Califon Public School
Curriculum

Subject: Math	Grade: 3	Unit #: 1	Pacing: 5 months 2 weeks
Unit Title: Whole Number Operations			

OVERVIEW OF UNIT:

This unit focuses on different strategies for adding and subtracting greater numbers. Students will also focus on collecting data and deciding how best to represent the data collected. As students progress through the unit, they will explore multiplication through various models. Place value is a fundamental principle of mathematics and is used in multiplication. Students will consider multiplication when one of the factors is a multiple of 10. Division is represented by problem contexts where the total is known and either the number of groups or the number of objects in each group is unknown. Students will recognize what information is unknown and use models to find the unknown information. Connecting division and multiplication helps students develop proficiency with the division facts.

Unit References	
Big Ideas	Essential Questions
You can add and subtract whole number and decide if an answer is reasonable. You can represent and interpret data on tables and graphs. You can use multiplication to find how many in all. You can use strategies such as skip counting, equal groups, and doubles facts to solve multiplication problems. You can use multiplication facts, place value, and properties to solve multiplication problems with multiples of 10.	• What strategies can be used to add and subtract numbers? • How can you use the strategy *draw a diagram* to solve one- and two- step addition and subtraction problems? • How can you draw a bar graph, picture graph, or line plot to show data? • How can you solve problems using data represented in graphs? • What strategies can be used to solve multiplication and division problems? • How can you model and record multiplying 1-digit whole numbers by multiples of 10? • Why are there rules such as the order of operations?

You can use division to find how many in each group or how many equal groups. You can use strategies such as repeated subtraction, arrays, equal groups, and related multiplication facts to divide.	

Objectives

Use strategies to add and subtract numbers.
Use the strategy *draw a diagram* to solve one- and two- step addition and subtraction problems.
Draw a bar graph, picture graph, or line plot to show data.
Solve problems using data represented in graphs.
Use strategies to solve multiplication and division problems.
Multiply 1-digit whole numbers by multiples of 10.
Use order of operations to solve problems.

Assessment

Formative Assessment:

- Lesson quick check
- lesson practice
- mid-chapter checkpoint
- portfolio
- middle-of-year test
- Xtramath
- eSpark
- IXL

Summative Assessment:

- Chapter review/test
- chapter test
- performance task assessment
- end-of year-test
- Link It

Benchmark:

- Prerequisite skills inventory
- show what you know
- beginning-of-year test

- Link It

Alternative:
- Modified quizzes and activities
- Performance assessments
- Activity choice board (Google Classroom)

Key Vocabulary

Compatible numbers, estimate, Identity Property of Addition, pattern, round, Bar graph, frequency table, horizontal bar graph, key, line plot, picture graph, scale, vertical bar graph, Equal groups, factor, multiply, product, array, Commutative Property of Multiplication, Identity Property of Multiplication, Zero Property of Multiplication, Multiple, Distributive Property, Associative Property of Multiplication, Pattern, equation, array, Commutative Property of Multiplication, factor, product, Distributive Property, multiple, place value, tens, hundreds, ones, Divide, equal groups, dividend, divisor, quotient, array, inverse operations, related facts, factor, product, Identity Property of Multiplication

Resources& Materials

Go Math! Teacher Edition Chapter 1 Addition and Subtraction Within 1,000

Technology Infusion

Teacher Technology:
- Google Classroom
- Chromebooks
- Smart Board

Student Technology:
- Google Classroom
- Chromebooks
- Smart Board
- iPads

Activities:
- Think Central games, assignments, and virtual manipulatives
- Google Classroom (math choice boards, instructional videos, discussion questions)
- IXL assignments
- eSpark tutorials and assignments
- Xtramath quizzes

Standard	Standard Description

8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

Interdisciplinary Integration

Activities:

- In a combined science and math activity, students will survey classmates about inherited traits. They will graph and analyze the data they collect, discussing observations and trends.

