Read and write numbers to 120.
 - Count on starting at any number less than 120.
- Core Lesson/Topic Instructional Procedures & Activities:**
- Order sets of numbers from least to greatest.
 - Complete hundreds chart, identify missing numbers
 - Count given sets of object
 - Identify number before or after a given number
 - Identify the number between two given numbers
 - Identify ten more or ten less than a given number
 - Count on or back from a given number
 - Skip count by 2s, 5s, and 10s.
- Core Lesson/Topic Materials:**
- McGraw Hill Textbook
 - Hundreds Chart
 - Base Ten Blocks
 - Counting Cubes
 - Tens and ones chart
 - Tens frame

Core Lesson/Topic Assignments: Optional

Core Lesson/Topic Notes: Optional

Lesson Topic: Lesson 2 Tens and Ones

Core Lesson/Topic Description: The students will show numbers as tens and ones.

Core Lesson/Topic Big Ideas: The base ten number system is a way to organize, represent and compare numbers using groups of ten and place value.

Core Lesson/Topic Essential Questions: How does one identify place value through 99?

Core Lesson/Topic Key Terminology & Definitions:

- Addition** – an operation that combines two or more addends to find the sum
- Associative Property of Addition** – the property that states that changing the grouping of the addends does not affect the sum
- Count Backward** – to count down by subtracting
- Count On** – to count by adding one each time
- Greater Than** – more than
- Multiples of 10** – the numbers obtained by multiplying 10 by every counting number
- Number** – one or more digits representing an amount
- Number Line** – a line that continues in both directions without end and is marked with numbers in order from least to greatest
- Odd** – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9
- Place Value** – the value of a digit based on its position within a number
- Rounding** – changing a number to show the nearest ten, hundred, and so on
- Row** – a horizontal arrangement of items

Core Lesson/Topic Student Learning Outcomes: Use place-value concepts to represent amounts of tens and ones and to compare two digit numbers.

Core Lesson/Topic Instructional Procedures & Activities:

- Explore patterns of tens
- Use objects to model tens and ones
- Compare one and two digit numbers
- Identify numbers in the tens and ones place
- Bundle straws into groups of tens and ones
- Rename numbers

Core Lesson/Topic Materials:

- McGraw Hill Textbook
- Hundreds Chart
- Base Ten Blocks
- Counting Cubes
- Tens and ones chart
- Tens frame

Lesson Topic:

Lesson Topic: Lesson 3 Addition and Subtraction within 100

Core

Lesson/Topic Description: Students will add and subtract using various strategies within 100.

Core

Lesson/Topic Big Ideas: The base ten number system is a way to organize, represent and compare numbers using groups of ten and place value.

Core

Lesson/Topic Essential Questions: How does one use the properties of addition and subtraction to solve problems within 100?

Core

Lesson/Topic Key Terminology & Definitions: **Addition** – an operation that combines two or more addends to find the sum
Associative Property of Addition – the property that states that changing the grouping of the addends does not affect the sum

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Greater Than – more than

Multiples of 10 – the numbers obtained by multiplying 10 by every counting number

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

Place Value – the value of a digit based on its position within a number

Rounding – changing a number to show the nearest ten, hundred, and so on

Row – a horizontal arrangement of items

Core

Lesson/Topic Student Learning Outcomes: The students will be able to add and subtract within 100.

Core

Lesson/Topic Instructional Procedures & Activities: -Addition and subtraction flashcards
-Repeated practice
-Addition and subtraction of classroom objects
-Connecting cubes
-Number line to solve addition and subtraction problems
-Use various strategies such as counting on, counting back, doubles, doubles plus one, related facts, turnaround facts, fact families
-Addition and subtraction games
-Otter Creek timed tests

Core

Lesson/Topic Materials: McGraw Hill Textbook
Hundreds Chart
Base Ten Blocks
Counting Cubes
Tens and ones chart
Tens frame

Unit: Unit 3 Operations and Algebraic Thinking

Unit/Module

Description: Students study algebraic concepts to improve their abstract cognitive skills and develop mental discipline. Students also expand their knowledge of numbers and equations, so they can use it in their everyday lives.

Unit/Module Big Ideas: Recognize, count and compare numbers and sets through 20.
Understand and apply properties between addition and subtraction.
Add and subtract up to 20.

Unit/Module Essential Questions: How are addition and subtraction related?
When solving a problem, how do we know how to solve it?
How can number patterns help us understand and describe numerical relationships?
How, when, and why do we represent, compare, and order numbers?

