Califon Public School
Curriculum

Subject: Math	Grade: 2nd	Unit #: 1	Pacing: 5 weeks

Unit Title: Numbers and Operations in Base Ten

OVERVIEW OF UNIT:

Students will understand place value within 3-digit numbers.
Students will identify and show the place value of each digit found in a 3-digit number.
Students will skip count any given number by 1,2,5,10 within 1,000.
Students will use place value understanding and properties of operations to add and subtract.

Big Ideas

- **Understand place value.**
  - Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
    - 100 can be thought of as a bundle of ten tens — called a "hundred."
    - The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
  - Count within 1000; skip-count by 5s, 10s, and 100s.
  - Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
  - Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
- **Use place value understanding and properties of operations to add and subtract.**
  - Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
  - Add up to four two-digit numbers using strategies based on place value and properties of operations.
  - Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
  - Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.
  - Explain why addition and subtraction strategies work, using place value and the properties of operations.

Essential Questions

- How are even numbers and odd numbers different?
- How do you know the value of a digit?
- How do you describe a 2-digit number as tens and ones?
- How can you show the value of a number in different ways?
- How does finding a pattern help you find all the ways to show a number with tens and ones?
- How do you count by 1s, 5s, 10s, and 100s with numbers within 1,000?
- How do you group tens as hundreds?
- How do you write the 3-digit number that is shown by a set of blocks?
- How do you know the values of the digits in numbers?
- How do you use place value to find 10 more, 10 less, 100 more, or 100 less than a 3-digit number?
- How does place value help you identify and extend counting patterns?
- How can you make a model to solve a problem about comparing numbers?

Objectives

- Students will be able to describe a 2-digit number as tens and ones.
- Students will be able to show the value of a number in different ways.
- Students will be able to write the 3-digit number that is shown by a set of blocks.
- Students will be able to know the value of a digit.
- Students will count by 1s, 5s, 10s, and 100s with numbers within 1,000.

Assessment

Formative Assessment:

- GoMath Chapters 1, 2
- Lesson Quick Check
- Guided Math Notes
- Leveled Center Work

Summative Assessment:

- Chapter review/test
- Performance assessment task

Benchmark:

- **Linkit**

Alternative:

- Modified test developed by teacher
- Prodigy

Key Vocabulary

even, odd, digits, hundred, thousand, compare, = is equal to, > is greater than, < is less than

Resources & Materials

- Houghton Mifflin Harcourt, Go Math

Technology Infusion

Teacher Technology:

- Promethean Board
- Google Classroom

Student Technology:

- Chromebooks
- Seesaw

Activities:

- Students are using the Chromebooks to complete assignments through ThinkCentral, Prodigy, or XtraMath.
- Students are using the Chromebooks to reflect on math concepts through the use of SeeSaw

Standard	Standard Description
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.

Interdisciplinary Integration

Activities:

- Students will apply reading and decoding strategies to independently complete math word problems.

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 Educator 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
NJSLS-ELA L.RF.2.3	Know and apply grade-level phonics and word analysis skills in decoding words.
NJSLS-ELA L.RF.2.4	Read with sufficient accuracy and fluency to support comprehension.

21st Century Life Skills Standards

Activities:

- Students will explore time, money, and place value during our morning math routine and the students will be able to explain why these skills are essential to everyday life.

Standard	Student Learning Objectives
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

Careers	
Activities: ● Students will demonstrate math concepts using Seesaw on their Chromebook to show their math thinking.	
Practice	**Description**
Use technology to enhance productivity increase collaboration and communicate effectively.	Students find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

Standards for Mathematical Practice	
MP #	Practice
1	Make sense of problems and persevere in solving them.
4	Model with mathematics.
5	Use appropriate tools strategically.
6	Attend to precision.

Standards	
Standard #	**Standard Description**
2.OA.C.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
2.NBT.A.2	Count within 1000; skip-count by 5s, 10s, and 100s.
2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2.NBT.A.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:
2.NBT.A.1.A	100 can be thought of as a bundle of ten tens — called a "hundred."
2.NBT.A.1.B	The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.
2.NBT.A.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
2.NBT.B.8	Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.