Resources:

- Teacher Vision Cross Curricular Theme Map - https://www.teachervision.com/teaching-methods/curriculum-planning/7167.html
- Engineering Go For It! - http://egfi-k12.org/
- US Department of Education STEM - http://www.ed.gov/stem
- Intel STEM Resource - http://www.intel.com/content/www/us/en/education/k12/stem.html
- NASA STEM - http://www.nasa.gov/audience/foreducators/expeditions/stem/#.VYrO2flViko
- PBS STEM - http://www.pbs.org/teachers/stem/#content
- STEM Works - http://stem-works.com/activities
- What Every Education Should Know About Using Google by Shell Education
- Promoting Literacy in all Subjects by Glencoe - http://www.glencoe.com/sec/teachingtoday/subject/promoting_literacy.phtml
- International Literacy Association Read Write Think - http://www.readwritethink.org/

Standard	Standard Description
3-LS3-1	Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.

21st Century Life Skills

Activities:

- As students learn new concepts, they will apply knowledge of these skills to solve real-world problems. They will discuss how knowledge of these concepts could be applied in future careers.

Standard	Standard Description
9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Careers	
Activities: ● Students will apply knowledge of new mathematical concepts to solve multiple-step problems.	
Standard	**Standard Description**
CRP2	Apply appropriate academic and technical skills.
CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.

NJSLS for Mathematical Practice: Bold all that apply	
MP #	Practice
1	**Make sense of problems and persevere in solving them.**
2	**Reason abstractly and quantitatively.**
3	**Construct viable arguments and critique the reasoning of others.**
4	**Model with mathematics.**
5	**Use appropriate tools strategically.**
6	**Attend to precision.**
7	**Look for and make use of structure.**
8	**Look for and express regularity in repeated reasoning.**

Standard #	Standard Description
3.0A.D.8	**Solve two-step problems involving the four operations, and identify and explain patterns in arithmetic.** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
3.0A.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.
3.NBT.A.1	**Use place value understanding and properties of operations to perform multi-digit arithmetic.** Use place value understanding to round whole numbers to the nearest 10 or 100.
3.NBT.A.2	Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Differentiation			
Special Education	English Language Learners (ELL)	Response to Intervention (RTI)	Enrichment
• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tasks • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Prioritize tasks • Use graphic organizers • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such as small groups • NJDOE resources - http://www.state.nj.us/education/specialed/	• Provide text-to-speech • Use of translation dictionary or software • Provide graphic organizers • NJDOE resources - http://www.state.nj.us/education/aps/cccs/ELL.htm • Adapt a Strategy – Adjusting strategies for ESL students - http://www.teachersfirst.com/content/esl/adaptstrat.cfm	• Tiered interventions following RTI framework • Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ • Interventional Central - http://www.interventioncentral.org/	• Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: real world problems, audiences, deadlines, evaluations, transformations • Learning environments should be modified: student-centered learning, independence, openness, complexity, groups varied • NJDOE resources - http://www.state.nj.us/education/aps/cccs/g_and_t_req.htm

Califon Public School
Curriculum

Subject: Math	Grade: 3	Unit #: 2	Pacing: 6 weeks
Unit Title: Fractions			

OVERVIEW OF UNIT:

In this unit, students will be exposed to different types of fraction models to reflect specific situations. They will learn strategies to compare and order fractions.

Unit References	
Big Ideas	Essential Questions
• You can use fractions to describe how much or how many. • You can use strategies to compare and order fractions.	• What are equal parts of a whole? • Why do you need to know how to make equal shares? • What do the top and bottom numbers of a fraction tell? • How does a fraction name part of a whole? • How can you represent and name fractions on a number line? • When might you use a fraction greater than 1 or a whole number? • How can a fraction name part of a group? • How can a fraction tell how many are in part of a group? • How can you use the strategy *draw a diagram* to solve fraction problems? • How can you use the strategy *act it out* to solve comparison problems? • How can you compare fractions with the same denominator? • How can you compare fractions with the same numerator? • What strategies can you use to compare fractions? • How can you compare and order fractions? • How can you use models to find equivalent fractions? • How can you use models to name equivalent fractions?