Unit/Module Key Terminology & Definitions:

Addition – an operation that combines two or more addends to find the sum

Associative Property of Addition – the property that states that changing the grouping of the addends does not affect the sum

Calculator – a tool used to quickly work math problems

Commutative Property of Addition – the property that state that changing the order of the addends does not affect the sum

Compare – to examine the likenesses and differences of objects; to determine which number is greater or whether the numbers are equal

Comparison Symbols – symbols that show whether a number is greater than ($>$), less than ($<$), or equal to ($=$) another number

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Difference – the answer to a subtraction problem

Digit – any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 used to write numbers

Digital – using digits

Doubles – two of the same number

Doubles Facts – addition facts in which the two addends are the same number

Equals Sign – the symbol that shows that two quantities have the same value - =

Estimate – to approximate, or guess, the value or measurement based on given information

Even – every number divisible by 2; every number ending in 0, 2, 4, 6, or 8

Fact Family – a group of addition facts and subtraction facts that all use the same three numbers; a group of multiplication facts and division facts that all use the same three numbers

Greater Than – more than

Less Than – not as many as

Mathematician – one who studies the science of numbers and their operations

Minus – a word used between numbers that means to subtract the second number from the first number

Minus Sign – the symbol for subtraction; sometimes used to indicate a negative quantity

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Number Sentence – a sentence that uses numbers and symbols but not words

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

Order – to place things in a specific way, often from least to greatest

Ordinal – describing a position or an order

Place Value – the value of a digit based on its position within a number

Plus Sign – the symbol for addition; sometimes used to indicate a positive quantity - +

Single-Digit Number – a number that has only one digit

Subtract – to count backwards; take away

Subtraction – an operation that deducts the value of one number from the value of another to find the difference

Sum – the answer to an addition problem

Symbol – a sign that represents a number or word

Symmetrical – having an imaginary line such that all corresponding parts on either side of the line are identical

Take away – subtract

Unit/Module Student Learning Outcomes: Represent and solve problems involving addition and subtraction within 20.
Understand and apply properties of operations and the relationship between addition and subtraction.

Unit/Module Materials: McGraw Hill textbook
various manipulatives
number lines
flashcards
Otter Creek facts practice
fact family triangles
compare cards
various teacher created games

STANDARDS

STATE: PA Common Core Standards (2012)

[CC.2.2.1.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 20.

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

Lesson Topic:

Lesson Topic: Lesson 1 Solve problems using addition and subtraction

Core Lesson/Topic Description: Students study algebraic concepts to improve their abstract cognitive skills and develop mental discipline. Students also expand their knowledge of numbers and equations, so they can use it in their everyday lives.

Core Lesson/Topic Big Ideas: Understand and apply properties between addition and subtraction.

Core Lesson/Topic Essential Questions: How are addition and subtraction related?
When solving a problem, how do we know how to solve it?

Core Lesson/Topic Key Terminology & Definitions:

- Addition** – an operation that combines two or more addends to find the sum
- Associative Property of Addition** – the property that states that changing the grouping of the addends does not affect the sum
- Calculator** – a tool used to quickly work math problems
- Commutative Property of Addition** – the property that states that changing the order of the addends does not affect the sum
- Compare** – to examine the likenesses and differences of objects; to determine which number

is greater or whether the numbers are equal

Comparison Symbols – symbols that show whether a number is greater than ($>$), less than ($<$), or equal to ($=$) another number

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Difference – the answer to a subtraction problem

Digit – any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 used to write numbers

Digital – using digits

Doubles – two of the same number

Doubles Facts – addition facts in which the two addends are the same number

Equals Sign – the symbol that shows that two quantities have the same value - =

Estimate – to approximate, or guess, the value or measurement based on given information

Even – every number divisible by 2; every number ending in 0, 2, 4, 6, or 8

Fact Family – a group of addition facts and subtraction facts that all use the same three numbers; a group of multiplication facts and division facts that all use the same three numbers

Greater Than – more than

Less Than – not as many as

Mathematician – one who studies the science of numbers and their operations

Minus – a word used between numbers that means to subtract the second number from the first number

Minus Sign – the symbol for subtraction; sometimes used to indicate a negative quantity

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Number Sentence – a sentence that uses numbers and symbols but not words

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

Order – to place things in a specific way, often from least to greatest

Ordinal – describing a position or an order

Place Value – the value of a digit based on its position within a number

Plus Sign – the symbol for addition; sometimes used to indicate a positive quantity - +

Single-Digit Number – a number that has only one digit

Subtract – to count backwards; take away

Subtraction – an operation that deducts the value of one number from the value of another to find the difference

Sum – the answer to an addition problem

Symbol – a sign that represents a number or word

Symmetrical – having an imaginary line such that all corresponding parts on either side of the line are identical

Take away – subtract

**Lesson/Topic
Student
Learning
Outcomes:**

Represent and solve problems involving addition and subtraction within 20.