2.NBT.B5	With accuracy and efficiency, add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Differentiation
Students with 504 plans
• Preferential seating • Guided notes • Extra time • Teacher check-ins • Use graphic organizers • Redirect attention • Prioritize tasks • Small group testing • Provide modifications & accommodations per individual student's 504 plan
Special Education
• Provide modifications & accommodations as listed in the student's IEP • Position the student near a helping peer or have quick access to the teacher • Modify or reduce assignments/tasks • Reduce the length of the assignment for different modes 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/
Response to Intervention (RTI)
• Tiered interventions following the RTI framework • Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ • Intervention Central - http://www.interventioncentral.org/
English Language Learners (ELL)
• Provide text-to-speech • Use of a 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
Enrichment
• 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, and groups should be varied
- NJDOE resources

Califon Public School
Curriculum

Subject: Math	Grade: 2nd	Unit #: 2	Pacing: 18 weeks

Unit Title: Operations and Algebraic Thinking

OVERVIEW OF UNIT:

Students will represent and solve problems involving addition and subtraction.
Students will add and subtract within 20.
Students will work with equal groups of objects to gain foundations for multiplication.

Big Ideas

- **Represent and solve problems involving addition and subtraction**.
  - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem
- **Add and subtract within 20.**
  - Fluently add and subtract within 20 using mental strategies.
  - By the end of Grade 2, know from memory all sums of two one-digit numbers.
- **Work with equal groups of objects to gain foundations for multiplication.**
  - Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
  - Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Essential Questions

- How can you use doubles facts to find sums for near doubles facts?
- How is make a ten strategy used to find sums?
- How are addition and subtraction related?
- How are bar models used to show addition and subtraction problems?
- How are number sentences used to show addition and subtraction situations?
- How can acting it out help when solving a problem about equal groups?
- How do you break apart addends to add tens and then add ones?
- How can drawing a diagram help when solving addition problems?
- How can drawing a diagram help when solving subtraction problems?
- How does breaking apart a number make it easier when subtracting?
- How do you write a number sentence to represent a problem?
- How do you decide what steps to take to solve a problem?

- How do you regroup when there are zeros in the number you start with?
- How can you use patterns and strategies to find sums and differences for basic facts?
- How do you use place value to add 2-digit numbers, and what are some different ways to add 2-digit numbers?
- How do you use place value to subtract 2-digit numbers with and without regrouping?
- What are some strategies for adding and subtracting 3-digit numbers?

Objectives

- Students will be able to create a number sentence to represent an addition or subtraction problem.
- Students will be able to solve addition and subtraction problems by drawing models.
- Students will be able to regroup when completing a subtraction or addition problem.

Assessment

Formative Assessment:

- GoMath Chapters 3,4,5,6,7,8,9,10
- Lesson Quick Check
- Guided Math Notes
- Leveled Center Work

Summative Assessment:

- Chapter review/test
- Performance assessment task

Benchmark:

- **Linkit**

Alternative:

- Modified test developed by teacher
- Prodigy

Key Vocabulary

Sums, addends, difference, regroup, column, Difference, regroup

Resources & Materials

- Houghton Mifflin Harcourt, Go Math

Technology Infusion

Teacher Technology:

- Promethean Board
- Google Classroom

Student Technology:

- Chromebooks
- Seesaw

Activities:

- Students are using the Chromebooks to complete assignments through ThinkCentral, Prodigy, or XtraMath.
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Standard	Standard Description

8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.

Interdisciplinary Integration

Activities:

- Students will apply reading and decoding strategies to independently complete math word problems.

Resources:

- Teacher Vision Cross-Curricular Theme Map - https://www.teachervision.com/teaching-methods/curriculum-planning/7167.html
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- NASA STEM - http://www.nasa.gov/audience/foreducators/expeditions/stem/#.VYrO2flViko
- PBS STEM - http://www.pbs.org/teachers/stem/#content
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Standard	Standard Description
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21st Century Life Skills Standards

Activities:

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Standard	Student Learning Objectives
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

Careers

Activities:

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Practice	Description
Use technology to enhance productivity increase collaboration and communicate effectively.	Students find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

Standards for Mathematical Practice	
MP #	Practice
1	Make sense of problems and persevere in solving them.
4	Model with mathematics.
5	Use appropriate tools strategically.
6	Attend to precision.

