BUTLER SCHOOL DISTRICT

Grade 3 Mathematics Curriculum

Authored by:
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Adapted from:
New Jersey Student Learning Standards
New Jersey Department of Education Instructional Units for Mathematics

Reviewed by:
Dr. Daniel R. Johnson, Superintendent
Margaret Lynch, Supervisor of STEAM

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VISION

The Butler School District's Mathematics Department believes the future belongs to those who can think critically and communicate effectively. Our teachers are determined to provide students with the skills to analyze, adapt, collaborate, innovate, persevere and thrive in an ever-changing world. The Mathematics curriculum provides students with quality, rigorous instruction to help them become better readers, writers, speakers, and listeners. The rich, educational experience provided within the Butler School District will produce young adults with the foundation and preparation they need for the future. It is the goal to challenge each student to develop and extend mathematical proficiency through highest quality mathematics teaching and standard-based assessments that meet the learning needs of each student. Butler Mathematics students will become individuals who persevere in their pursuit of lifelong learning through a culture that appreciates the beauty and usefulness of math.

As a result of a Butler Mathematics education, students will be able to…

- Synthesize mathematical skills across disciplines
- Develop into confident mathematicians
- Learn at their own pace and advance their understanding in a variety of ways
- Collaborate with others and contribute productively and articulately
- Act responsibly and be accountable for actions, in person and online
- Effectively approach, analyze, plan, and apply appropriate strategies for problem solving in ambitious contexts with accommodations for those who need it.
- Persevere through difficult situations and tasks and maintain a growth mindset despite adversity.
- Draw on knowledge from a wide variety of mathematical topics with flexibility to approach the same problem from different mathematical perspectives or represent the mathematics in different ways.
- Evaluate situations, draw logical conclusions, and develop, describe and apply solutions.
- Construct and support arguments.
- Evaluate their own reasoning and critique the reasoning of others.
- Assess the reasonableness of a solution with respect to the given construct or problem context.
- Use effective communication to engage in peer collaboration, reflecting on whether or not a solution is viable.
- Create appropriate representations of mathematical situations across a variety of mediums. These models will support the student's ability to demonstrate and explain their mathematical understanding.
- Use mathematical tools to explore and deepen their understanding of mathematical concepts.
- Make effective choices regarding the use of any available tools.
- Make appropriate use of technology as a tool that is constantly changing and evolving.

- Attend to precision in their mathematical calculations and in their communication.
- Calculate accurately and efficiently and express numerical answers with a degree of precision that is appropriate to the given context.
- Develop precision in their use of mathematical language.
- Look closely to determine patterns and structures within mathematics.
- Make meaningful connections between their knowledge from previous experiences and the content they are currently exploring.
- Develop deep understandings of mathematical concepts such that these understandings become applicable building blocks for future learning.
- Use their mathematical understandings to make generalizations that apply to various mathematical circumstances.
- Identify patterns in mathematics that can be used to solve problems that are challenging relative to their learning comfort zone.
- Use generalizations to increase the efficiency and manageability of their work.
- Demonstrate growth mindset and grit in effectively approaching ever-rigorous problem solving.
- Apply appropriate strategies with differentiated levels of support.
- Be confident in participating in higher level discussions that will assess and advance the understanding of concepts.
- Learn mathematics through exploring and solving contextual and mathematical problems

COURSE OVERVIEW

The fundamental purpose of this course is to give 3rd grade student's an understanding of mathematical concepts and a solid mathematical foundation. NJSLS standards are incorporated in each unit to ensure students are developing procedural fluency, problem solving skills, and productive disposition towards Mathematics.

GOALS

New Jersey Student Learning Standards for Mathematics

ASSESSMENT

Student learning will be assessed through a variety of formative, summative, benchmark, and alternative assessments.