**Core
Lesson/Topic
Instructional
Procedures &
Activities:**

- Addition and subtraction flashcards
- Repeated practice
- Addition and subtraction of classroom objects
- Connecting cubes
- Number line to solve addition and subtraction problems
- Use various strategies such as counting on, counting back, doubles, doubles plus one, related facts, turnaround facts, fact families
- Addition and subtraction games
- Otter Creek timed tests

**Core
Lesson/Topic
Materials:**

McGraw Hill textbook
various manipulatives
number lines
flashcards
Otter Creek facts practice

Lesson Topic: Lesson 2 Explore relationships between addition and subtraction

**Core
Lesson/Topic
Description:**

Students study algebraic concepts to improve their abstract cognitive skills and develop mental discipline. Students also expand their knowledge of numbers and equations, so they can use it in their everyday lives.

**Core
Lesson/Topic
Big Ideas:**

Understand and apply properties between addition and subtraction.
Add and subtract up to 20.

**Core
Lesson/Topic
Essential
Questions:**

How are addition and subtraction related?
When solving a problem, how do we know how to solve it?

**Core
Lesson/Topic
Key
Terminology &
Definitions:**

Addition – an operation that combines two or more addends to find the sum

Associative Property of Addition – the property that states that changing the grouping of the addends does not affect the sum

Calculator – a tool used to quickly work math problems

Commutative Property of Addition – the property that states that changing the order of the addends does not affect the sum

Compare – to examine the likenesses and differences of objects; to determine which number is greater or whether the numbers are equal

Comparison Symbols – symbols that show whether a number is greater than ($>$), less than ($<$), or equal to ($=$) another number

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Difference – the answer to a subtraction problem

Digit – any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 used to write numbers

Digital – using digits

Doubles – two of the same number

Doubles Facts – addition facts in which the two addends are the same number

Equals Sign – the symbol that shows that two quantities have the same value - =

Estimate – to approximate, or guess, the value or measurement based on given information

Even – every number divisible by 2; every number ending in 0, 2, 4, 6, or 8

Fact Family – a group of addition facts and subtraction facts that all use the same three numbers; a group of multiplication facts and division facts that all use the same three numbers

Greater Than – more than

Less Than – not as many as

Mathematician – one who studies the science of numbers and their operations

Minus – a word used between numbers that means to subtract the second number from the first number

Minus Sign – the symbol for subtraction; sometimes used to indicate a negative quantity

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Number Sentence – a sentence that uses numbers and symbols but not words

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

Order – to place things in a specific way, often from least to greatest

Ordinal – describing a position or an order

Place Value – the value of a digit based on its position within a number

Plus Sign – the symbol for addition; sometimes used to indicate a positive quantity - +

Single-Digit Number – a number that has only one digit

Subtract – to count backwards; take away

Subtraction – an operation that deducts the value of one number from the value of another to find the difference

Sum – the answer to an addition problem

Symbol – a sign that represents a number or word

Symmetrical – having an imaginary line such that all corresponding parts on either side of the line are identical

Take away – subtract

Core Lesson/Topic Student Learning Outcomes:

Represent and solve problems involving addition and subtraction within 20.

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

Core Lesson/Topic Instructional Procedures & Activities:

- Addition and subtraction flashcards
- Repeated practice
- Addition and subtraction of classroom objects
- Connecting cubes
- Number line to solve addition and subtraction problems
- Use various strategies such as counting on, counting back, doubles, doubles plus one, related facts, turnaround facts, fact families
- Addition and subtraction games
- Otter Creek timed tests

Core Lesson/Topic Materials:

- McGraw Hill textbook
- various manipulatives
- number lines
- flashcards
- Otter Creek facts practice
- fact family triangles
- compare cards
- various teacher created games

Unit: Unit 4 Geometry

Unit/Module Description: Students compose and decompose plane or solid figures and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop background for measurement and for initial understandings of properties such as congruence and symmetry. Students will use the understanding of fractions to partition shapes into halves and quarters.

Unit/Module Big Ideas: Two and three- dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.

Identify transformations and symmetry in shapes.

Patterns exhibit relationships that can be extended described and generalized.

Understand fractions to partition shapes into halves and quarters.

Unit/Module Essential Questions: How would one identify, describe, classify and sort shapes?

What are ways to determine transformations and symmetry in shapes?

How would one identify and partition shapes into halves and quarters?