Standards	
Standard #	**Standard Description**
2.OA.A1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. *
2.OA.B.2	With accuracy and efficiency, add and subtract within 20 using mental strategies.[2] By end of Grade 2, know from memory all sums of two one-digit numbers.
2.OA.C.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
2.NBT.B.5	With accuracy and efficiency, add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.
2.NBT.B.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
2.NBT.B.9	Explain why addition and subtraction strategies work, using place value and the properties of operations. (*Clarification: Explanations should be supported by drawings or objects)*

Differentiation
Students with 504 plans
• Preferential seating • Guided notes • Extra time • Teacher check-ins • Use graphic organizers • Redirect attention

- Prioritize tasks
- Small group testing
- Provide modifications & accommodations per individual student's 504 plan

Special Education

- Provide modifications & accommodations as listed in the student's IEP
- Position the student near a helping peer or have quick access to the teacher
- Modify or reduce assignments/tasks
- Reduce the length of the assignment for different modes 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/

Response to Intervention (RTI)

- Tiered interventions following the RTI framework
- Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/
- Intervention Central - http://www.interventioncentral.org/

English Language Learners (ELL)

- Provide text-to-speech
- Use of a 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

Enrichment

- 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, and groups should be varied
- NJDOE resources

Califon Public School
Curriculum

Subject: Math	Grade: 2nd	Unit #: 3	Pacing: 4 weeks

Unit Title: Money & Time

OVERVIEW OF UNIT:

Students will solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Students will tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Big Ideas

- **Work with time and money.**
  - Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
  - Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?
- How do you use the values of coins and bills to find the total value of a group of money, and how do you read time when using analog or digital clocks?

Essential Questions

- How do you find the total value of a group of dimes, nickels, and pennies?
- How do you find the total value of a group of coins?
- How do you order coins to help find the total of a group of coins?
- How do you choose coins to show a money amount in different ways?
- How can you show the value of one dollar with coins?
- How do you show money amounts greater than one dollar?
- How do you tell time to the hour and half hour on a clock?
- How do you tell and show time to five minutes?
- What are the different ways you can read the time on a clock?
- How do you use A.M. and P.M. to describe times?

Objectives

- Students will be able to order coins to help find the total of a group of coins.
- Students will be able to tell time to the hour and half hour on a clock.

Assessment

Formative Assessment:
- GoMath Chapters 11, 12

Benchmark:
- **Linkit**

- Lesson Quick Check
- Guided Math Notes
- Leveled Center Work

Alternative:

- Modified test developed by teacher
- Prodigy

Summative Assessment:

- Chapter review/test
- Performance assessment task

Key Vocabulary
Dime, nickel, penny, cent sign ¢, quarter, dollar, dollar sign $, decimal point ., minutes, hour, quarter past, noon, midnight, A.M., P.M.

Resources & Materials
• Houghton Mifflin Harcourt, Go Math

Technology Infusion

Teacher Technology:

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- Google Classroom

Student Technology:

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- Seesaw

Activities:

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Standard	Standard Description
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.

Interdisciplinary Integration

Activities:

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6	Attend to precision.

Standards

Standard #	Standard Description
2.M.C.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

2.M.C.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Differentiation
Students with 504 plans
• Preferential seating • Guided notes • Extra time • Teacher check-ins • Use graphic organizers • Redirect attention • Prioritize tasks • Small group testing • Provide modifications & accommodations per individual student's 504 plan
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Enrichment
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Califon Public School
Curriculum

Subject: Math	Grade: 2nd	Unit #: 4	Pacing: 4 weeks

Unit Title: Measurement

OVERVIEW OF UNIT:

Students will measure and estimate lengths in standard units. They will use various tools when measuring.

Big Ideas

- **Measure and estimate lengths in standard units.**
  - Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
  - Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
  - Estimate lengths using units of inches, feet, centimeters, and meters.
  - Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Essential Questions

- Why is measuring feet different from measuring in inches?
- How do you estimate the lengths of objects in feet?
- How do you choose a measuring tool to use when measuring lengths?
- How can a line plot be used to show measurement data?
- How is measuring in meters different from measuring in centimeters?
- How do you estimate the lengths of objects in meters?
- How do you find the difference between the lengths of two objects?
- How do you make a picture graph to show data in a tally chart?
- How is a bar graph used to show data?
- How do you make a bar graph to show data?
- How does making a bar graph help when solving problems about data?
- How do you find the difference between the lengths of two objects?
- What are some of the methods and tools that can be used to estimate and measure length?
- What are some of the methods and tools that can be used to estimate and measure length in metric units?
- How do tally charts, picture graphs, and bar graphs help you solve problems?

Objectives

- Students will be able to choose a measuring tool to use when measuring length.
- Students will be able to measure objects in inches, centimeters, feet, and meters.

