

Oldmans Township School

Math Curriculum

K-8

Oldmans Township School

A decorative graphic at the bottom of the page consists of several overlapping, semi-transparent geometric shapes in shades of blue and grey, creating a layered, architectural effect.

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Program Overview

The Mathematics Curriculum at Oldmans Township School is designed to prepare students for the twenty-first century. Mathematics at every level is design to be both relevant and rigorous, and meets or exceeds the standards presented in the Common Core Standards.

Students in grades K-5 use *EverydayMath*, which is research based, teaches basic and conceptual thinking, uses a hands-on approach and sets high expectations. Students acquire knowledge and skills, and develop an understanding of mathematics from their own experience. The philosophy is that mathematics is meaningful when it is rooted in real life contexts and experiences. The program stresses the importance of number fact reflexes and also encourages students to learn multiple solutions for doing math operations. Students can then choose the method that works best for them.

Students in grade 6 use *Connected Math. Connected Mathematics*, is a complete mathematics curriculum that helps students develop an understanding of important concepts, skills, procedures, and ways of thinking and reasoning in number, geometry, measurement, algebra, probability, and statistics.

Students in grades 7 &8 take courses in *Pre-Algebra* and *Algebra*, respectively. These courses are designed to utilize important research-based instructional strategies to reinforce the established high goals. The program includes a healthy balance of instructional strategies to foster cooperative, competitive, and individualistic styles of problem solving and learning.

Topic: Geometry

Objectives: All students will be able to:

Identify and describe plane and solid shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, spheres). CCS-K.G.1.2.3
CCS-K.MP.1.2.4.5.6.7.
Analyze, compare, create, and compose shapes. CCS-K.G.4.5.6
CCS-K.MP.1.2.4.5.6.7

Activities:

Identify 2-dimensional shapes
Create/extend designs with 2-dimensional shapes
Draw triangles and quadrilaterals
Explore shape relationships
Identify characteristics of 2-dimensional shapes
Compare 2-dimensional shapes
Construct 2-dimensional shapes
Solve 2-dimensional shapes problems
Record designs with 2-dimensional shapes
Complete shape patterns
Sort shapes by attributes
Explore similarities and differences among quadrilaterals
Form shapes by combining polygons
Classify and name polygons
Construct models of polygons with straws
Identify 3-dimensional shapes
Identify characteristics of 3-dimensional shapes
Construct 3-dimensional shapes
Explore similarities and differences among 3-dimensional shapes
Fold and cut symmetrical shapes
Create/complete a symmetrical design
Identify symmetrical figures
Identify lines of symmetry

Math
Kindergarten

Cross curricular: Daily routines (calendar, money, temperature, weather, lunch count, etc.), art activities (drawing), ELA (illustrating, responding)

Resources: teacher's manual (Everyday Math, 2007), home links, manipulatives (pattern blocks, straws/connectors), math games, mixed abilities group, peer tutors, choral responses, ESL internet translation website

Accommodations: shorten assignments, use manipulatives, math games, mixed abilities group work, peer tutors, choral responses, ESL internet translation website

Assessment: guideposts, teacher-made assessments, math games, observation, additional worksheets

Technology: SMART Board, ELMO ,computer (primarygames.com, coolmath.com, KidPix)

Topic: Measurement and Data

Objectives: All students will be able to:

- Describe and compare measurable attributes. CCS-K.MD.1.2
- CCS-K.MP.1.2.4.5.6.
- Classify objects and count the number of objects in each category.
- CCS-K.MD.3
- CCS-K.MP.1.2.4.5.6

Activities:

- Estimate and compare distances
- Estimate and compare lengths/heights of objects
- Measure lengths with nonstandard units
- Measure to the nearest foot
- Investigate the yard
- Investigate the meter
- Name tools used to measure length
- Compare capacities of containers
- Use a pan balance
- Estimate and compare weights
- Recognize pennies, nickels, dimes and quarters
- Use cents notation
- Calculate the value of coin combinations
- Compare values of sets of coins
- Show money amounts with coins
- Recognize dollars
- Calculate the value of bill combinations
- Identify equivalencies and make coin exchanges
- Identify equivalencies and make bill exchanges
- Add money amounts
- Use the calendar
- Compare the hour and minute hands
- Tell time on the hour
- Estimate duration of a minute
- Investigate duration of an hour
- Use digital notation
- Investigate the second hand
- Investigate 1-minute intervals
- Show days/events on a timeline
- Number and name the months in a year
- Write today's date
- Use the Fahrenheit temperature scale
- Use a thermometer

Math
Kindergarten

Use the Celsius temperature scale

Cross curricular: Daily routines (calendar, money, temperature, weather, lunch count, etc.), related language arts and science stories

Resources: teacher's manual (Everyday Math, 2007), home links, manipulatives (paper coins, cubes, longs, clocks, rulers, relevant games), activity masters, additional supplemental worksheets

Accommodations: shorten assignments, use manipulatives, math games, mixed abilities group work, peer tutors, choral responses, ESL internet translation website, ESL home links

Assessments: Guideposts, teacher-made assessment, math games, observations, additional worksheets, daily routines (routine board)

Technology: SMART Board, ELMO, computer (primarygames.com, coolmath.com), check temperature/weather on internet

Topic: Number and Operations in Base Ten

Objectives: All students will be able to:
Work with numbers 11-19 to gain foundations for place value.CCS-K.NBT1
CCS-K.MP.2.4.5.6.7

Activities:

Understand meaning of addition/subtraction
Solve addition/subtraction number stories
Make up addition/subtraction stories
Add/subtract using a number line
Practice basic facts
Use tally marks to show meaning of tens and ones
Use flats, longs and cubes to show meaning of hundreds, tens and ones
Compose and decompose numbers from 11-19 into tens and some further ones by using objects or drawings
Record composition and decomposition of numbers by drawing or equation
Understand that these numbers are composed of then ones and one, two, three, four, five, six, seven eight or nine ones

Cross curricular: Daily routines (calendar, money, temperature, weather, lunch count, etc.)

Resources: teacher's manual (Everyday Math, 2007), home links, manipulatives (cubes, longs, flats, counters, number cards, number lines, relevant games), activity masters, additional supplemental worksheets

Assessment: guideposts, teacher-made assessment, kid-watching, slate assessment, math journal entries

Accommodations: shorten assignments, use of manipulatives, math games, mixed abilities group work, peer tutors, choral responses, ESL internet translation website

Technology: calculator, computer (coolmath.com, primarygames.com, sdmf.k12.wi.us/bf/math/k-3/k-3games.html, emgames.com), SMART Board, ELMO.

Topic: Number and Operations in Base Ten

Kindergarten

Objectives: All students will be able to:

Work with numbers 11-19 to gain foundations for place value CCS-K.NBT1
CCS-K.MP.2.4.6.7

Activities:

Compose and decompose numbers from 11-19 into ten ones and some further ones, e.g, by using objects or drawings

Record each composition or decomposition by a drawing or equation (such $18=10 + 8$)

Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven., eight, or nine ones.

Cross Curricular: Daily routines (calendar, money, temperature, weather, etc.)

Resources: teacher's manual (Everyday Math, 2007), homelinks, manipulatives (cubes, longs, flats, counters, number line), activity masters, additional supplemental worksheets, math websites

Assessment: Guideposts, teacher-made assessments, math games, observations, additional worksheets, ELMO

Topic: Operations and Algebraic Thinking

Kindergarten

Objectives: All students will be able to:

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from CCS-K.OAT.1.2.3.4.5
CCS-K.MP.1.2.4.6.7.

Activities:

Solve addition/subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem

Make up addition/subtraction stories

Solve change-to-more and change-to-less number stories/diagrams

Solve parts-and-total number stories/diagrams

Add/subtract using a number line

Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, or equations

Decompose numbers less than or equal to 10 into pairs in more way than one way, e.g., by using objects or drawings to represent the problem, and record each decomposition by a drawing or equation (e.g., $5=2+3$ and $5=4+1$).

For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings and record the answer with a drawing or equation

Fluently add and subtract within 5

Cross curricular: Daily routines (calendar, money, temperature, weather, lunch count, etc.)