Unit/Module Key Terminology & Definitions: **Angle** – the figure formed by two rays extending from a common endpoint

Area – the number of square units needed to cover a surface: $\text{area} = \text{length} \times \text{width}$

Cone – a geometric solid bounded by a circular base and the surface formed by line segments joining all points on the edge of the circular base to one common vertex

Congruent – having the same size and shape

Corner – the point where lines, edges, or sides meet

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Cube – a geometric solid with six congruent square faces

Cylinder – a geometric solid bounded by congruent circular bases and the surface formed by parallel line segments joining all points on the edges of the one base to the edges of the other base

Distance – the length of space between two points

Edge– the line segment where two faces of a geometric solid intersect; the border of a closed figure

Eighths – eight equal parts that combine to make one whole

Endpoint – a point at the beginning or the end of a line segment

Equal Groups – sets of objects having the same number or value; a way of talking about multiplication and division

Equal Parts – parts that are exactly the same size

Equal Pieces – Pieces that are exactly the same

Face – a flat surface of a geometric solid

Flip – to turn over a figure from front to back or from back to front along a fixed line or point; reflect

Geoband – a rubber band used to make geometric shapes on a geoboard

Geoboard – a board used to make geometric shapes by placing rubber bands over pegs

Geometric Solid – a three-dimensional object (e.g., sphere, cone, cylinder, cube, pyramid)

Graph – a chart that displays one variable in relation to another variable using symbols,

points, bars, or lines

Half – one of two equal parts; (also see one half)

Half Dozen – a set of six

Hexagon – a six-sided figure

Line – a straight path extending in both directions without end; a line is marked with an arrowhead at each end

Line of Symmetry – an imaginary line that divides a figure into two identical sides

Line Segment – a straight line usually marked with two endpoints

One fourth – $\frac{1}{4}$; one of four equal parts

One half – $\frac{1}{2}$; one of two equal parts

One sixth – $\frac{1}{6}$; one of six equal parts

One third – $\frac{1}{3}$; one of three equal parts

Order – to place things in a specific way, often from least to greatest

Parallelogram – a four-sided figure with two pairs of parallel sides

Pattern – a repeating arrangement of something

Pentagon – a five-sided figure

Pictograph – a graph that uses pictures or symbols to display information

Polygon – a closed, flat figure bounded by line segments

Rectangle – a four sided figure with four right angles

Rectangular Prism – a geometric solid with six rectangular faces

Shape – a closed form or outline

Side – a flat edge of a shape; a flat surface of an object

Sixth – the ordinal number that tells the number six position; (also see one sixth)

Size – the magnitude of an object relative to another

Slide – to transform a shape by moving it from one place to another on a flat surface without turning it from one place to another on a flat surface without turning it; translate

Solid – a three-dimensional object

Sort – to separate items into groups based on a common attribute

Sphere – a geometric solid bounded by all points that are given distance from the center point

Square – a rectangle with all sides of equal length; a four-sided figure with all sides of equal length and four right angles

Story problem – a math problem that is written as a story

Subtract – to count backwards; take away

Trapezoid – a four sided figure with one pair of parallel sides

Triangle – a figure with three sides

Turn – to rotate a shape around a fixed point

**Unit/Module
Student
Learning
Outcomes:**

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

Use the understanding of fractions to partition shapes into halves and quarters.

Unit/Module McGraw Hill Textbook
Materials: pattern blocks
two and three dimensional figures
geoboards
geobands
graph paper/ paper
websites
various games

STANDARDS

STATE: PA Common Core Standards (2012)

[CC.2.3.1.A.1 \(Advanced\)](#) Compose and distinguish between two- and three-dimensional shapes based on their attributes.

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

Lesson Topic:

Lesson Topic: Lesson 1 two- and three-dimensional shapes

Core Lesson/Topic Description: Students compose and decompose plane or solid figures and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop background for measurement and for initial understandings of properties such as congruence and symmetry.

Core Lesson/Topic Big Ideas: Two and three- dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.

Identify transformations and symmetry in shapes.

Patterns exhibit relationships that can be extended described and generalized.

Core Lesson/Topic Essential Questions: How would one identify, describe, classify and sort shapes?

What are ways to determine transformations and symmetry in shapes?

Core Lesson/Topic Key Terminology & Definitions:

Angle – the figure formed by two rays extending from a common endpoint

Area – the number of square units needed to cover a surface: $\text{area} = \text{length} \times \text{width}$

Cone – a geometric solid bounded by a circular base and the surface formed by line segments joining all points on the edge of the circular base to one common vertex

Congruent – having the same size and shape

Corner – the point where lines, edges, or sides meet

Cube – a geometric solid with six congruent square faces

Cylinder – a geometric solid bounded by congruent circular bases and the surface formed by parallel line segments joining all points on the edges of the one base to the edges of the other base

Distance – the length of space between two points

Edge- the line segment where two faces of a geometric solid intersect; the border of a closed figure

Eighths – eight equal parts that combine to make one whole

Endpoint – a point at the beginning or the end of a line segment

Equal Groups – sets of objects having the same number or value; a way of talking about multiplication and division