- Students will be able to identify the difference between the lengths of two objects.

Assessment	
Formative Assessment: ● GoMath Chapters 13, 14 ● Lesson Quick Check ● Guided Math Notes ● Leveled Center Work **Summative Assessment:** ● Chapter review/test ● Performance assessment task	**Benchmark:** ● **Linkit** **Alternative:** ● Modified test developed by teacher ● Prodigy

Key Vocabulary
Inch, foot, measuring tape, yardstick, line plot, Centimeter, meter,

Resources & Materials
● Houghton Mifflin Harcourt, Go Math

Technology Infusion

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Student Technology:

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Activities:

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- What Every Educator 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
NJSLS-ELA L.RF.2.3	Know and apply grade-level phonics and word analysis skills in decoding words.
NJSLS-ELA L.RF.2.4	Read with sufficient accuracy and fluency to support comprehension.

21st Century Life Skills Standards

Activities:

- Students will explore time, money, and place value during our morning math routine and the students will be able to explain why these skills are essential to everyday life.

Standard	Student Learning Objectives
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

Careers

Activities:

- Students will demonstrate math concepts using Seesaw on their Chromebook to show their math thinking.

Practice	Description
Use technology to enhance productivity increase collaboration and communicate effectively.	Students find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

Standards for Mathematical Practice

MP #	Practice
1	Make sense of problems and persevere in solving them.
4	Model with mathematics.
5	Use appropriate tools strategically.
6	Attend to precision.

Standards	
Standard #	**Standard Description**
2.M.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.M.A.2	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
2.M.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.
2.M.B.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.
2.M.B.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
2.DL.B.3.	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
2.M.A.3	Estimate lengths using units of inches, feet, centimeters, and meters
2.M.A.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Differentiation
Students with 504 plans
• Preferential seating • Guided notes • Extra time • Teacher check-ins • Use graphic organizers • Redirect attention • Prioritize tasks • Small group testing • Provide modifications & accommodations per individual student's 504 plan
Special Education
• Provide modifications & accommodations as listed in the student's IEP • Position the student near a helping peer or have quick access to the teacher • Modify or reduce assignments/tasks • Reduce the length of the assignment for different modes 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/

Response to Intervention (RTI)

- Tiered interventions following the RTI framework
- Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/
- Intervention Central - http://www.interventioncentral.org/

English Language Learners (ELL)

- Provide text-to-speech
- Use of a 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

Enrichment

- 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, and groups should be varied
- NJDOE resources

Califon Public School
Curriculum

Subject: Math	Grade: 2nd	Unit #: 5	Pacing: 4 weeks

Unit Title: Geometry

OVERVIEW OF UNIT:

Students will reason with shapes and their attributes.

Big Ideas

- **Reason with shapes and their attributes.**
  - Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
  - Partition a rectangle into rows and columns of the same-size squares and count to find the total number of them.
  - Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Essential Questions

- What objects match three-dimensional shapes?
- How would you describe the faces of a rectangular prism and the faces of a cube?
- How can you identify and describe three-dimensional shapes according to the number of faces, edges, and vertices?
- How can you build a rectangular prism?
- What shapes can you name just by knowing the number of sides and vertices?
- How do you name 3-, 4-, 5-, and 6-sided shapes according to the number of sides and vertices?
- How do you find and count angles in two-dimensional shapes?
- How do you use the number of sides and angles to sort two-dimensional shapes?
- How do you find the total number of squares of the same size that will cover a rectangle?
- What are halves, thirds, and fourths of a whole?
- How do you know if a shape shows halves, thirds, or fourths of a whole?
- How do you know if a shape shows halves, thirds, or fourths?
- How do you find a half of, a third of, or a fourth of a whole?
- How can drawing a diagram help when solving problems about equal shares?

Objectives

- Students will be able to identify and describe two-dimensional shapes.

- Students will be able to combine and take-apart two-dimensional shapes to make new shapes.
- Students will be able to identify shapes that are shown in halves, thirds, or fourths.