Resources: teacher's manual (Everyday Math, 2007), home links, manipulatives (counters, number cards, number lines, relevant games), activity masters, additional supplemental worksheets, math websites

Assessment: Guideposts, teacher-made assessment, kid-watching, slate assessment, math games, math journal entries

Accommodations: shorten assignments, use of manipulatives, math games, mixed abilities group work, peer tutors, choral responses, ESL internet translation website

Math
Kindergarten

Technology: calculator, computer (coolmath.com, primarygames.com, sdmf.k12.wi.us/bf/math/k-3/k-3games.html, emgames.com), SMART Board, ELMO

Topic: OAT Operations and Algebraic Thinking

Objectives:

Represent and solve problems involving addition and subtraction CCS 1.OA.1.2, CCS 1.MP.1.4

Understand and apply properties of operations and the relationship between addition and subtraction CCS 1.OA.3.4, CCS1.MP.2.6.7.8

Add and subtract within 20 CCS 1.OA.5.6, CCS 1.MP. 1.2.4.5

Work with addition and subtraction equations CCS 1.OA.7.8, CCS 1.MP.1.2.7.8

Activities:

Understand meaning of addition/ subtraction

Solve addition/ subtraction number stories

Make up addition/ subtraction number stories

Find/ use complements of 10

Solve change-to-more and change-to-less number stories/ diagrams

Solve parts-and-total number stories/ diagrams

Solve comparison number stories

Find patterns in addition/ subtraction facts

Add/ subtract using a number line

Add/ subtract using a number grid

Add/ subtract using a calculator

Find sums of even and odd numbers

Practice basic facts

Use mental arithmetic to add/ subtract

Investigate relationships between addition and subtraction

Add/ subtract multiples of 10

Add/ subtract money amounts/ decimals

Add 3 or more 1-digit numbers

Add/ subtract 2-digit numbers

Investigate properties of addition/ subtraction

Use an Addition/ Subtraction Facts Table

Make change

Use estimation to add/ subtract

Resources: teacher's manual, student journals 1 & 2, homelinks, manipulatives (number line, number grid, counters, calculator, coins, Addition/ Subtraction Facts Table), math masters, additional supplemental worksheets

Assessment: end-of-units Checking Progress Tests, slate assessments, observation of games

Accommodations: shorten assignments, use of manipulatives, mixed ability group work, peer tutors, choral responses, ELL- internet translation website and Spanish homelinks

Technology: manipulatives, SMART Board notebook and gallery, ELMO

Topic: NBT Numbers and Operations in Base Ten

Objectives:

Extend the counting sequence CCS 1.NBT.1, CCS 1.MP.4

Understand place value CCS 1.NBT.2.3, CCS 1.MP.4.5

Use place value understanding and properties of operations to add and subtract CCS 1.NBT.4.5.6

CCS 1.MP.1.2.3.5

Activities:

Read and write numbers to 20

Read and write 2-digit numbers

Read and write 3-digit numbers

Read and write 4-digit numbers

Read and write ordinal numbers

Order numbers to 20

Order 2-digit numbers

Order 3-digit numbers

Compare numbers to 20

Compare 2-digit numbers

Compare 3-digit numbers

Compare numbers using $<$, $>$, and $=$ symbols

Perform rote counting

Perform rational counting

Skip count by 2s, 5s, and 10s

Count by 25s

Count using a calculator

Identify even and odd numbers

Find equivalent names for numbers

Make and solve number-grid puzzles

Explore place value using a number grid

Identify place value in 2-digit numbers

Identify place value in 3-digit numbers

Identify place value in 4-digit numbers

Make exchanges among place values

Find complements of 10

Display and read numbers on a calculator

Use cents notation

Use dollars-and-cents notation

Display money amounts on a calculator

Identify equivalencies and make coin exchanges

Identify equivalencies and make coin/bill exchanges

Show money amounts with coins

Show money amounts with bills and coins

Compare money amounts using $<$, $>$, and $=$ symbols

Math
Grade 1

Identify pennies and dimes as fractional parts of a dollar
Calculate the value of coin combinations
Understand the meaning of fractions
Identify numerator and denominator
Identify fractional parts of a region
Identify fractional parts of a set
Find equivalent fractions
Compare and order fractions
Explore uses of fractions
Use fractions in number stories

Resources: teacher's manual, student journals 1 & 2, homelinks, manipulatives (number grid, number line, calculator, coins, fraction pieces), math masters, additional supplemental worksheets

Assessments: end-of-units Checking Progress Tests, slate assessments, observation of math games

Accommodations: shorten assignments, use of manipulatives, mixed ability group work, peer tutors, choral responses, ELL- internet translation website and Spanish homelinks

Technology: manipulatives, SMART Board notebook and gallery, ELMO

Topic: MD Measurement and Data

Objectives:

Measure lengths indirectly and by iterating length units. CCS 1.MD.1.2, CCS 1.MP.1.4.5.6.

Tell and write time. CCS 1.MD.3., CCS 1.MP.2.4.5.6.

Represent and interpret data. CCS 1.MD. 4., CCS 1.MP.1.2.3.4.5.6.7.8.

Activities:

Estimate and compare distances

Estimate and compare lengths/ heights of objects

Measure lengths with nonstandard units

Measure to the nearest foot

Measure to the nearest inch

Investigate the yard

Measure to the nearest centimeter

Investigate the meter

Solve length/ height number stories

Name tools used to measure length

Measure to the nearest yard

Measure to the nearest meter

Compare capacities of containers

Use a pan balance

Solve weight number stories

Estimate and compare weights

Investigate area

Recognize pennies and nickels

Use cents notation

Calculate the value of coin combinations

Recognize dimes

Use dollars-and-cents notation

Compare values of sets of coins

Recognize quarters

Show money amounts with coins

Show money amounts with coins/ bills

Recognize dollars

Solve money number stories

Make change

Calculate the value of bill combinations

Identify equivalencies and make coin exchanges

Identify equivalencies and make bill exchanges

Add money amounts

Subtract money amounts

Identify pennies and dimes as fractional parts of a dollar

Math
Grade 1

Use the calendar
Compare the hour and minute hands
Tell time on the hour
Investigate A.M. and P.M.
Estimate the duration of a minute
Investigate the duration of an hour
Tell time on the half-hour
Tell time on the quarter-hour
Use digital notation
Tell time to the nearest 5 minutes
Investigate the second hand
Solve time number stories
Investigate 1-minute intervals
Calculate elapsed time
Show days/ events on a timeline
Number and name the months in a year
Write today's date
Use the Fahrenheit temperature scales
Use a thermometer
Solve temperature number stories
Use a weather map
Use the Celsius temperature scale
Collect data by counting
Make predictions about data
Conduct a survey
Make a tally chart
Make a bar graph
Record data in a table/ chart
Make a frequency table
Make a line plot
Find the range
Find the mode
Find the median
Compare two sets of numbers
Find the minimum/ maximum
Read tables, graphs, and maps
Use data in problem solving
Summarize and interpret data
Explore equal-chance events
Predict outcomes
Conduct experiments
Explore fair and unfair games

Resources:

Math
Grade 1

teacher's manual, student journals 1 & 2, homelinks, manipulatives (rulers, pan balance, coins, bills, clocks, thermometers, dice), math masters, additional supplemental worksheets

Assessment: end-of-units Checking Progress Tests, slate assessments, observation of math games

Accommodations: shorten assignments, use of manipulatives, mixed ability group work, peer tutors, choral responses, ELL- internet translation website and Spanish homelinks

Technology: manipulatives, Smart board notebook and gallery, ELMO

Topic: G Geometry

Objectives:

Reason with shapes and their attributes. CCS 1.G.1.2.3, CCS 1.MP. 1.2.3.4.5.6.7.8.

Activities:

Identify 2-dimensional shapes

Create/ extend designs with 2-dimensional shapes

Make 2-dimensional shapes on a geoboard

Record geoboard shapes on dot paper

Draw triangles and quadrilaterals

Explore shape relationships

Identify characteristics of 2-dimensional shapes

Compare 2-dimensional shapes

Construct 2-dimensional shapes

Solve 2-dimensional-shapes problems

Record designs with 2-dimensional shapes

Compare polygons and non-polygons

Complete shape patterns

Sort shapes by attributes

Explore similarities and differences among quadrilaterals

Form shapes by combining polygons

Math
Grade 1

Classify and name polygons
Construct models of polygons with straws
Identify 3-dimensional shapes
Identify characteristics of 3-dimensional shapes
Construct 3-dimensional shapes
Explore similarities and differences among 3-dimensional shapes
Fold and cut symmetrical shapes
Create/ complete a symmetrical design
Identify lines of symmetry
Draw line segments with a straightedge

Resources: teacher's manual, student journals 1 & 2, homelinks, manipulatives (pattern blocks, shapes, shape template), math masters, additional supplemental worksheets

Assessments: end-of-units Checking Progress Tests, slate assessments, observation of math games

Accommodations: shorten assignments, use of manipulatives, mixed ability group work, peer tutors, choral responses, ELL- internet translation website and Spanish homelinks

Technology: manipulatives, Smart board notebook and gallery, ELMO

Grade 2: Math

Topic: Geometry

Objectives: All students will be able to:

Reason with shapes and their attributes, CCS 2.G.1.2.3
CCS 2.G.1.2.4.5.6.7.8

Activities:

Identify 2-dimensional shape
Create/extend designs with 2-dimensional shapes
Make 2-dimensional shapes on a geoboard
Record geoboard shapes on dot paper
Draw triangles and quadrilaterals
Explore shape relationships
Identify characteristics of 2-dimensional shapes
Compare 2-dimensional shapes
Construct 2-dimensional shapes
Solve 2-dimensional shapes problems
Record designs with 2-dimensional shapes
Compare polygons and non-polygons
Complete shape patterns
Sort shapes by attributes
Explore similarities and differences among quadrilaterals
Form shapes by combining polygons
Classify and name polygons
Identify 3-dimensional shapes
Identify characteristics of 3-dimensional shapes
Construct 3-dimensional shapes
Explore similarities and differences among 3-dimensional shapes
Explore the relationship among the numbers of faces, edges, and vertices of pyramids
Fold and cut symmetrical shapes
Create/complete a symmetrical design
Identify symmetrical features
Identify lines of symmetry
Make symmetrical shapes on a geoboard
Draw line segments with a straightedge
Identify parallel and nonparallel line segments
Identify and name points
Identify and name line segments
Model parallel lines on a geoboard
Draw parallel lines with a straightedge
Resources: Everyday Mathematics 2007 curriculum (teacher's manual, student journals 1 & 2, homelinks, manipulative math masters)
Assessments: End of units checking progress and secure tests, slate and oral assessments.
Accommodations: Shorten assignments, use of manipulative, mixed ability group work, peer tutors, choral responses.