SCOPE AND SEQUENCE
(*Pacing Guide*)

Unit of Study	**Estimated Time**
Unit 1- Introductory Multiplication and Division Concepts	9 weeks
Unit 2- Relating Area to Multiplication and Addition	7 weeks
Unit 3- Introductory Fraction Concepts	12 weeks
Unit 4- Spatial Reasoning and Fluency with Operations	6 weeks

AFFIRMATIVE ACTION COMPLIANCE STATEMENT

The Butler Public Schools are committed to the achievement of increased cultural awareness, respect, and equity amongst our students, teachers, and community. We are pleased to present all pupils with information pertaining to possible career, professional, or vocational opportunities which in no way restricts or limits options on the basis of race, color, creed, religion, sex, ancestry, national origin, or socioeconomic status.

INTEGRATED ACCOMMODATIONS AND MODIFICATIONS

Students with IEPs, 504s, and/or Students at Risk of Failure Students read authentic texts and write authentic pieces at their independent and instructional reading levels. Individualized feedback is provided through conferences and small groups. The teacher utilizes visual and multi-sensory methods of instruction in addition to assistive technology when needed. Students are provided with graphic organizers and other scaffolded material. Modification of content and product may be deemed necessary based on student needs. Students are provided with testing accommodations and authentic assessments.

Gifted & Talented Students Students read authentic texts and write authentic pieces at their independent and instructional reading levels. Individualized feedback is provided to the student through conferences and small groups. Students are engaged through inquiry-based instruction to develop higher-order thinking skills. Activities are developed based on student interests and student goals. Students engage in real-world projects and scenarios.

English Language Learners Students read authentic texts and write authentic pieces at their independent and instructional reading levels. Individualized feedback is provided to students through conferences and small groups. Students are pre-taught vocabulary terms and concepts. Teachers engage students through visual learning, including the use of graphic organizers. Teachers use cognates to increase comprehension. The teacher models tasks and concepts, and pairs students learning English with students who have more advanced English language skills. Scaffolding is provided including word walls, sentence frames, think-pair-share, cooperative learning groups, and teacher think-alouds.

21ST CENTURY THEMES & SKILLS

Embedded in many of our units of study and problem based learning projects are the 21st Century Themes as prescribed by the New Jersey Department of Education. These themes are as follows:

- Global Awareness
- Financial, Economic, Business, and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy

CURRICULUM ADDENDA FOR SPECIAL EDUCATION

This curriculum can be both grade and age appropriate for special education students and serves as a guide for the special education teacher in line with the district's written philosophy of special education, as stated within Policy #6700 concerning Programs for Educationally Disabled Students. Based on the Child Study Team evaluation and consultation with the parent and classroom teacher, an individualized education plan may include modifications to content, instructional procedures, student expectations, and targeted achievement outcomes of this curriculum document in accordance with the identified needs of an eligible student. This educational plan will then become a supplement guide that the classroom teacher, parent, and Child Study Team will use to measure the individual student's performance and achievement.

CURRICULUM ADDENDA FOR ENGLISH LANGUAGE LEARNERS

This curriculum guide is appropriate and is implemented for all students according to age and grade, and is in line with the district's written philosophy of English language acquisition concerning Bilingual Instruction and English as a Second Language Programs. In accordance with the New Jersey Administrative Code 6A:15, the contents herein provide equitable instructional opportunities for English Language Learners to meet the New Jersey Student Learning Standards and to participate in all academic and non-academic courses. Students enrolled in a Bilingual and/or an ESL program may, in consultation with the classroom teacher and Bilingual and/or ESL teacher, receive modification to content, instructional procedures, student expectations and targeted achievement outcomes of this curriculum document in accordance with the students developmental and linguistic needs.

DIVERSITY AND INCLUSION

In alignment with the 2020 NJSLS, the Mathematics Curriculum materials will:

Cultivate respect towards minority groups to foster appreciation of their differences as well as their contributions to the advancement of mathematics

Analyze and appreciate the diverse contributions made in the past (scientifically, economically, politically, and socially) at both the state and federal level as exemplified through mathematics

Examine grade-level texts and resources that simultaneously highlight mathematics as well as the contributions made to it by those of different genders, ethnicities, and abilities.

Employ mathematics as a means of communication — whether in regard to empathy, inclusivity, or advocacy — in an effort to creatively inspire solutions for those with specific needs.

Engage in authentic learning experiences that motivate the acquisition and application of varied perspectives in mathematics

Facilitate the ability to communicate effectively through mathematics while applying content knowledge, interdisciplinary connections, and thinking skills to do so.