Equal Parts – parts that are exactly the same size

Equal Pieces – Pieces that are exactly the same

Face – a flat surface of a geometric solid

Flip – to turn over a figure from front to back or from back to front along a fixed line or point; reflect

Geoband – a rubber band used to make geometric shapes on a geoboard

Geoboard – a board used to make geometric shapes by placing rubber bands over pegs

Geometric Solid – a three-dimensional object (e.g., sphere, cone, cylinder, cube, pyramid)

Graph – a chart that displays one variable in relation to another variable using symbols, points, bars, or lines

Half – one of two equal parts; (also see one half)

Half Dozen – a set of six

Hexagon – a six-sided figure

Line – a straight path extending in both directions without end; a line is marked with an arrowhead at each end

Line of Symmetry – an imaginary line that divides a figure into two identical sides

Line Segment – a straight line usually marked with two endpoints

One fourth – $\frac{1}{4}$; one of four equal parts

One half – $\frac{1}{2}$; one of two equal parts

One sixth – $\frac{1}{6}$; one of six equal parts

One third – $\frac{1}{3}$; one of three equal parts

Parallelogram – a four-sided figure with two pairs of parallel sides

Pattern – a repeating arrangement of something

Pentagon – a five-sided figure

Polygon – a closed, flat figure bounded by line segments

Rectangle – a four sided figure with four right angles

Rectangular Prism – a geometric solid with six rectangular faces

Shape – a closed form or outline

Side – a flat edge of a shape; a flat surface of an object

Sixth – the ordinal number that tells the number six position; (also see one sixth)

Size – the magnitude of an object relative to another

Slide – to transform a shape by moving it from one place to another on a flat surface without turning it from one place to another on a flat surface without turning it; translate

Solid – a three-dimensional object

Sort – to separate items into groups based on a common attribute

Sphere – a geometric solid bounded by all points that are given distance from the center point

Square – a rectangle with all sides of equal length; a four-sided figure with all sides of equal length and four right angles

Trapezoid – a four sided figure with one pair of parallel sides

Triangle – a figure with three sides

Turn – to rotate a shape around a fixed point

Core Lesson/Topic Student Learning Outcomes: Compose and distinguish between two- and three- dimensional shapes based on their attributes.

Core Lesson/Topic Instructional Procedures & Activities:

- Identify plane shapes and relate them to real life objects.
- Recognize open and closed figures and sides and corners of plane figures
- Identify solid shapes and relate them to real life objects
- Determine how shapes are alike and different to solve problems
- Combine plane figures to make new shapes
- Make and match figures that are the same size and shape
- Use geoboards and geobands

Core Lesson/Topic Materials:

- McGraw Hill Textbook
- pattern blocks
- two and three dimensional figures
- geoboards
- geobands
- graph paper/ paper
- websites
- various games

Lesson Topic:

Lesson Topic: Lesson 2 Fractions

Core Lesson/Topic Description: Students will use the understanding of fractions to partition shapes into halves and quarters.

Core Lesson/Topic Big Ideas: Understand fractions to partition shapes into halves and quarters.

Core Lesson/Topic Essential Questions: How would one identify and partition shapes into halves and quarters?

Core Lesson/Topic Key Terminology & Definitions:

- Congruent** – having the same size and shape
- Eighths** – eight equal parts that combine to make one whole
- Equal Groups** – sets of objects having the same number or value; a way of talking about multiplication and division
- Equal Parts** – parts that are exactly the same size
- Equal Pieces** – Pieces that are exactly the same
- Half** – one of two equal parts; (also see one half)
- Line of Symmetry** – an imaginary line that divides a figure into two identical sides
- One fourth** – $\frac{1}{4}$; one of four equal parts
- One half** – $\frac{1}{2}$; one of two equal parts
- One sixth** – $\frac{1}{6}$; one of six equal parts
- One third** – $\frac{1}{3}$; one of three equal parts
- Sixth** – the ordinal number that tells the number six position; (also see one sixth)

Core Lesson/Topic Student Learning Outcomes: Use the understanding of fractions to partition shapes into halves and quarters.

Core Lesson/Topic Instructional Procedures & Activities:

- Identify pictures that show equal parts of one whole
- Identify objects that show one half and one fourth of a whole
- Identify fractions of a set of objects
- Divide shapes into halves and fourths

Core Lesson/Topic Materials:

- McGraw Hill textbook
- paper
- fraction puzzles
- fraction strips
- fraction posters
- flashcards
- real life objects (ex. cookie, pizza, sandwich,etc.)

Unit: Unit 5 Measurement and Data

Unit/Module Description: Students learn to collect, interpret and analyze and assess the reliability of conclusions based on sample data using and applying the basic principles of statistical analysis. Students develop an understanding of the meaning and processes of measurement. Students will read and interpret a calendar and identify and count pennies, nickels, dimes and quarters to \$1.00.