Technology: Overhead

Grade 2: Math

Topic: Measurement and Data

Objectives: All students will be able to:

Measure and estimate lengths in standards units, CCS 2.MD.1.2.3.4

CCS 2.MP.1.5.6.7.8

Relate addition and subtraction to length, CCS 2.MD.5.6

CCS 2.MP.1.2.4.6.7.8

Work with time and money, CCS.MD.7.8

CCS 2.MP.1.3.4.5.6.8

Represent and interpret data, CCS.MD.9.10

CCS 2.MP.1.3.5.6.7.8

Activities:

Measurement

Estimate and compare distances

Estimate and compare lengths/heights of objects

Measure lengths with nonstandard units

Measure to the nearest foot

Measure to the nearest inch

Investigate the yard

Measure to the nearest centimeter

Investigate the meter

Solve length/height number stories

Name tools used to measure length

Measure to the nearest $\frac{1}{2}$ inch

Measure to the nearest $\frac{1}{2}$ centimeter

Measure to the nearest yard

Identify equivalent customary units of lengths

Identify equivalent metric units of lengths

Choose the appropriate unit of measure

Measure to the nearest decimeter

Investigate the mile

Investigate kilometer

Solve distance number stories

Measure to the nearest meter

Use a mileage map

Compare capacities of containers

Name tools to measure capacity

Identify customary units of capacity

Identify equivalent customary units of capacity

Identify metric units of capacity

Identify equivalent metric units of capacity

Measure capacities of irregular containers

Grade 2
Math

Name tools used to measure volume
Find volume
Estimate volume
Choose the appropriate unit of measure
Use a pan balance
Solve weight number stories
Identify customary units of weight

Data

Collect data by counting
Collect data by interviewing
Collect data from print sources
Collect data from posters
Collect data from a map
Make predictions about data
Conduct a survey
Make a tally chart
Make a bar graph
Record data in a table/chart
Make frequency table
Make a line plot
Find the range
Find the mode
Find the median
Compare two sets of data
Find the minimum/maximum
Read tables, graphs, and maps
Use data in problem solving
Summarize and interpret data
Predict outcomes

Resources: Everyday Mathematics 2007 curriculum (teacher's manual, student journals 1 & 2, homelinks, manipulative math masters)

Assessments: End of units checking progress and secure tests, slate and oral assessments.

Accommodations: Shorten assignments, use of manipulative, mixed ability group work, peer tutors, choral responses.

Technology: Overhead transparencies, calculator, computer, manipulative, SMART Board activities.

Cross Curricular: Morning routines (calendar, money, temperature, weather, etc.) transparencies, calculator, computer, manipulative, SMART Board activities.

Cross Curricular: Morning routines (calendar, money, temperature, weather, etc.)

Grade 2: Math

Topic: Numbers and Operations in Base Ten

Objectives: All students will be able to:

Understand Place Value, CCS 2.NBT.1.2.3.4.5.6.7.8.9

CCS 2.MP.1.4.5.7.8

Use place value understanding and properties of operations to add and subtract, CCS 2.NBT.1.2.3.4.5.6.7.8.9

CCS 2.MP.1.4.5.6.7

Activities:

Numbers

Read and write numbers to 20.

Read and write 2-digit numbers

Read and write 3-digit numbers

Read and write 4-digit numbers

Read and write ordinal numbers

Order numbers to 20

Order 2-digit numbers

Order 3 digit numbers

Order 4-digit numbers

Order larger numbers

Compare numbers to 20

Compare two digit numbers

Compare 3 digit numbers

Compare 4 digit numbers

Compare larger numbers

Compare numbers using $<$, $>$, $=$ symbols

Perform rote counting

Perform rational counting

Skip count by 2's, 5's, and 10s

Count by 25s

Count by 100s, 1,000s, and 10,000s

Count using a calculator

Use Roman Numerals

Identify even and odd numbers

Find equivalent names for numbers

Make and solve number-grid puzzles

Explore place value using a number grid

Identify place value in a 2 digit number

Identify place value in 3-digit numbers

Identify place value in 4-digit numbers

Grade 2
Math

Make exchanges among place values
Find compliments of ten
Find compliments for multiples of 10
Display and read numbers on a calculator
Use cents notation
Use dollars and cents notation
Display money amounts on a calculator
Identify equivalencies and make coin exchanges
Identify equivalencies and make coin/bill exchange
Show money amounts with coins
Show money amounts with coins/bills
Compare money using $<$, $>$, $=$ symbols
Identify pennies and dimes as fractional parts of a dollar.
Calculate the value of coin combinations.
Calculate the value of bill combinations.
Explore uses for decimals
Understand the meaning of fractions
Identify numerator and denominator
Identify fractional parts of a region
Identify fractional parts of a set
Find equivalent fractions
Compare and order fractions
Explore uses of fractions

Operation in Base Ten

Understand meaning of addition/subtraction
Solve addition/subtraction number stories
Makeup addition/subtraction number stories
Find/use compliments of 10
Find/use compliments of 100
Solve change-to-more and change-to-less number stories/diagrams
Solve parts and total number stories/diagrams
Solve comparison number stories
Find patterns in addition/subtraction facts
Add/subtract using a number line
Add/subtract using a number grid
Add/subtract using a calculator
Find sums of even and odd numbers
Practice basic facts
Use mental arithmetic to add/subtract
Investigate relationships between addition and subtraction
Add/subtract multiples of 10
Add/subtract multiples of 100
Add/subtract money amounts/decimals
Add 3 or more 1-digit numbers

Grade 2
Math

Add/subtract 2-digit numbers
Add 3 or more 2-digit numbers
Add/subtract 3-and 4-digit numbers
Investigate properties of addition/subtraction
Use an addition /subtraction algorithms
Understand meaning of multiplication/division
Solve multiplication/division number stories
Make up multiplication/division number stories
Solve problems involving ratios
Investigate properties of multiplication/division
Practice multiplication/division facts
Explore square numbers
Investigate relationships between multiplication and division
Multiply/divide using a number line
Find patterns in multiplication/division facts
Find patterns in multiples of 10, 100, 1,000
Use a multiplication/division facts table
Use mental arithmetic to multiply/divide

Resources: Everyday Mathematics 2007 curriculum (teacher's manual, student journals 1 & 2, homelinks, manipulative math masters)

Assessments: End of units checking progress and secure tests, slate and oral assessments.

Accommodations: Shorten assignments, use of manipulative, mixed ability group work, peer tutors, choral responses.

Technology: Overhead transparencies, calculator, computer, manipulative, SMART Board activities.

Cross Curricular: Morning routines (calendar, money, temperature, weather).

Grade 2: Math

Topic: Operations and Algebraic Thinking

Objectives: All students will be able to:

Represent and solve problems involving addition and subtraction,

CCS 2.OA.1

CCS 2.MP.1.2.4.6.7.8

Add and subtract within 20, CCS 2.OA.2

CCS 2.MP.1.2.4.6.7.8

Work with equal groups of objects to gain foundations for multiplication,

CCS 2.OA.3.4

CCS 2.MP.1.2.3.4.6.7.8

Activities:

Create patterns with 2-dimensional shapes

Sort and identify shapes/objects by attributes

Explore and extend visual patterns

Find patterns in the real world

Find common attributes in objects and people

Count up and back on a number grid

Investigate even and odd number patterns

Identify and use patterns on a number grid

Add and subtract using a number grid

Find patterns in addition and subtraction facts

Find patterns in multiplication and division facts

Find equivalent names for numbers

Investigate square numbers

Explore patterns in doubling numbers

Count up and back on a number line

Make/complete a number line

Count by 2's 5's and 10s

Count by numbers greater than 10

Complete number sequences

Solve Frames-and Arrows problems with two rules

Explore counting patterns using a calculator

Solve "What's My Rule" (Function Machine)

Use symbols +, -, =

Write/solve addition/subtraction number sentences

Write solve number sentences with missing addends

Explore number properties

Use symbols x, =

Write and solve addition and subtraction up to 100 in multiple steps in word problems

Write and solve multiplication number stories

Write and solve number sentences with missing factors

Write and solve division number sentences

Make up/solve number sentences with parentheses

Compare numbers using <, > symbols

Resources: Everyday Mathematics 2007 curriculum (teacher's manual, student journals 1 & 2, homelinks, manipulative math masters)

Assessments: End of units checking progress and secure tests, slate and oral assessments.