Foster active student participation in an inclusive culture that honors mathematicians of all genders, ethnicities, and abilities.

Analyze and develop an understanding of how scientific, economic, political, social, and cultural aspects of society influence new technological and mathematical processes.

Reflect on both personal and non-personal experiences aimed to promote empathy and inclusivity for all regardless of our differences.

UNIT
Unit 1: Introductory Multiplication and Division Concepts
UNIT SUMMARY
This first unit introduces multiplication and division concepts. Students will build upon the skills they learned in Grade 2 by working with arrays and repeated addition to create equal groups. By exploring the concepts of multiplication and division together, students will learn about the relationship between the two operations. Students use a variety of strategies to solve multiplication and division problems involving single digit numbers. As students apply strategies to solve these problems, they begin working towards accuracy and efficiency (fluency) with these operations. By the end of the unit, students use drawings and equations with a symbol for the unknown to represent simple two-step word problems using the four operations.
NEW JERSEY STUDENT LEARNING STANDARDS MATHEMATICS
Module A: **3.OA.A.1** Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5 × 7. **3.OA.A.2** Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8. **3.OA.A.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. **Module B:** **3.OA.A.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?. **3.OA.B.5** Apply properties of operations as strategies to multiply and divide. *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property)* **3.OA.B.6** Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.

3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
3.OA.D.8 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.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.
3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

INTERDISCIPLINARY CONNECTIONS

New Jersey Student Learning Standards- English Language Arts:
RI.3.1. Ask and answer questions, and make relevant connections to demonstrate understanding of a eferring explicitly to the text as the basis for the answers.
RI.3.2. Determine the main idea of a text; recount the key details and explain how they support the main

RI.3.3. Describe the relationship between a series of historical events, scientific ideas or concepts, or in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
RI.3.8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., arison, cause/effect, first/second/third in a sequence) to support specific points the author makes in a text.

New Jersey Student learning Standards- Social Studies 2020:
6.1.4.B.1. Compare and contrast information that can be found on different types of maps and determine how the information may be useful.
New Jersey Student Learning Standards- Science 2020:
3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
3-ESS2-2. Obtain and combine information to describe climates in different regions of the World.
3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills (2020)
9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions
9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand thinking about a topic of curiosity
9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process
9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem
9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view
9.4.5.IML.2: Create a visual representation to organize information about a problem or issue

2020 New Jersey Student Learning Standards – Computer Science and Design Thinking

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

21st CENTURY LIFE AND CAREER STANDARDS

Career Readiness, Life Literacies, and Key Skills Practices describe the habits of the mind that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success.

1. Act as a responsible and contributing community member and employee.
2. Attend to financial well-being.
3. Consider the environmental, social and economic impacts of decisions.
4. Demonstrate creativity and innovation.
5. Utilize critical thinking to make sense of problems and persevere in solving them.
6. Model integrity, ethical leadership and effective management.
7. Plan education and career paths aligned to personal goals.
8. Use technology to enhance productivity, increase collaboration and communicate effectively.
9. Work productively in teams while using cultural global competence.

9.1: Personal Financial Literacy	**9.2: Career Awareness, Exploration & Preparation, and Training**	**9.3: Career and Technical Education**
A. Civic Responsibility	A. Career Awareness (K-2)	A. Agriculture
B. Financial Institutions	**B. Career Awareness and Planning (3-5)**	B. Architecture
C. Financial Psychology	C. Career Awareness and Planning (6-8)	C. Arts,A/V, Technology
D. Planning and Budgeting	D. Career Awareness and Planning (9-12)	D. Business Management
E. Risk Management and Insurance		E. Education
F. Civic Financial Responsibility		F. Finance
G. Credit Profile		G. Government
H. Economic and Government Influences		H. Health Science
I. Credit and Debt Management		I. Hospital & Tourism
		J. Human Services
		K. Information Tech.
	9.4 Life Literacies and Key Skills	L. Law and Public Safety
		M. Manufacturing