Unit/Module Big Ideas:

- Read, create and use graphs to interpret data.
- Compare time to the hour and half hour.
- Measure lengths and objects.
- Identify and name a penny, nickel, dime, and quarter.
- Find the value of certain coins.
- Read and interpret a calendar.

Unit/Module Essential Questions:

- How does one read, create, and use graphs?
- How can one tell time to the hour and half hour?
- How does one measure lengths both directly and by repeating length units?
- How does one calculate the value of coins?
- How does one read and interpret a calendar?

Unit/Module Key Terminology & Definitions:

- Calendar** – a chart that shows the month, day, year, and day of the week
- Centimeter** – a small metric unit used to measure length; cm.

Date – the month, day, and year

Day – the time between sunrise and sunset; the 24-hour time period from one midnight to the next; the word corresponding to the day of the week (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday); the number corresponding to the day of the month

Degree – a unit used to measure temperature; °

Digital Time – the time shown on a clock using digits instead of using a dial and hands

Distance – the length of space between two points

Evening – a time of day between late afternoon and sunset

Fahrenheit – a scale for measuring temperature named for Gabriel Fahrenheit; on the Fahrenheit scale, the freezing point of water is 32 degrees and the boiling point of water is 212 degrees

Foot – a U.S. Customary System unit used to measure length, height, or distance; ft.

Half Hour – 30 minutes

Half Past – 30 minutes after the hour

Height – a vertical distance

Hour – 60 minutes

Hour Hand - the short hand on the clock that tells what hour it is

Inch – a small U.S. Customary System unit used to measure length, height, or distance; in.

Length – the distance from one end to the other end

Likely – probably will happen

Measure – to determine the length, weight, height, temperature, capacity, time, or other quantifiable characteristic

Minute – a unit used to measure time; min

Minute Hand –the long hand on the clock that tells the number of minutes before and after the hour

Month – the period of time equal to about four weeks or 30-31 days; January, February, March, April, May, June, July, August, September, October, November, December

Morning – the time of day between sunrise and noon

Night – the time of day between sunset and sunrise when it is dark outside

O'clock – as shown on the clock

Pair – two items that are usually together, such as shoes and glove

Pictograph – a graph that uses pictures or symbols to display information

Pound – a U.S. Customary System unit used to measure weight (mass); lb.

Size – the magnitude of an object relative to another

Slide – to transform a shape by moving it from one place to another on a flat surface without turning it from one place to another on a flat surface without turning it; translate

Tally – to keep track while counting by writing small vertical and oblique marks

Temperature – the measurement by degree of hot or cold something is

Thermometer – a tool used to measure temperature

Week – seven consecutive days; (also see day)

Weight – the measure of how heavy something is

Year – the time period of about 365 days required for the earth to revolve once around the sun

Unit/Module Student Learning Outcomes: Students will understand how to read, create and use a graph.
Students will tell time to the hour and half hour.
Students will read and interpret the calendar.
Students will find the value of certain coins.
Students will measure lengths and objects.

Unit/Module Materials: McGraw Hill textbook
Rulers
Judy Clocks
Money manipulatives/Stampers
Various websites
Games
Flashcards

STANDARDS

STATE: PA Common Core Standards (2012)

[CC.2.4.1.A.1 \(Advanced\)](#) Order lengths and measure them both indirectly and by repeating length units.

[CC.2.4.1.A.2 \(Advanced\)](#) Tell and write time to the nearest half hour using both analog and digital clocks.

[CC.2.4.1.A.4 \(Advanced\)](#) Represent and interpret data using tables/charts.

Lesson Topic: Lesson 1 Measuring

Core

Lesson/Topic Description: Students will order lengths and measure them both indirectly and by repeating length units.

Core

Lesson/Topic Big Ideas: Measure lengths and objects.

Core

Lesson/Topic Essential Questions: How does one measure lengths both directly and by repeating length units?

Core

Lesson/Topic Key Terminology & Definitions:

Calendar – a chart that shows the month, day, year, and day of the week

Centimeter – a small metric unit used to measure length; cm.

Date – the month, day, and year

Day – the time between sunrise and sunset; the 24-hour time period from one midnight to the next; the word corresponding to the day of the week (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday); the number corresponding to the day of the month

Degree – a unit used to measure temperature; °

Digital Time – the time shown on a clock using digits instead of using a dial and hands

Distance – the length of space between two points

Evening – a time of day between late afternoon and sunset

Fahrenheit – a scale for measuring temperature named for Gabriel Fahrenheit; on the Fahrenheit scale, the freezing point of water is 32 degrees and the boiling point of water is 212 degrees

Foot – a U.S. Customary System unit used to measure length, height, or distance; ft.