Accommodations: Shorten assignments, use of manipulative, mixed ability group work, peer tutors, choral responses.

Technology: Overhead transparencies, calculator, computer, manipulative, SMART Board activities.

Cross Curricular: Morning routines (calendar, money, temperature, weather, etc.)

Topic: Numeration

Objectives: The students will be able to develop number sense and perform standard numerical operations and estimations on all types of numbers in a variety of ways.(C.C.C.S. 4.1) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas.(C.C.C.S. 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Read, write and compare 2-4 digit numbers
- Perform rote and rational counting
- Skip count by 2s, 5s, and 10s
- Find equivalent names for numbers
- Explore place value using a number grid
- Identify place value in 4-digit numbers
- Find complements of 10
- Use dollar and cents notation
- Identify equivalencies and make coin exchanges
- Show money amounts with coins
- Calculate the value of coin combinations
- Understand the meaning of fractions
- Identify numerator and denominator
- Identify fractional parts of a region

Cross Curricular:

Literature: Read Twelve Ways to Get to Eleven, 26 Letters and 99 Cents, and How Much is a Million?

Social Studies- Discuss different museums, solve addition and subtraction problems based on distance between cities, temperature differences between US cities

Science – Compare sizes of groups of animal eggs

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Math box pages, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, Smart board, Thinkfinity.org , ELMO

Topic: Operations and Computation

Objectives: The students will be able to develop number sense and perform standard numerical operations and estimations on all types of numbers in a variety of ways. (C.C.C.S. 4.1) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S. 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Understand the meaning of addition and subtraction
- Solve addition and subtraction number stories
- Find and use complements of 10
- Solve comparison number stories
- Find patterns in addition and subtraction facts
- Add and subtract using a number grid, calculator, and mental math
- Practice basic facts
- Investigate relationships between addition and subtraction
- Add and subtract multiples of 10, 100
- Add 3 or more 1-digit numbers
- Add and subtract 2, 3, and 4-digit numbers
- Use estimation to add and subtract
- Find patterns in multiples of 10, 100, and 1,000

Cross Curricular:

Literature: Read If You Made a Million, A Million Fish...More or Less, and One Hundred Hungry Ants

Language Arts- Learn about the Dewy Decimal System

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Math box pages, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, Smart board, Thinkfinity.org , SMART Board, ELMO

Topic: Geometry

Objectives: The students will be able to develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena.(C.C.C.S 4.2) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Identify 2 and 3-dimensional shapes
- Fold and cut symmetrical shapes
- Create and complete a symmetrical design
- Identify symmetrical figures
- Identify lines of symmetry
- Make symmetrical shapes on a geoboard

Cross Curricular:

Literature: Read Lao Lao of Dragon Mountain, The Art of Shapes for Children and Adults ,
The Greedy Triangle

Art- Read Shapes, and Shapes, and Shapes

Language Arts- Discuss the meaning of the prefixes tri-, quad-, penta-

Grade 3
Math

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, Powerpoint for Mental Math and Math Message, Smart board, Thinkfinity.org , SMART Board, ELMO

Topic: Measurement and Reference Frames: Measurement

Objectives: The students will be able to develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena. (C.C.C.S 4.2) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Measure to the nearest foot, inch, yard
- Investigate the yard
- Measure to the nearest centimeter, $\frac{1}{2}$ inch, and $\frac{1}{4}$ inch
- Calculate the value of coin combinations
- Use dollars and cents notation
- Show money amounts with coins
- Solve number money stories
- Make change

Grade 3
Math

- Identify equivalencies and make coin exchanges
- Review telling time and finding elapsed time

Cross Curricular:

Literature: Math Curse

Health- Discuss the nutritional information on various labels

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Math box pages, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, Smart board, Thinkfinity.org, SMART Board, ELMO

Topic: Measurement and Reference Frames: Reference Frames

Objectives: The students will be able to develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena. (C.C.C.S 4.2) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Compare the hour and minute hands
- Tell time on the hour, half-hour, quarter-hour
- Use digital notation
- Tell time to the nearest five minutes
- Solve time number stories

Grade 3
Math

- Investigate 1-minute intervals
- Write today's date
- Use the Fahrenheit temperature scale
- Use a thermometer
- Solve temperature number stories

Cross Curricular:

Social Studies- Locate towns on a map

Geography- Research and report on places with the highest and lowest recorded temperatures on Earth

Science- Make a line graph of temperature differences

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Math box pages, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, Smart board, Thinkfinity.org , SMART Board, ELMO

Topic: Patterns, Functions, and Algebra

Objectives: The students will be able to develop number sense and perform standard numerical operations and estimations on all types of numbers in a variety of ways. (C.C.C.S. 4.1) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S. 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Add and subtract using a number grid
- Find patterns in addition and subtraction facts
- Find equivalent names for numbers
- Count by 2's, 5's, and 10s
- Solve frames-and-arrows problems with one rule
- Solve frames-and-arrows problems with two rules
- Use +, -, +
- Write and solve addition and subtraction number sentences
- Write and solve number sentences with missing addends
- Identify 2-dimensional shapes

Cross Curricular:

Literature: Read Counting on Frank, Math Curse

Grade 3
Math

Language Arts- Learn about the Dewy Decimal System

Science- Make a line graph of temperature differences

Consumer- Make a record for a stock-up sale

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Math box pages, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, Smart board, Thinkfinity.org, SMART Board, ELMO

Topic: Data and Chance

Objectives: The students will be able to develop an understanding of the concepts and techniques of data analysis, probability, and discrete mathematics, and will use them to model situations, solve problems, and analyze and draw appropriate inferences from data. (C.C.C.S 4.4) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, Home Links, Math Games

- Make a tally chart
- Make a bar graph
- Read tables, graphs, and maps
- Use data in problem solving
- Summarize and interpret data
- Find the minimum, maximum, range, median, and mode for a set of data
- Use basic probability terms
- Describe certain and uncertain events
- Predict the outcome of a probability experiment and conduct a probability experiment

Cross Curricular:

Geography- Research and report on places with the highest and lowest recorded temperatures on Earth and use information to make a bar graph

Resources: Math Journal, Student Reference Book, Home Links Book, Websites, Test Prep Materials, Math games, ESL internet translation website, Every Day Math Manipulatives

Assessment examples: Tests, Quizzes, Timed Facts Tests, Peer group assessment, Exit Slips, Math box pages, Open Response Questions, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website, Explorations

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, Smart board, Thinkfinity.org , SMART Board, ELMO

Grade 4

Topic: Data and Chance

Objective: All students will develop an understanding of the concepts and techniques of Data Analysis, Probability, and discrete Mathematics, and will use them to model situations, solve problems, and analyze and draw appropriate inferences from data.
(CCCS 4.4)

Activities:

Find and use median
Interpret tables, graphs, and maps
Use data in problem-solving
Interpret data
Summarize data

Resources:

Reference Book
Math Journal
Test Prep Materials
Mental Math
Math Message
Math Journal Pages/Math Boxes
Study Links
Math Games

Assessment:

Tests
Quizzes
Projects
Presentations
Timed Tests for Facts

Learnia

Accommodations (Special Needs/ELL)

Shorten Assignments

Extended Time for assignments and Tests

Test in small group or individually

Read Test/Assignments Aloud

Repeat, reword, clarify, word problems

Technology

Computer Websites – Math related

Power Point activities/Projects/Presentations

ELMO

SMARTBOARD

Cross Curricular:

Literature: Read/Discuss Gator Pie by: Louise Mathews

Literature: Read/Discuss Grandfather Tang's Story by: Ann Tompert

Art: Draw and color a geometric shape to explore relationships between fractions.

Grade 4

Topic: Measurement

Objective: All students will develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena. (CCCS 4.2)

Activities:

Measure to the nearest foot
Measure to the nearest inch
Measure to the nearest $\frac{1}{2}$ inch
Measure to the nearest decimeter
Measure to the nearest $\frac{1}{4}$ inch
Identify customary units of weight
Use dollar-and-cents notation
Solve money number stories
Add/subtract money amounts
Divide money amounts
Solve time number stories
Investigate 1-minute intervals
Tell time to the nearest minute
Solve temperature number stories

Resources:

Reference Book
Math Journal
Test Prep Materials
Mental Math
Math Message

Math Journal Pages/Math Boxes
Study Links
Math Games

Assessment Examples:

Tests
Quizzes
Timed Tests for Facts
Learnia

Accommodations (Special Needs/ELL):

Shorten Assignments
Extended Time for assignments and tests
Test in small group or individually
Read Test/Assignments Aloud
Repeat, reword, clarify, word problems

Technology

Computer Websites – Math related
Power Point Activities/Projects/Presentations
SMARTBOARD
ELMO

Cross Curricular:

Social Studies: Examine a Travel Map – Discuss Measurements.