Objectives
● Students will be able to identify equal parts of a whole. ● Students will be able to determine how to make equal shares. ● Students will be able to relate parts of a fraction as a part of a whole. ● Students will be able to describe when to use a fraction greater than 1 or a whole number. ● Students will be able to use the strategy *draw a diagram* to solve fraction problems. ● Students will be able to use the strategy *act it out* to solve comparison problems. ● Students will be able to compare fractions with the same denominator or numerator. ● Students will be able to compare and order fractions. ● Students will be able to use models to find and name equivalent fractions.
Assessment
Formative Assessment: ● Lesson quick check ● lesson practice ● mid-chapter checkpoint ● portfolio ● middle-of-year test ● Xtramath ● eSpark ● IXL **Summative Assessment:** ● Chapter review/test ● chapter test ● performance task assessment ● end-of year-test ● Link It **Benchmark:** ● Prerequisite skills inventory ● show what you know ● beginning-of-year test ● Link It **Alternative:**

• Modified quizzes and activities • Performance assessments • Activity choice board (Google Classroom)
Key Vocabulary
Eighths, equal parts, fourths, halves, sixths, thirds, whole, fraction, unit fraction, denominator, numerator, fraction greater than 1, Compare, equal to (=), greater than (>), less than (<), denominator, numerator, order, equivalent, equivalent fractions
Resources & Materials
Houghton Mifflin Harcourt, Go Math! Teacher Edition

Technology Infusion

Teacher Technology:
- Google Classroom
- Chromebooks
- Smart Board

Student Technology:
- Google Classroom
- Chromebooks
- Smart Board
- iPads

Activities:
- Think Central games, assignments, and virtual manipulatives
- Google Classroom (math choice boards, instructional videos, discussion questions)
- IXL assignments
- eSpark tutorials and assignments
- Xtramath quizzes

Standard	Standard Description
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

Interdisciplinary Integration
Activities: ● Students will read the story "James' Frames" and solve problems involving measurement that are presented with the characters in the book. **Resources:** ● Teacher Vision Cross Curricular Theme Map - https://www.teachervision.com/teaching-methods/curriculum-planning/7167.html ● Engineering Go For It! - http://egfi-k12.org/ ● US Department of Education STEM - http://www.ed.gov/stem ● Intel STEM Resource - http://www.intel.com/content/www/us/en/education/k12/stem.html ● NASA STEM - http://www.nasa.gov/audience/foreducators/expeditions/stem/#.VYrO2flViko ● PBS STEM - http://www.pbs.org/teachers/stem/#content ● STEM Works - http://stem-works.com/activities ● What Every Education Should Know About Using Google by Shell Education ● Promoting Literacy in all Subjects by Glencoe - http://www.glencoe.com/sec/teachingtoday/subject/promoting_literacy.phtml ● International Literacy Association Read Write Think - http://www.readwritethink.org/

Standard	Standard Description
RL.3.10	By the end of the year, read and comprehend literature, including stories, dramas, and poems at grade level text-complexity or above, with scaffolding as needed.

21st Century Life Skills
Activities: ● As students learn new concepts, they will apply knowledge of these skills to solve real-world problems. They will discuss how knowledge of these concepts could be applied in future careers.

Standard	Standard Description
9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Careers	
Activities: ● Students will apply knowledge of new mathematical concepts to solve multiple-step problems.	
Standard	**Standard Description**
CRP2	Apply appropriate academic and technical skills.

Common Core State Standards for Mathematical Practice: Bold all that apply	
MP #	**Practice**
1	**Make sense of problems and persevere in solving them.**
2	**Reason abstractly and quantitatively.**
3	**Construct viable arguments and critique the reasoning of others.**
4	**Model with mathematics.**
5	**Use appropriate tools strategically.**
6	**Attend to precision.**
7	**Look for and make use of structure.**
8	**Look for and express regularity in repeated reasoning.**

Standard #	Standard Description
3.NF.A.1	**Develop understanding of fractions as numbers.** Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*.
3.NF.A.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. a. Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line. b. Represent a fraction *a*/*b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.
3.NF.A.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram*.