Half Hour – 30 minutes

Half Past – 30 minutes after the hour

Height – a vertical distance

Hour – 60 minutes

Hour Hand - the short hand on the clock that tells what hour it is

Inch – a small U.S. Customary System unit used to measure length, height, or distance; in.

Length – the distance from one end to the other end

Likely – probably will happen

Measure – to determine the length, weight, height, temperature, capacity, time, or other quantifiable characteristic

Minute – a unit used to measure time; min

Minute Hand –the long hand on the clock that tells the number of minutes before and after the hour

Month – the period of time equal to about four weeks or 30-31 days; January, February, March, April, May, June, July, August, September, October, November, December

Morning – the time of day between sunrise and noon

Night – the time of day between sunset and sunrise when it is dark outside

O'clock – as shown on the clock

Pair – two items that are usually together, such as shoes and glove

Pictograph – a graph that uses pictures or symbols to display information

Pound – a U.S. Customary System unit used to measure weight (mass); lb.

Size – the magnitude of an object relative to another

Slide – to transform a shape by moving it from one place to another on a flat surface without turning it from one place to another on a flat surface without turning it; translate

Tally – to keep track while counting by writing small vertical and oblique marks

Temperature – the measurement by degree of hot or cold something is

Thermometer – a tool used to measure temperature

Week – seven consecutive days; (also see day)

Weight – the measure of how heavy something is

Year – the time period of about 365 days required for the earth to revolve once around the sun

Core Lesson/Topic Student Learning Outcomes:

Students will be able to measure lengths and objects.

Core Lesson/Topic Instructional Procedures & Activities:

-Sort objects from shortest to longest
-Estimate and measure length with nonstandard units
-Measure length in inches

Core Lesson/Topic Materials:

rulers
paperclips
connecting cubes
websites

Lesson Topic: Lesson 2 Time and Calendar

Core Lesson/Topic Description:

Students will tell time to the hour and half hour using analog and digital clocks.
Students will read a calendar to identify the year, month, day and date.

Core Lesson/Topic Big Ideas:

Compare time to the hour and half hour.
Read a calendar to find date, day, month and year.

Core Lesson/Topic Essential Questions:

How can one tell time to the hour and half hour?
How does one read a calendar to find the date, day, month and year?

Core Lesson/Topic Key Terminology & Definitions:

Calendar – a chart that shows the month, day, year, and day of the week

Date – the month, day, and year

Day – the time between sunrise and sunset; the 24-hour time period from one midnight to the next; the word corresponding to the day of the week (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday); the number corresponding to the day of the month

Digital Time – the time shown on a clock using digits instead of using a dial and hands

Evening – a time of day between late afternoon and sunset

Half Hour – 30 minutes

Half Past – 30 minutes after the hour

Hour – 60 minutes

Hour Hand - the short hand on the clock that tells what hour it is

Minute – a unit used to measure time; min

Minute Hand –the long hand on the clock that tells the number of minutes before and after the hour

Month – the period of time equal to about four weeks or 30-31 days; January, February, March, April, May, June, July, August, September, October, November, December

Morning – the time of day between sunrise and noon

Night – the time of day between sunset and sunrise when it is dark outside

O'clock – as shown on the clock

Week – seven consecutive days; (also see day)

Year – the time period of about 365 days required for the earth to revolve once around the sun

Core Lesson/Topic Student Learning Outcomes:

The students will be able to tell time to the hour and half hour using analog and digital clocks.

The students will be able to read a calendar.

Core Lesson/Topic Instructional Procedures & Activities:

- Introduce and discuss the types of clocks
- Identify hands of a clock
- Practice identifying hands and times on Judy clocks
- Use student Judy clocks to tell time to the hour and half hour
- Complete calendar activities daily- identify day, month, year and date

Core Lesson/Topic Materials:

McGraw Hill textbook
Judy Clocks
Various real life digital and analog clocks
Websites
Time activity cards/posters/sheets
Time games such as BINGO, etc.
Student created clocks
Calendar
number cards
months of year
days of week

Lesson Topic: Lesson 3 Money

Core Lesson/Topic Description:

Students will be able to identify coins and count coins to \$1.00.

Core Lesson/Topic Big Ideas:

Identify and name a penny, nickel, dime, and quarter.
Find the value of certain coins.

Core Lesson/Topic Essential Questions:

How does one calculate the value of coins?