Social Studies: Examine the measurements of various
Geographical Landmarks.

Science: Using specific weights – Make up and solve stories.

Computer Science: Consider driving distance and time to solve a
problem.

Grade 4

Topic: Numeration

Timeframe: 5 to 6 Weeks

Objective: All students will develop number sense and will perform standard numerical operations and estimations on all types of numbers in a variety of ways. (CCCS 4.1)

Activities:

Read and write numbers to the hundred millions

Identify place value in numbers to hundred millions

Name the value of the digits in numbers to hundred million

Make exchanges among place values

Round whole numbers to a given place

Compare larger numbers

Find equivalent names for numbers

Find factors of numbers

Use dollars and cents notation

Explore uses of decimals

Identify and name decimal numbers

Model decimals with base-10 materials

Identify fractional parts of a region

Identify fractional parts of a set

Use a calculator to rename a fraction as a decimal or percent

Explore uses for positive and negative integers

Resources:

Reference Book
Math Journal
Text Prep Materials
Mental Math
Math Message
Math Journal Pages/Math Boxes
Study Links
Math Games

Assessment Examples:

Tests
Quizzes
Timed Tests for Facts
Learnia

Accommodations (Special Needs/ELL):

Shorten Assignments
Extended Time
Test in small group or individually
Read Tests/Assignments Aloud
Repeat, reword, clarify, word problems

Technology:

Computer Websites – Math related
Power Point Activities/Projects/Presentations
Smart Board
Elmo

Cross Curricular:

Social Studies: Students go on an imaginary world tour, during which they will use various reference sources to collect and examine information from different places.

Consumer Education: Students measure the headband of a cap and compare their results to head-size data on a bar graph.

Literature: Read/Discuss: How Much Is A Million? by: David M. Schwartz

Grade 4

Topic: Operations and Computation

Objective: All students will develop number sense and will perform standard numerical operations and estimations on all types of numbers in a variety of ways. (CCCS 4.1)

Activities:

Solve addition and subtraction number stories

Add/subtract using a calculator

Practice basic facts/extensions

Use mental math to add/subtract

Add/subtract multiples of tens, hundreds

Add/subtract multi-digit numbers

Use estimation to add and subtract

Use addition/subtraction algorithms

Practice multiplication/division facts

Investigate relationships between multiplication and division

Solve multiplication/division problems involving multiples of 10, 100, 1000

Use a calculator to multiply/divide

Resources:

Reference Book
Math Journal
Test Prep Materials
Mental Math
Math Message
Math Journal Pages/Math Boxes
Study Links
Math Games

Assessment Examples:

Tests
Quizzes
Timed Tests for Facts
Learnia

Accommodations (Special Needs/ELL):

Shorten Assignments
Extended Time for assignments and tests
Test in small groups or individually
Read tests/assignments aloud
Repeat, reword, clarify, word problems

Technology:

Computer websites – Math related
Power Point Activities/Projects/Presentations
Smart Board
ELMO

Cross Curricular:

Literature: Read/Discuss: Each Orange Had Eight Slices
Social Studies: Measure distances on a map of Egypt.
Science: Solve problems about eclipses.

Grade 4

Topic: Patterns, Functions, and Algebra

Objective: All students will represent and analyze relationships among variable quantities and solve problems involving patterns, functions, and algebraic concepts and processes. (CCCS 4.3)

Activities:

Create patterns with 2-dimensional shapes

Explore and extend visual patterns

Find patterns in addition and subtraction facts

Find equivalent names for numbers

Write/solve addition and subtraction number sentences

Resources:

Reference Book

Math Journal

Test Prep Materials

Mental Math

Math Message

Math Journal Pages/Math Boxes

Study Links

Math Games

Assessment Examples:

Tests
Quizzes
Timed Tests for Facts
Learnia

Accommodations (Special Needs/ELL):

Shorten Assignments
Extended Time for Tests/Assignments
Test in small groups or individually
Read Test/Assignments aloud
Repeat, reword, clarify, word problems

Technology:

Computer Websites – Math related
Power Point Activities/Projects/Presentations
Smart Board
ELMO

Cross Curricular:

Literature: Silly Decimal Riddles
Consumer Education: Determine the average number of miles you can travel on a gallon of gas.
Science: Measure the length or wingspan of invertebrates.

Grade 4

Topic: Geometry

Objective: All students will develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena. (CCCS 4.2)

Activities:

Identify 2-dimensional shapes

Explore shape relationships

Construct/draw 2-dimensional shapes

Identify symmetrical figures

Identify lines of symmetry

Identify lines of reflection, reflected figures

Identify and name angles

Resources:

Reference Book

Math Journal

Grade 4
Math

Test Prep Materials
Mental Math
Math Message
Math Journal Pages/Math Boxes
Study Links
Math Games

Assessment Examples:

Tests
Quizzes
Timed Tests for Facts
Learnia

Accommodations (Special Needs/ELL)

Shorten Assignments
Extended Time for assignments and tests
Test in small groups or individually
Read tests/assignments aloud
Repeat, reword, clarify, word problems

Technology

Computer Websites – Math related
Power-Point Activities/Projects/Presentations
Smart Board
ELMO

Cross Curricular:

Grade 4
Math

Art: Create and construct circle designs.

Reference Skills: Practice using the Table of Contents, the Glossary, and the Index in the Student Reference Book

Literature: Read: The Greedy Triangle by: Marilyn Burns

Topic: Data and Chance

Objectives: The students will be able to develop an understanding of the concepts and techniques of data analysis, probability, and discrete mathematics, and will use them to model situations, solve problems, and analyze and draw appropriate inferences from data. (C.C.C.S 4.4) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games

- Make a tally chart
- Make a bar graph
- Find/use the range
- Find/use the mode
- Find/use the median
- Find/use the mean
- Find/use the minimum/maximum
- Interpret tables, graphs, and maps
- Use data in problem solving
- Summarize and interpret data

Cross Curricular:

Technology- Discuss stock closing prices obtained from the internet

Social Studies- Discuss ambiguous numbers sentences and look up definitions of ambiguous. Discuss symbols, markings, and colors on a migration map. Play Algebra Election

Resources: Math Journal, Student Reference Book, StudyLinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, SMARTBOARD, ELMO

Topic: Numeration

Objectives: (C.C.C.S 4.1) The students will be able to develop number sense and perform standard numerical operations and estimations on all types of numbers in a variety of ways. The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games

- Read and write numbers to hundred millions and billions
- Identify place value in numbers to hundred millions and billions
- Name the values of digits in numbers to billions
- Compare larger numbers
- Find equivalent names for numbers
- Identify even and odd numbers
- Find and identify factors of numbers
- Rename numbers written in exponential notation
- Read and write decimals to thousandths
- Identify place value in decimals to thousandths
- Round decimals to a given place

Grade 5
Math

- Find equivalent fractions
- Compare and order fractions
- Convert between mixed numbers and fractions
- Find common denominators
- Identify the whole for fractions
- Find a fraction of a number
- Relate fractions and decimals
- Give equivalencies between fractions, decimals, and percents
- Use a calculator to rename a fraction as a decimal or percent
- Explore uses for positive and negative numbers
- Convert between fractions, decimals, mixed numbers, and percents

Cross Curricular:

Literature: Read The King's Chessboard by David Birch and discuss the power of doubling, read How Much is a Million and discuss a million, a billion, and a trillion

Science- Use scientific and standard notation to date important events in the history of Earth, Play the game FRACTION ACTION, FRACTION FRICTION

Social Studies- Discuss job trends and predict ratios for job availability in the year 2015, Use a map to locate the 10 smallest countries in the world

Grade 5
Math

Resources: Math Journal, Student Reference Book, StudyLinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website,

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website

Technology: Calculator, Computer, PowerPoint for Mental Math and Math Message SMARTBOARD, ELMO

Topic: Measurement and Reference Frames: Reference Frames

Objectives: The students will be able to develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena. (C.C.C.S 4.2) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games

- Calculate elapsed time
- Convert units of time

Cross Curricular:

Social Studies- Estimate distances and times based on an imaginary trip

Science- Experiment with reaction times to stimuli

Resources: Math Journal, Student Reference Book, StudyLinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website

Technology: Calculator, Computer, PowerPoint for Mental Math and Math Message SMARTBOARD, ELMO

Topic: Geometry

Objectives: The students will be able to develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena.(C.C.C.S 4.2) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games

- Identify 2 and 3-dimensional shapes
- Explore shape relationships
- Identify characteristics of 2-dimensional shapes
- Identify characteristics of 3-dimensional shapes
- Construct/draw 2-dimensional shapes
- Construct/draw 3-dimensional shapes
- Classify and name polygons

Grade 5
Math

- Identify properties of polygons
- Classify quadrilaterals according to side and angle properties
- Identify faces, edges, vertices, and bases of prisms and pyramids
- Describe properties of geometric solids
- Identify and name angles
- Measure angles with degree units
- Identify acute, obtuse, straight, and reflex angles
- Make turns and fraction of turns; relate turns to angles
- Use full circle and half circle protractors to measure and draw angles

Cross Curricular:

Literature: Read The Greedy Triangle by Marilyn Burns and discuss different polygons

Art- Inscribe a regular hexagon in a circle, Create tessellating patterns

Language Arts- Discover the nonmathematical meanings of the words acute, obtuse, adjacent, and vertical

Resources: Math Journal, Student Reference Book, Studylinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website, SMARTBOARD, ELMO

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website

Technology: Calculator, Overhead projector, Computer, PowerPoint for Mental Math and Math Message, SMARTboard, ELMO

Topic: Measurement and Reference Frames: Measurement

Objectives: The students will be able to develop spatial sense and the ability to use geometric properties, relationships, and measurement to model, describe and analyze phenomena. (C.C.C.S 4.2) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games.