Differentiation			
Special Education	English Language Learners (ELL)	Response to Intervention (RTI)	Enrichment
• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tasks • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Prioritize tasks • Use graphic organizers • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such as small groups • NJDOE resources - http://www.state.nj.us/education/specialed/	• Provide text-to-speech • Use of translation dictionary or software • Provide graphic organizers • NJDOE resources - http://www.state.nj.us/education/aps/cccs/ELL.htm • Adapt a Strategy – Adjusting strategies for ESL students - http://www.teachersfirst.com/content/esl/adaptstrat.cfm	• Small group instruction • Visual support • Chunking of skills • Math boards and charts • Computer programs tiered to level • Tiered interventions following RTI framework • Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ • Interventional Central - http://www.interventioncentral.org/	• Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: real world problems, audiences, deadlines, evaluations, transformations • Learning environments should be modified: student-centered learning, independence, openness, complexity, groups varied • NJDOE resources - http://www.state.nj.us/education/aps/cccs/g_and_t_req.htm

Califon Public School
Curriculum

Subject: Math	Grade: 3	Unit #: 3	Pacing:7 weeks
Unit Title: Measurement			

OVERVIEW OF UNIT:

Engaging in measurement requires students to reason abstractly and quantitatively. In this unit, students will understand that each measurement attribute (e.g. time, length, mass, etc.) has its own units for obtaining and recording a quantitative measurement. Area is the amount of space taken up by a two-dimensional object or shape, and perimeter is the distance or length around a two-dimensional object or shape. In this unit, students will solve problems involving area and perimeter.

Unit References	
Big Ideas	Essential Questions
You can tell time and use measurement to describe the size of something. You can solve problems involving area and perimeter.	• How can you tell time to the nearest minute? • How can you generate measurement data and show the data on a line plot? • How can you estimate and measure liquid volume in metric units? • How can you estimate and measure mass in metric units? • How can you use models to solve liquid volume and mass problems? • How can you find perimeter? • How is finding the area of a figure different from finding the perimeter of a figure? • How can you find the area of a plane figure?
Objectives	
• Tell time to the nearest minute. • Generate measurement data and show the data on a line plot. • Estimate and measure mass and liquid volume in metric units. • Use models to solve liquid volume and mass problems.	

- Find perimeter and area of a plane figure.

Assessment

Formative Assessment:

- Lesson quick check
- lesson practice
- mid-chapter checkpoint
- portfolio
- middle-of-year test
- Xtramath
- eSpark
- IXL

Summative Assessment:

- Chapter review/test
- chapter test
- performance task assessment
- end-of year-test
- Link It

Benchmark:

- Prerequisite skills inventory
- show what you know
- beginning-of-year test
- Link It

Alternative:

- Modified quizzes and activities
- Performance assessments
- Activity choice board (Google Classroom)

Key Vocabulary

Minute, analog clock, digital clock, half hour, quarter hour, hour, A.M., midnight, noon, P.M., inch, liquid volume, liter (L), gram (g), kilogram (kg), mass, Perimeter, area, square unit, unit square, multiplication, repeated addition, pattern, distributive property

Resources& Materials

Go Math! Teacher Edition Chapter 10 Time, Length, Liquid Volume, and Mass
Go Math! Teacher Edition Chapter 11 Area and Perimeter

Technology Infusion
Teacher Technology: ● Google Classroom ● Chromebooks ● Smart Board **Student Technology:** ● Google Classroom ● Chromebooks ● Smart Board ● iPads **Activities:** ● Think Central games, assignments, and virtual manipulatives ● Google Classroom (math choice boards, instructional videos, discussion questions) ● IXL assignments ● eSpark tutorials and assignments ● Xtramath quizzes

Standard	Standard Description
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

Interdisciplinary Integration
Activities: ● Students will read the story “James’ Frames” and solve problems involving measurement that are presented with the characters in the book. **Resources:** ● Teacher Vision Cross Curricular Theme Map - https://www.teachervision.com/teaching-methods/curriculum-planning/7167.html ● Engineering Go For It! - http://egfi-k12.org/ ● US Department of Education STEM - http://www.ed.gov/stem ● Intel STEM Resource - http://www.intel.com/content/www/us/en/education/k12/stem.html ● NASA STEM - http://www.nasa.gov/audience/foreducators/expeditions/stem/#.VYrO2flViko ● PBS STEM - http://www.pbs.org/teachers/stem/#content

- STEM Works - http://stem-works.com/activities
- What Every Education Should Know About Using Google by Shell Education
- Promoting Literacy in all Subjects by Glencoe - http://www.glencoe.com/sec/teachingtoday/subject/promoting_literacy.phtml
- International Literacy Association Read Write Think - http://www.readwritethink.org/

Standard	Standard Description
RL.3.10	By the end of the year, read and comprehend literature, including stories, dramas, and poems at grade level text-complexity or above, with scaffolding as needed.