Assessment

Formative Assessment:

- GoMath Chapters 15, 16
- Lesson Quick Check
- Guided Math Notes
- Leveled Center Work

Benchmark:

- **Linkit**

Alternative:

- Modified test developed by teacher
- Prodigy

Summative Assessment:

- Chapter review/test
- Performance assessment task

Key Vocabulary

Cube, rectangular prism, sphere, cylinder, cone, face, edge, vertex, vertices, side, quadrilateral, pentagon, hexagon, angle, halves, thirds, fourths, half of, third of, fourth of, quarter of

Resources & Materials

- Houghton Mifflin Harcourt, Go Math

Technology Infusion

Teacher Technology:

- Promethean Board
- Google Classroom

Student Technology:

- Chromebooks
- Seesaw

Activities:

- Students are using the Chromebooks to complete assignments through ThinkCentral, Prodigy, or XtraMath.
- Students are using the Chromebooks to reflect on math concepts through the use of SeeSaw

Standard	Standard Description
8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.

Interdisciplinary Integration

Activities:

- Students will apply reading and decoding strategies to independently complete math word problems.

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 Educator 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
NJSLS-ELA L.RF.2.3	Know and apply grade-level phonics and word analysis skills in decoding words.
NJSLS-ELA L.RF.2.4	Read with sufficient accuracy and fluency to support comprehension.

21st Century Life Skills Standards

Activities:

- Students will explore time, money, and place value during our morning math routine and the students will be able to explain why these skills are essential to everyday life.

Standard	Student Learning Objectives
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

Careers

Activities:

- Students will demonstrate math concepts using Seesaw on their Chromebook to show their math thinking.

Practice	Description
Use technology to enhance productivity increase collaboration and communicate effectively.	Students find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

Standards for Mathematical Practice

MP #	Practice
1	Make sense of problems and persevere in solving them.
4	Model with mathematics.
5	Use appropriate tools strategically.
6	Attend to precision.

Standards	
Standard #	**Standard Description**
2.G.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.
2.G.A.2	Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
2.G.A.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. *For example, students partition a rectangle (i.e. the whole) into three equal shares, identify each of the shares as a 'third' and describe the rectangle as three 'thirds'.*

Differentiation
Students with 504 plans
• Preferential seating • Guided notes • Extra time • Teacher check-ins • Use graphic organizers • Redirect attention • Prioritize tasks • Small group testing • Provide modifications & accommodations per individual student's 504 plan
Special Education
• Provide modifications & accommodations as listed in the student's IEP • Position the student near a helping peer or have quick access to the teacher • Modify or reduce assignments/tasks • Reduce the length of the assignment for different modes 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/
Response to Intervention (RTI)
• Tiered interventions following the RTI framework • Effective RTI strategies for teachers - http://www.specialeducationguide.com/pre-k-12/response-to-intervention/effective-rti-strategies-for-teachers/ • Intervention Central - http://www.interventioncentral.org/

English Language Learners (ELL)
• Provide text-to-speech • Use of a 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
Enrichment
• 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, and groups should be varied • NJDOE resources

Califon Public School
Curriculum

Subject: Math	Grade: 2nd	Unit #: 6	Pacing: 2 weeks

Unit Title: Data Literacy

OVERVIEW OF UNIT:

Students will understand that people collect data to answer questions. Students will understand that data can vary. Students will identify what could count as data (e.g., visuals, sounds, numbers).

Big Ideas

- What are some ways to represent data?
- How can we access information from various presentations in math?
- How can students record data from a survey?

Essential Questions

- How do I use a tally chart to record data from a survey?
- How do I make picture graphs to represent data?
- How do I interpret data in bar graphs and use that information to solve problems?

Objectives

- Students will make a tally chart to record data from a survey.
- Students will interpret data in a picture graph and use that information to solve problems.
- Students will make picture graphs to represent data.
- Students will interpret data in bar graphs and use that information to solve problems.
- Students will make bar graphs to represent data.
- Students will make a picture graph and a bar graph using a scale of 1.

Assessment

Formative Assessment:

- GoMath Chapters 17
- Lesson Quick Check
- Guided Math Notes
- Leveled Center Work

Summative Assessment:

- Chapter review/test
- Performance assessment task

Benchmark:

- **Linkit**

Alternative:

- Modified test developed by teacher
- Prodigy

Key Vocabulary
Survey, data, picture graph, key, bar graph

Resources & Materials
• Houghton Mifflin Harcourt, Go Math

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Teacher Technology:

- Promethean Board
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Student Technology:

- Chromebooks
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- 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
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6	Attend to precision.

Standards	
Standard #	**Standard Description**
2.DL.A.1	Understand that people collect data to answer questions. Understand that data can vary.
2.DL.A.2	Identify what could count as data (eg., visuals, sounds, numbers)
2.DL.B.3	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.
2.DL.B.4	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

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