- Measure to the nearest foot
- Measure to the nearest inch
- Measure to the nearest $\frac{1}{2}$ inch, $\frac{1}{4}$ inch, and $\frac{1}{8}$ inch
- Establish personal references for metric units of length
- Establish personal references for customary units of length

Grade 5
Math

- Investigate area
- Find the perimeters of irregular shapes
- Find the perimeters of regular shapes
- Use formulas to find areas of rectangles, parallelograms, and triangles
- Solve money number stories
- Estimate costs
- Divide money amounts
- Multiply money amounts

Cross Curricular:

Literature: Read Spaghetti and Meatballs for All

Science- Play the game Fraction Action, Fraction Friction

Social Studies- Examine populations using maps and charts

Art- Inscribe a regular hexagon in a circle and create tessellating patterns

Resources: Math Journal, Student Reference Book, StudyLinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments, interactive translation website

Technology: Calculator, Computer, PowerPoint for Mental Math and Math Message SMARTBOARD, ELMO

Topic: Operations and Computation

Objectives: The students will be able to develop number sense and perform standard numerical operations and estimations on all types of numbers in a variety of ways. (C.C.C.S. 4.1) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S. 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games

- Solve addition and subtraction number stories
- Practice basic facts and extended facts
- Add/subtract multidigit numbers
- Use estimation to add/subtract
- Use addition/subtraction algorithms

Grade 5
Math

- Add/subtract money amounts/decimals
- Add/subtract 1 and 2 digit decimals
- Solve decimal addition/subtraction number stories
- Add/subtract multidigit whole numbers and decimals
- Practice multiplication/division facts
- Practice extended multiplication/division facts
- Use arrays to model multiplication
- Solve multiplication/division problems involving multiples of 10, 100, and 1,000
- Use a calculator to multiply and divide
- Multiply/divide multiples of 10, 100, and 1,000 by 1-digit numbers

Cross Curricular:

Literature: Read the poem “Arithmetic” by Carl Sandburg and discuss uses of mathematics in students’ daily lives, Read and discuss Counting on Frank by Rod Clement

Social Studies- Estimate distances and times based on an imaginary trip

Language Arts- Discuss the origins of the word algorithm

Resources: Math Journal, Student Reference Book, StudyLinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments

Technology: Calculator, Computer, PowerPoint for Mental Math and Math Message SMARTBOARD, ELMO

Topic: Patterns, Functions, and Algebra

Objectives: The students will be able to develop number sense and perform standard numerical operations and estimations on all types of numbers in a variety of ways. (C.C.C.S. 4.1) The students will be able to use mathematical processes of problem solving, communication, connections, reasoning, representations, and technology to solve problems and communicate mathematical ideas. (C.C.C.S. 4.5)

Activities: Mental Math and Math Message, Math Journal Pages, Math Boxes, StudyLinks, Math Games

- Explore and extend visual patterns
- Write/solve addition/subtraction number sentences
- Write/solve multiplication number sentences
- Write/solve division number stories

Grade 5
Math

Cross Curricular:

Language Arts- Discuss ambiguous number sentences and look up definitions of ambiguous

Resources: Math Journal, Student Reference Book, StudyLinks Book, Websites, Test Prep Materials, Math games, ESL internet translation website

Assessment examples: Tests, Quizzes, Timed Tests, Peer group assessment, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, Modified assignments

Technology: Calculator, Computer, PowerPoint for Mental Math and Math Message SMARTBOARD, ELMO

Topic: Data Analysis

Objectives: The students will be able to:

- Use tables, line plots, and bar graphs to display data. (C.C.C.S. 4.4)
- Use measurements of central tendency to describe data distribution.
(C.C.C.S. 4.4)
- Express probabilities as ratios, percents, and decimals. (C.C.C.S. 4.4)

Activities: Student name lengths

Pet survey

Relating height to arm span and graph it

Is Anyone Typical? Unit Project

Cross Curricular: Health (mean heart rate of class), Science (genetics probability)

Resources: Texts, Connected Math 2 website, manuals, test prep materials (i.e. Measuring Up), National Library of Virtual Manipulatives, mathplayground.com

Assessment examples: Surveys, tests, quizzes, presentations, computer research, peer group assignments, unit project, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, website to classroom TV, Connected Math 2 website, SMART Board, ELMO, AVA video, mathplayground.com, document camera

Grade 6

Topic: Fractions, Decimals, and Percents

Objectives: The students will be able to:

- Develop ways to model situations using fractions, decimals and percents.
(C.C.C.S. 4.1)
- Compare and order fractions. (C.C.C.S. 4.1)
- Develop and use benchmarks that relate different forms of representations of rational numbers. (C.C.C.S. 4.1)
- Estimate the reasonableness of results of operations with fractions using benchmarks. (C.C.C.S. 4.1)
- Solve problems using arithmetic operations on fractions, decimals and percents. (C.C.C.S. 4.1)
- Add, subtract, multiply and divide fractions and decimals. (C.C.C.S. 4.1)
- Choose between addition, subtraction, multiplication, or division as an appropriate operation to use to solve a problem. (C.C.C.S. 4.5)
- Create and interpret circle graphs. (C.C.C.S. 4.3)

Activities: Making fraction strips
Shading grids
Shading percent bars
Getting Close Game

Cross Curricular: FCS (measuring), Health (nutritional information, heart rate/pulse)

Grade 6
Math

Resources: Texts, Connected Math 2 website, manuals, test prep materials (i.e. Measuring Up), National Library of Virtual Manipulatives

Assessment examples: Surveys, tests, quizzes, presentations, computer research, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, website to classroom TV, Connected Math 2 website, Smartboard, document camera, mathplayground.com, AVA videos, National Library of Virtual Manipulatives

Grade 6

Topic: Fractions, Decimals, and Percents

Objectives: The students will be able to:

- Develop ways to model situations using fractions, decimals and percents.
(C.C.C.S. 4.1)
- Compare and order fractions. (C.C.C.S. 4.1)
- Develop and use benchmarks that relate different forms of representations of rational numbers. (C.C.C.S. 4.1)
- Estimate the reasonableness of results of operations with fractions using benchmarks. (C.C.C.S. 4.1)
- Solve problems using arithmetic operations on fractions, decimals and percents. (C.C.C.S. 4.1)
- Add, subtract, multiply and divide fractions. (C.C.C.S. 4.1)

Activities: Making fraction strips
Shading grids
Shading percent bars
Getting Close Game

Cross Curricular: FCS (measuring), Health (nutritional information, heart rate/pulse)

Grade 6
Math

Resources: Texts, Connected Math 2 website, manuals, test prep materials (i.e. Measuring Up); National Library of Virtual Manipulatives, AVA videos, mathplayground.com

Assessment examples: Surveys, tests, quizzes, presentations, computer research, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, website to classroom TV, Connected Math 2 website, SMART Board, ELMO; National Library of Virtual Manipulatives

Grade 6

Topic: Two Dimensional Geometry

Timeframe: 8 weeks

Objectives: The students will be able to:

- Identify polygons. (C.C.C.S. 4.2)
- Identify rotation and reflection symmetry. (C.C.C.S. 4.2)
- Estimate and measure angles. (C.C.C.S. 4.2)
- Determine which polygons tessellate. (C.C.C.S. 4.2)
- Draw and sketch polygons. (C.C.C.S. 4.2)
- Describe angles formed when parallel lines are cut by a transversal.
(C.C.C.S. 4.2)

Activities: Used shape sets to make tessellations
Measuring angles
Four in a row game
Building polygons with polystrips

Cross Curricular: FCS (measuring), Art

Resources: Texts, Connected Math 2 website, manuals, test prep materials (i.e. Measuring Up), angle rulers, shape sets, National Library of Virtual Manipulatives, AVA videos, document camera