	A. Creativity and Innovation **B Critical Thinking and Problem-solving** C. Digital Citizenship D. Global and Cultural Awareness E. Information and Media Literacy F. Technology Literacy	N. Marketing **O. Science, Technology, Engineering & Math** P. Trans./Logistics

TECHNOLOGY STANDARDS	
8.1: Computer Science A. Computing systems B. Networks and the Internet C. Impacts of Computing **D. Data & Analysis** E. Algorithms & Programming	**8.2 Design Thinking** A. Engineering Design B. Interaction of Technology and Humans **C. Nature of Technology** D. Effects of Technology on the Natural World E. Ethics & Culture
ENDURING UNDERSTANDINGS	**ESSENTIAL QUESTIONS**
Student will understand that: ● The total number of objects when grouped, can be found most efficiently by multiplication ● Multiplication and division are inverse operations. ● There are strategies to patterns in a sequence of numbers. ● Equations can model real-world problems.	● How are multiplication and division related? ● How can one use properties as strategies to solve problems? ● How can one use multiplication to help solve division problems? ● How can one use the relationship between multiplication and division to find products and quotients? ● How can patterns be used to solve problems?

STUDENT LEARNING OBJECTIVES (Students are learning to / Students are learning that)

Students are learning to/that…

- Interpret products of whole numbers in terms of the number of groups and objects
- Interpret whole number quotients of whole numbers as the number of objects in each share (or groups) or as the number of shares (or groups) that result from partitioning a total number of objects
- Use multiplication and division within 100 to solve word problems in situations involving: equal groups, arrays and measurement quantities.
- Use drawings and equations with a symbol for the unknown number to represent multiplication and division word problems within 100.
- Determine the unknown whole number in a multiplication or division equation relating three whole numbers.

- Apply properties of operations (commutative property) as strategies to multiply.
- Multiply and divide within 100 using strategies such as the relationship between multiplication and division, or properties of operations (working towards accuracy and efficiency).
- Identify arithmetic patterns, including patterns in the addition table or multiplication table, and explain them using properties of operations.
- A related multiplication problem with an unknown factor can be used to solve a division problem.
- Solve simple two-step word problems using the four operations.
- Represent two-step word problems using equations with a letter standing for the unknown quantity.
- Assess the reasonableness of answers in two-step word problems using mental computation and estimation strategies including rounding.
- Round whole numbers to the nearest 10 or 100, using place value understanding.

SUGGESTED ACTIVITIES

- Learning Centers
- Manipulatives
- Interactive websites, including but not limited to:
    - Khan Academy
    - ST Math
    - SplashLearn
    - IXL
- 3.OA.A.2 Fish Tanks
- 3.OA.A.3 Analyzing Word Problems Involving Multiplication
- 3.OA.A.4 Finding the unknown in a division equation
- 3.MD.C.6 Finding the Area of Polygons
- 3.MD.C.7a India's Bathroom Tiles
- 3.NBT.A.1 Rounding to 50 or 500
- 3.NBT.A.1 Rounding to the Nearest Ten and Hundred
- 3.NBT.A.3 How Many Colored Pencils?

EVIDENCE OF LEARNING

Formative Assessments: Classroom Discussion Exit Slip Checklists Math Boxes Peer Assessment Rubrics Participation and teacher observation Mini Whiteboard Responses Think-Pair-Share Classroom Poll 100 Facts (+, -, x)	**Summative Assessment:** Unit Tests End-of-Book Test NJSLA Test
Benchmark Assessment: Star 360 Benchmark Unit Benchmarks	**Alternative Assessments:** Project

INSTRUCTIONAL RESOURCES

Core Instructional Resource:	**Teacher Created Materials**	**Supplemental Resources:**
EnVision	Nearpod Presentations	ST Math IXL Khan Academy Kahoot Choice Boards

INTEGRATED ACCOMMODATIONS AND MODIFICATIONS

Special Education:
Provide modified notes and access to extra copies online
Provide oral reminders and check student work during independent work time
Model skills/techniques to be mastered
Check and sign assignment planner
Preferential seating
Pair visual prompts with verbal presentations
Modified or scaffolded homework and classwork
Extended time as needed
Provide graphic organizers and study guides