21st Century Life Skills

Activities:

- As students learn new concepts, they will apply knowledge of these skills to solve real-world problems. They will discuss how knowledge of these concepts could be applied in future careers.

Standard	Standard Description
9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Careers

Activities:

- Students will apply knowledge of new mathematical concepts to solve multiple-step problems.

Standard	Standard Description
CRP2	Apply appropriate academic and technical skills.

NJSLS for Mathematical Practice: Bold all that apply	
MP #	Practice
1	**Make sense of problems and persevere in solving them.**
2	**Reason abstractly and quantitatively.**
3	**Construct viable arguments and critique the reasoning of others.**
4	**Model with mathematics.**
5	**Use appropriate tools strategically.**
6	**Attend to precision.**
7	**Look for and make use of structure.**
8	**Look for and express regularity in repeated reasoning.**

Standard #	Standard Description
3.MD.A.1	Solve problems involving measurement and estimation. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
3.MD.A.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
3.MD.B.4	Represent and interpret data. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

Differentiation			
Special Education	English Language Learners (ELL)	Response to Intervention (RTI)	Enrichment
• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tasks • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Prioritize tasks • Use graphic organizers • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such as small groups • NJDOE resources - http://www.state.nj.us/education/specialed/	• Provide text-to-speech • Use of translation dictionary or software • Provide graphic organizers • NJDOE resources - http://www.state.nj.us/education/aps/cccs/ELL.htm • Adapt a Strategy – Adjusting strategies for ESL students - http://www.teachersfirst.com/content/esl/adaptstrat.cfm	• Tiered interventions following RTI framework • Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ • Interventional Central - http://www.interventioncentral.org/	• Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: real world problems, audiences, deadlines, evaluations, transformations • Learning environments should be modified: student-centered learning, independence, openness, complexity, groups varied • NJDOE resources - http://www.state.nj.us/education/aps/cccs/g_and_t_req.htm

Califon Public School
Curriculum

Subject: Math	Grade: 3	Unit #: 4	Pacing: 4 weeks
Unit Title: Geometry			

OVERVIEW OF UNIT:

Seeing examples and non-examples of shapes, with an emphasis on discussing the attributes of shapes, helps students with classification. In this unit, students will use a variety of strategies to describe and classify two-dimensional shapes.

Unit References	
Big Ideas	Essential Questions
You can describe and classify two-dimensional shapes.	• What are some ways to describe two-dimensional shapes? • How can you describe angles in plane shapes? • How can you use line segments and angles to make polygons? • How can you describe line segments that are sides of polygons? • How can you use sides and angles to help you describe quadrilaterals? • How can you draw quadrilaterals? • How can you use sides and angles to help you describe triangles? • How can you use the strategy *draw a diagram* to classify plane shapes? • How can you divide shapes into parts with equal areas and write the area as a unit fraction of the whole?
Objectives	
• Describe two-dimensional shapes, angles, and line segments. • Identify, describe, and draw quadrilaterals. • Use sides and angles to describe triangles. • Classify plane shapes. • Divide shapes into parts with equal areas and write the area as a unit fraction of the whole.	

Assessment
Formative Assessment: ● Lesson quick check ● lesson practice ● mid-chapter checkpoint ● portfolio ● middle-of-year test ● Xtramath ● eSpark ● IXL **Summative Assessment:** ● Chapter review/test ● chapter test ● performance task assessment ● end-of year-test ● Link It **Benchmark:** ● Prerequisite skills inventory ● show what you know ● beginning-of-year test ● Link It **Alternative:** ● Modified quizzes and activities ● Performance assessments ● Activity choice board (Google Classroom)
Key Vocabulary
Closed shape, endpoint, line, line segment, open shape, plane shape, point, ray, two-dimensional shape, angle, right angle, vertex, decagon, hexagon, octagon, pentagon, polygon, quadrilateral, side, triangle, intersecting lines, parallel lines, perpendicular lines, rectangle, rhombus, square, trapezoid, Venn diagram, area, unit fraction
Resources& Materials
Go Math! Teacher Edition Chapter 12 Geometry