Grade 6
Math

Assessment examples: Unit project slide show, Tests, quizzes, computer research, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website,

Technology: Calculator, overhead projector, website to classroom TV, Connected Math 2 website, SMART Board, mathplayground.com, National Library of Virtual Manipulatives, AVA videos, document camera

Pre Algebra Curriculum- Grade 7

Topic: Introduction to Algebra and Geometry

Timeframe: 3 Weeks

Objectives: The students will be able to:

- Add, subtract, multiply and divide integers. (C.C.C.S. 4.1)
- Graph integers on a coordinate plane. (C.C.C.S. 4.3)
- Compare and order integers. (C.C.C.S. 4.1)
- Find absolute value of an expression. (C.C.C.S. 4.3)
- Organize data in a line plot. (C.C.C.S. 4.4)

Activities: Counters

Statistical line plots

Reading maps

Graph pictures from given coordinates

Smart Response Question Sets (SmartBoard)

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Chip Boards

Assessment examples: Tests, quizzes, peer group assignments, Chip Boards, Graphed Picture, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections,

Topic: Integers

Timeframe: 4 Weeks

Objectives: The students will be able to:

- Add, subtract, multiply and divide integers. (C.C.C.S. 4.1)
- Graph integers on a coordinate plane. (C.C.C.S. 4.3)
- Compare and order integers. (C.C.C.S. 4.1)
- Find absolute value of an expression. (C.C.C.S. 4.3)
- Organize data in a line plot. (C.C.C.S. 4.4)

Activities: Counters

Statistical line plots

Reading maps

Graph pictures from given coordinates

Smart Response Question Sets (SmartBoard)

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Chip Boards, SmartBoard Smart Response Question Set Quiz, Learnia

Assessment examples: Tests, quizzes, peer group assignments, Chip Boards, Graphed Picture, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Solving One and Two Step Equations and Inequalities

Timeframe: 4 Weeks

Objectives: The students will be able to:

- Solve equations and inequalities with one or more operations. (C.C.C.S. 4.3)
- Solve equations and inequalities with variables on both sides. (C.C.C.S. 4.3)
- Find circumference of a circle. (C.C.C.S. 4.2)
- Convert measurements in the metric system. (C.C.C.S. 4.2)
- Solve verbal problems by translating them into equations and inequalities. (C.C.C.S. 4.5)

**Activities: Counters,
Slinky activities,
Square footage of homes,
Roller Coaster math
Balance Scale
Smart Response Question Sets (SmartBoard)**

Cross Curricular: Science

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Chip Boards

Grade 7
Math: Pre-Algebra

Assessment examples: Tests, quizzes, peer group assignments, Chip Boards, SmartBoard Response Question Set Quiz Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Factors and Fractions

Timeframe: 3 Weeks

Objectives: The students will be able to:

- Use exponents, both positive and negative, in expressions and equations.
(C.C.C.S. 4.1)
- Identify prime and composite numbers. (C.C.C.S. 4.1)
- Find the Greatest Common Factor and use it to simplify fractions.
(C.C.C.S. 4.1)
- Find the Least Common Multiple. (C.C.C.S. 4.1)
- Multiply and divide monomials. (C.C.C.S. 4.3)

**Activities: Rolling Dice,
Making a Prime Pyramid,
Truth Table
Smart Response Questions Sets (SmartBoard)**

Cross Curricular: Science, Social Studies

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Dice, Maps

Assessment examples: Tests, quizzes, peer group assignments, Chip Boards, SmartBoard Smart Response Question Set Quiz, Learnia

Grade 7
Math: Pre-Algebra

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Rational Numbers

Timeframe: 4 Weeks

Objectives: The students will be able to:

- Identify and compare rational numbers. (C.C.C.S. 4.1)
- Estimate sums, differences, products, and quotients of rational numbers.
(C.C.C.S. 4.1)
- Add, subtract, multiply, and divide rational numbers. (C.C.C.S. 4.1)
- Solve equations and inequalities with rational numbers. (C.C.C.S. 4.1)
- Use mean, median, mode, range to analyze data. (C.C.C.S. 4.4)
- Recognize and extend arithmetic and geometric sequences. (C.C.C.S. 4.3)
- Write numbers in scientific notation. (C.C.C.S. 4.1)
- Extend the Fibonacci sequence. (C.C.C.S. 4.3)
- Problem solving using deductive or inductive reasoning. (C.C.C.S. 4.5)

Activities: Supermarket Challenge
Concentration
Squared off numbers
Smart Response Questions Sets (SmartBoard)

Cross Curricular: Science, Social Studies,

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Sales paper, empty food boxes

Assessment examples: Tests, quizzes, peer group assignments, Chip Boards, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Functions and Graphing

Timeframe: 3 Weeks

Objectives: The students will be able to:

- Graph linear equations and inequalities. (C.C.C.S. 4.3)
- Solve problems by drawing a graph. (C.C.C.S. 4.3)
- Find the slope of a line (C.C.C.S.4.3)
- Find intercepts. (C.C.C.S. 4.1)
- Graph systems of equations. (C.C.C.S. 4.2)

Activities: Graphing Calculators
Stadium Stampede
Newspapers
Geoboards
Smart Response Question Sets (SmartBoard)

Cross Curricular: Science, Economics

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Graphing Calculators

Assessment examples: Tests, quizzes, peer group assignments, Graphing Calculators, Graphs, Geoboards, Newspapers, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Ratio, Proportion, and Percent

Timeframe: 3 Weeks

Objectives: The students will be able to:

- Write ratios as fractions in simplest form and as unit rates. (C.C.C.S. 4.3)
- Find the probability of simple and compound events. (C.C.C.S. 4.4)
- Use proportions to solve problems. (C.C.C.S.4.3)
- Use percent proportions. (C.C.C.S. 4.1)
- Express decimals and fractions as percents and vice versa. (C.C.C.S. 4.1)
- Use statistics to predict the actions of a larger group. (C.C.C.S. 4.4)

Activities: Fair and Unfair Games
Spinner Games
Capture-Recapture
Nutrition Labels
Smart Response Question Sets (SmartBoard)

Cross Curricular: Science, Economics, Consumer Science, Health

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Graphing Calculators

Grade 7
Math: Pre-Algebra

Assessment examples: Tests, quizzes, peer group assignments, Spinners, Dice, Marbles, Nutritional Labels, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Measuring Area and Volume

Timeframe: 4 Weeks

Objectives: The students will be able to:

- Find the area of geometric figures. (C.C.C.S. 4.2)
- Find the surface area of prisms, cylinders, and cones. (C.C.C.S. 4.2)
- Find the volume of prisms, cylinders and cones. (C.C.C.S.4.2)
- Solve problems by making a geometric model or drawing. (C.C.C.S. 4.2)
- Find probabilities using area models. (C.C.C.S. 4.2)

Activities: Bean Bag Toss
Geometric Probability Using Graphing Calculators
Wrapping Boxes
Making containers and filling them to find volume
Smart Response Questions Sets (SmartBoard)

Cross Curricular: Science, Economics, Consumer Science

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Graphing Calculators

Grade 7
Math: Pre-Algebra

Assessment examples: Tests, quizzes, peer group assignments, Graphing Calculators, Graphs, Boxes, Rice, Bean Bags, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Applying Algebra to Geometry

Timeframe: 4 Weeks

Objectives: The students will be able to:

- Identify points, lines, planes, rays, segments, angles, and parallel, perpendicular, and skew lines. (C.C.C.S. 4.2)
- Identify complementary and supplementary angles. (C.C.C.S. 4.2)
- Find missing angle measures in a triangle. (C.C.C.S. 4.2)
- Identify similar and congruent triangles. (C.C.C.S. 4.2)
- Classify polygons and determine the sum of the measures of the interior and exterior angles of a polygon. (C.C.C.S. 4.2)
- Identify and draw reflections, translations, rotations and similar figures. (C.C.C.S. 4.2)

**Activities: Calculating Baseball Swings
Measuring Angles
Making Tessellations
Making Designs
Smart Response Question Sets (SmartBoard)**

Cross Curricular: Science, Art

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), rulers, protractors, compasses

Assessment examples: Tests, quizzes, peer group assignments, protractors, Graphed Picture, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Applying Algebra to Right Angles

Timeframe: 4 Weeks

Objectives: The students will be able to:

- To find and use squares and square roots. (C.C.C.S. 4.1)
- To use Venn diagrams to solve problems. (C.C.C.S. 4.2 & 4.5)
- To solve equations by using square roots. (C.C.C.S. 4.1)
- Use the Pythagorean Theorem to find the length of the side of a right triangle and to solve problems. (C.C.C.S. 4.2)

Activities: Class Survey to make Venn Diagrams
Oh Give Me a Home Activity
Simply Simplified
Shadow calculations of Right Triangles
Smart Response Question Sets (SmartBoard)

Cross Curricular: Science, Art

Grade 7
Math: Pre-Algebra

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), rulers,

Assessment examples: Tests, quizzes, peer group assignments, protractors, Graphed Picture, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Polynomials