Core Lesson/Topic Key Terminology & Definitions:

Cent –one of 100 equal parts of a U.S. dollar; a value of money

Cent Symbol – the symbol for the word "cent" or "cents" – ¢

Coin – a piece of metal with a specific value used as money

Dime – a U.S. Coin worth 10 cents

Dollar – the basic unit in the U.S. money system that is equal to 100 cents

Dollar Sign – the symbol for the word “dollar” or “dollars - \$

Nickel – a U.S. coin worth five cents

Penny – a U.S. coin worth one cent

Quarter – a U.S. coin worth 25 cents; one fourth

Core

**Lesson/Topic
Student
Learning
Outcomes:**

Students will be able to identify a penny, nickel, dime, and quarter.
Students will be able to count sets of coins.

Core

**Lesson/Topic
Instructional
Procedures &
Activities:**

-Identify values and name coins
-Count coins
-Find the value of mixed sets of coins
-Identify different combinations of coins that equal the same value
-Add and subtract money amounts

Core

**Lesson/Topic
Materials:**

McGraw Hill textbook
money manipulatives
money stamps
Money BINGO
websites
games
money activity sheets
cash register
price tags
class store

Lesson Topic: Lesson 4 Tables and Graphs

Core

**Lesson/Topic
Description:**

Students will interpret data using tables and charts.

Core

**Lesson/Topic
Big Ideas:**

Read, create and use graphs to interpret data.

Core

**Lesson/Topic
Essential
Questions:**

How does one read, create, and use graphs?
What are different types of graphs used to collect data?

Core

**Lesson/Topic
Key
Terminology &
Definitions:**

Addition – an operation that combines two or more addends to find the sum

Associative Property of Addition – the property that states that changing the grouping of the addends does not affect the sum

Bar Graph – a graph that displays data using parallel rectangles, or bars, whose lengths are proportional to the quantities they represent

Calculator – a tool used to quickly work math problems

Certain – absolutely sure to happen

Chart – an organized display of information

Column – a vertical arrangement of items

Commutative Property of Addition – the property that states that changing the order of the addends does not affect the sum

Compare – to examine the likenesses and differences of objects; to determine which number is greater or whether the numbers are equal

Comparison Symbols – symbols that show whether a number is greater than ($>$), less than ($<$), or equal to ($=$) another number

Count Backward – to count down by subtracting

Count On – to count by adding one each time

Difference – the answer to a subtraction problem

Digit – any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 used to write numbers

Equal Groups – sets of objects having the same number or value; a way of talking about multiplication and division

Equals Sign – the symbol that shows that two quantities have the same value - =

Estimate – to approximate, or guess, the value or measurement based on given information

Even – every number divisible by 2; every number ending in 0, 2, 4, 6, or 8

Fact Family – a group of addition facts and subtraction facts that all use the same three numbers; a group of multiplication facts and division facts that all use the same three numbers

Graph – a chart that displays one variable in relation to another variable using symbols, points, bars, or lines

Greater Than – more than

Impossible – cannot happen

Less Than – not as many as

Likely – probably will happen

Minus – a word used between numbers that means to subtract the second number from the first number

Minus Sign – the symbol for subtraction; sometimes used to indicate a negative quantity

Multiples of 10 – the numbers obtained by multiplying 10 by every counting number

Number – one or more digits representing an amount

Number Line – a line that continues in both directions without end and is marked with numbers in order from least to greatest

Number Sentence – a sentence that uses numbers and symbols but not words

Odd – every number not divisible by 2; every number ending in 1, 3, 5, 7, or 9

Order – to place things in a specific way, often from least to greatest

Pattern – a repeating arrangement of something

Pictograph – a graph that uses pictures or symbols to display information

Plus Sign – the symbol for addition; sometimes used to indicate a positive quantity - +

Repeating Pattern – an arrangement of items in a specific order over and over such that the next item can be predicted

Right – a direction; the opposite of left; correct

Set – a collection of items

Single-Digit Number – a number that has only one digit

Some, Some more – a story problem that has an addition pattern

Some, some went away – a story problem that has a subtraction pattern

Sort – to separate items into groups based on a common attribute

length; a four-sided figure with all sides of equal length and four right angles

Story problem – a math problem that is written as a story

Subtract – to count backwards; take away

Subtraction – an operation that deducts the value of one number from the value of another to find the difference

Sum – the answer to an addition problem

Symbol – a sign that represents a number or word

Take away – subtract

Tally – to keep track while counting by writing small vertical and oblique marks

Core

**Lesson/Topic
Student
Learning
Outcomes:**

Students will be able to create, read and interpret graphs.
Students will 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.

Core

**Lesson/Topic
Instructional
Procedures &
Activities:**

- Make and interpret a real and pictograph
- Compare data by interpreting a tally table
- Use tally chart to make a bar graph and solve problems
- Read and interpret bar graphs
- Analyze data to make decisions and compare data

Core

**Lesson/Topic
Materials:**

graph paper
Various created pictographs, bar graphs, charts and tables
manipulatives
websites
post-it notes