Technology Infusion

Teacher Technology:

- Google Classroom
- Chromebooks
- Smart Board

Student Technology:

- Google Classroom
- Chromebooks
- Smart Board
- iPads

Activities:

- Think Central games, assignments, and virtual manipulatives
- Google Classroom (math choice boards, instructional videos, discussion questions)
- IXL assignments
- eSpark tutorials and assignments
- Xtramath quizzes

Standard	Standard Description
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

Interdisciplinary Integration

Activities:

- Students will study famous artists such as Picasso and Kandinsky who used geometric shapes in their art. Students will examine the history of their art and create geometric art of their own.

Resources:

- Teacher Vision Cross Curricular Theme Map - https://www.teachervision.com/teaching-methods/curriculum-planning/7167.html
- Engineering Go For It! - http://egfi-k12.org/
- US Department of Education STEM - http://www.ed.gov/stem
- Intel STEM Resource - http://www.intel.com/content/www/us/en/education/k12/stem.html
- NASA STEM - http://www.nasa.gov/audience/foreducators/expeditions/stem/#.VYrO2flViko
- PBS STEM - http://www.pbs.org/teachers/stem/#content

- STEM Works - http://stem-works.com/activities
- What Every Education Should Know About Using Google by Shell Education
- Promoting Literacy in all Subjects by Glencoe - http://www.glencoe.com/sec/teachingtoday/subject/promoting_literacy.phtml
- International Literacy Association Read Write Think - http://www.readwritethink.org/

Standard	Standard Description
1.1.5.D.2	Compare and contrast works of art in various mediums that use the same art elements and principles of design.

21st Century Life Skills

Activities:

- As students learn new concepts, they will apply knowledge of these skills to solve real-world problems. They will discuss how knowledge of these concepts could be applied in future careers.

Standard	Standard Description
9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Careers

Activities:

- Students will apply knowledge of new mathematical concepts to solve multiple-step problems.

Standard	Standard Description
CRP2	Apply appropriate academic and technical skills.

NJSLS for Mathematical Practice: Bold all that apply	
MP #	Practice
1	**Make sense of problems and persevere in solving them.**
2	**Reason abstractly and quantitatively.**
3	**Construct viable arguments and critique the reasoning of others.**
4	**Model with mathematics.**
5	**Use appropriate tools strategically.**
6	**Attend to precision.**
7	**Look for and make use of structure.**
8	**Look for and express regularity in repeated reasoning.**

Standard #	Standard Description
3.G.A.1	**Reason with shapes and their attributes.** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape*.

Differentiation			
Special Education	English Language Learners (ELL)	Response to Intervention (RTI)	Enrichment
• Provide modifications & accommodations as listed in the student's IEP • Position student near helping peer or have quick access to teacher • Modify or reduce assignments/tasks • Reduce length of assignment for different mode of delivery • Increase one-to-one time • Prioritize tasks • Use graphic organizers • Use online resources for skill building • Provide teacher notes • Use collaborative grouping strategies such as small groups • NJDOE resources - http://www.state.nj.us/education/specialed/	• Provide text-to-speech • Use of translation dictionary or software • Provide graphic organizers • NJDOE resources - http://www.state.nj.us/education/aps/cccs/ELL.htm • Adapt a Strategy – Adjusting strategies for ESL students - http://www.teachersfirst.com/content/esl/adaptstrat.cfm	• Tiered interventions following RTI framework • Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ • Interventional Central - http://www.interventioncentral.org/	• Process should be modified: higher order thinking skills, open-ended thinking, discovery • Utilize project-based learning for greater depth of knowledge • Utilize exploratory connections to higher grade concepts • Contents should be modified: real world problems, audiences, deadlines, evaluations, transformations • Learning environments should be modified: student-centered learning, independence, openness, complexity, groups varied • NJDOE resources - http://www.state.nj.us/education/aps/cccs/g_and_t_req.htm