Timeframe: 4 Weeks

Objectives: The students will be able to:

- To identify and classify polynomials and find their degree. (C.C.C.S. 4.1)
- To add and subtract polynomials. (C.C.C.S. 4.1)
- To find the powers of monomials. (C.C.C.S. 4.1)
- To multiply a polynomial and a monomial. (C.C.C.S. 4.1)
- To multiply binomials. (C.C.C.S.4.1)

Activities: Polynomial Properties Activity
Representing Polynomials with Algebra Tiles
Potent Powers Activity
Smart Response Question Sets (SmartBoard)

Cross Curricular: Science

Grade 7
Math: Pre-Algebra

Resources: Glencoe Pre-Algebra Texts, manuals, test prep materials (i.e. Measuring Up), Algebra Tiles, Variable Card Deck, Polynomial Card Deck

Assessment examples: Tests, quizzes, peer group assignments, protractors, Graphed Picture, SmartBoard Smart Response Question Set Quiz, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, SMART Board, ELMO, Internet connections

Topic: Exploring Expressions, Equations, and Functions (Chapter 1)

Timeframe: 3 weeks

Objectives: The students will be able to:

- Use the order of operations to evaluate real number expressions. (C.C.C.S. 4.1)
- Translate verbal expressions into mathematical expressions and vice versa.
(C.C.C.S. 4.3)
- Use the distributive property to simplify expressions. (C.C.C.S. 4.3)
- Solve open sentences by performing arithmetic operations. (C.C.C.S. 4.1)

Activities: Counters

Textbook activities

Enrichment activities

Practice/Study Guide activities

Algeblocks

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Algeblocks

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Exploring Rational Numbers (Chapter 2)

Timeframe: 3 weeks

Objectives: The students will be able to:

- Display and interpret statistical data on a line plot. (C.C.C.S. 4.4)
- Find absolute value of a number. (C.C.C.S. 4.1)
- Add, subtract, multiply and divide rational numbers and integers. (C.C.C.S. 4.1)
- Find square roots. (C.C.C.S. 4.1)
- Graph solutions of inequalities on number lines. (C.C.C.S. 4.2)

Activities: Counters

Textbook activities

Enrichment activities

Practice/Study Guide activities

Graphing activities

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Solving Linear Equations(Chapter 3)

Timeframe: 3 weeks

Objectives: The students will be able to:

- Solve equations by using addition, subtraction, multiplication and division or a combination of these. (C.C.C.S. 4.3)
- Find the complement and supplement of an angle. (C.C.C.S. 4.2)
- Solve equations with variables on both sides. (C.C.C.S. 4.3)
- Solve equations and formulas for a specified variable. (C.C.C.S. 4.3)
- Find and interpret the mean, median, and mode of a set of data. (C.C.C.S. 4.4)

Activities: Counters

Textbook activities

Enrichment activities

Practice/Study Guide activities

Cups;

Algeblocks

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Using Proportional Reasoning (Chapter 4)

Timeframe: 3 weeks

Objectives: The students will be able to:

- Solve proportions. (C.C.C.S. 4.1)
- Find the unknown measures of the sides of two similar triangles. (C.C.C.S. 4.2)
- Solve percent problems. (C.C.C.S. 4.1)
- Solve problems involving simple interest. (C.C.C.S. 4.1)
- Solve problems involving percent of increase or decrease. (C.C.C.S. 4.1)
- Find the probability and odds of a simple event. (C.C.C.S. 4.4)
- Solve mixture problems. (C.C.C.S. 4.3)
- Solve problems involving direct and indirect variation. (C.C.C.S. 4.4)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities

Cross Curricular: Science, Health, Social Studies

**Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up),
Counters**

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Graphing Relations and Functions (Chapter 5)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Use a graphing calculator to graph relations. (C.C.C.S. 4.2)
- Identify domain, range, and inverse of a relation. (C.C.C.S. 4.4)
- Show relations as sets of ordered pairs, tables, mappings, and graphs. (C.C.C.S. 4.2)
- Determine the range for a given domain. (C.C.C.S. 4.3)
- Determine whether the given relation is a function. (C.C.C.S. 4.3)
- Write equations that represent relations. (C.C.C.S. 4.3)
- Calculate and interpret the range, quartiles, and interquartile range of sets of data. (C.C.C.S. 4.4)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Geometer's Sketchpad

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Geometer's Sketchpad, Calculator Based Responder (CBR)

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Grade 8
Math: Algebra

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Analyzing Linear Equations (Chapter 6)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Find the slope of a line. (C.C.C.S. 4.2)
- Write linear equations in point-slope, slope-intercept and standard forms.
(C.C.C.S. 4.3)
- Graph and interpret points on a scatter plot. (C.C.C.S. 4.2)
- Determine the x- and y-intercepts of linear graphs from their equations. (C.C.C.S. 4.3)
- Determine if two lines are parallel or perpendicular by their slopes. (C.C.C.S. 4.2)
- Write equations of lines passing through a given point, parallel or perpendicular to the graph of a given equation. (C.C.C.S. 4.3)
- Find the coordinates of the midpoint of a line segment in the coordinate plane.
(C.C.C.S. 4.2)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Geometer's Sketchpad

Cross Curricular: Science, Health, Social Studies

Grade 8
Math: Algebra

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up),
Counters

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group
instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like
NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Solving Linear Inequalities (Chapter 7)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Solve inequalities by using addition, subtraction, multiplication, or division or a combination of these. (C.C.C.S. 4.3)
- Solve compound inequalities and graph their solution sets. (C.C.C.S. 4.3, 4.2)
- Solve open sentences involving absolute value and graph the solutions. (C.C.C.S. 4.2, 4.3)
- Display and interpret data on box-and-whisker plots. (C.C.C.S. 4.4)
- Graph inequalities in the coordinate plane. (C.C.C.S. 4.3)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Cups
Counters
Geometer's Sketchpad

Cross Curricular: Science, Health, Social Studies

Grade 8
Math: Algebra

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Geometer's Sketchpad

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Solving Systems of Linear Equations and Inequalities (Chapter 8)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Solve systems of equations by graphing. (C.C.C.S. 4.2)
- Solve systems of equations by substitution, or by using addition, subtraction, and/or multiplication. (C.C.C.S. 4.3)
- Solve systems of inequalities by graphing. (C.C.C.S. 4.3)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Geometer's Sketchpad

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Geometer's Sketchpad

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Exploring Polynomials (Chapter 9)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Multiply and divide monomials. (C.C.C.S. 4.3)
- Add and subtract polynomials. (C.C.C.S. 4.3)
- Multiply polynomials by monomials. (C.C.C.S. 4.3)
- Simplify expressions. (C.C.C.S. 4.3)
- Use the FOIL method to multiply two binomials. (C.C.C.S. 4.3)
- Multiply any two polynomials by using distributive property. (C.C.C.S. 4.3)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Algeblocks

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Algeblocks

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Using Factoring (Chapter 10)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Find the Greatest Common Factors for sets of monomials. (C.C.C.S. 4.3)
- Use the GCF and the distributive property to factor polynomials. (C.C.C.S. 4.3)
- Use grouping techniques to factor polynomials with four or more terms. (C.C.C.S. 4.3)
- Identify and factor binomials that are the differences of squares. (C.C.C.S. 4.3)
- Identify and factor perfect square trinomials. (C.C.C.S. 4.3)
- Use the zero product property to solve equations. (C.C.C.S. 4.3)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Algeblocks

Cross Curricular: Science, Health, Social Studies

Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up), Counters, Algeblocks

Assessment examples: Tests, quizzes, peer group assignments, Learnia

Accommodations: Shorten tests, verbal assessment, extended test time, small group instruction, modified assignments, translation website

Technology: Calculator, overhead projector, Smartboard, Internet connections like NLVM (National Library of Virtual Manipulatives) and Algebra I site from Glencoe

Topic: Exploring Rational Expressions and Equations (Chapter 12)

Timeframe: 4 weeks

Objectives: The students will be able to:

- Simplify rational expressions. (C.C.C.S. 4.3)
- Identify values excluded from the domain of a rational expression. (C.C.C.S. 4.3)
- Multiply and divide rational expressions. (C.C.C.S. 4.3)
- Add and subtract rational expressions with like and unlike denominators.
(C.C.C.S. 4.3)
- Simplify mixed expressions and complex fractions. (C.C.C.S. 4.3)
- Solve rational equations. (C.C.C.S. 4.3)

Activities: Textbook activities
Enrichment activities
Practice/Study Guide activities
Algeblocks

Grade 8
Math: Algebra

Cross Curricular: Science, Health, Social Studies

**Resources: Glencoe Algebra 1 Texts, manuals, test prep materials (i.e. Measuring Up),
Counters, Algeblocks**

Assessment examples: Tests, quizzes, peer group assignments, Learnia

**Accommodations: Shorten tests, verbal assessment, extended test time, small group
instruction, modified assignments, translation website**

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