English Learners:
Provide scaffolded assignments and assessments
Pair visual prompts with visual presentations
Check and sign assignment planner
Native Language translation (peer, online assistive technology, translation device, bilingual dictionary)
Extended time for assignment and assessment as needed
Highlight key vocabulary
Use graphic organizers
Provide verbal and written directions
Preferential seating with a English-speaking peer

At Risk of Failure:
Check and sign assignment planner
Encourage class participation and reinforce skills
Model skills and assignments
Extended to time to complete class work
Preferential seating
Provide extra help outside of class and 1:1 instruction when needed
Communicate regularly with students' other teachers
Provide positive feedback for tasks well done
Encourage student to proofread assessments and projects and ask for teacher proofreading of large writing assignments

Gifted and Talented:
Pose higher-level thinking questions
Provide higher level reading and writing materials for literacy based activities
Probe student to extend thinking beyond the text or connect two or more texts
Provide alternate or project-based assessments and assignments

Students with 504 Plans
Provide extended time as needed
Modify length of writing assignment
Provide short breaks within the lesson
Provide scaffolding for students
Utilize graphic organizers

UNIT
Unit 2: Relating Area to Multiplication and Addition
UNIT SUMMARY
This unit focuses on the concepts of area, the distributive property, and multiplication. Unit 2 builds on earlier work with arrays and repeated addition from the previous unit. Students use area models and properties of operations to calculate products of whole numbers, as well as using a variety of extended strategies to solve multiplication word problems involving area. By the end of the unit, students recognize area as an additive and use the concept to determine areas of rectilinear figures. As students apply strategies to solve multiplication and division problems, they continue working towards accurately and efficiently multiplying and dividing within 100 fluently.
NEW JERSEY STUDENT LEARNING STANDARDS MATHEMATICS
Module A: **3.MD.C.5** Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.

b. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.

3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and nonstandard units).

3.MD.C.7 Relate area to the operations of multiplication and addition.

a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths *a* and *b* + *c* is the sum of *a* × *b* and *a* × *c*. Use area models to represent the distributive property in mathematical reasoning.

3.OA.B.5 Apply properties of operations as strategies to multiply and divide. *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)*

3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Module B:

3.OA.B. 5 Apply properties of operations as strategies to multiply and divide. *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)*

3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Module C:

3.MD.C.7 Relate area to the operations of multiplication and addition.

d. Recognize area as an additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

INTERDISCIPLINARY CONNECTIONS

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RI.3.8. Describe the logical connection between particular sentences and paragraphs in a text comparison, cause/effect, first/second/third in a sequence) to support specific points the author s in a text.

New Jersey Student learning Standards- Social Studies 2020:
6.1.4.B.1. Compare and contrast information that can be found on different types of maps and determine how the information may be useful.
New Jersey Student Learning Standards- Science 2020:
3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
3-ESS2-2. Obtain and combine information to describe climates in different regions of the World.
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9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions
9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to d one's thinking about a topic of curiosity
9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process
9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem
9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view
9.4.5.IML.2: Create a visual representation to organize information about a problem or issue

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8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

21st CENTURY LIFE AND CAREER STANDARDS

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2. Attend to financial well-being.
3. Consider the environmental, social and economic impacts of decisions.
4. Demonstrate creativity and innovation.
5. Utilize critical thinking to make sense of problems and persevere in solving them.
6. Model integrity, ethical leadership and effective management.
7. Plan education and career paths aligned to personal goals.
8. Use technology to enhance productivity, increase collaboration and communicate effectively.
9. Work productively in teams while using cultural global competence.

9.1: Personal Financial Literacy

J. Civic Responsibility
K. Financial Institutions
L. Financial Psychology
M. Planning and Budgeting
N. Risk Management and Insurance
O. Civic Financial Responsibility
P. Credit Profile
Q. Economic and Government Influences
R. Credit and Debt Management

9.2: Career Awareness, Exploration & Preparation, and Training

G. Career Awareness (K-2)
H. Career Awareness and Planning (3-5)
I. Career Awareness and Planning (6-8)
J. Career Awareness and Planning (9-12)

9.4 Life Literacies and Key Skills

A. Creativity and Innovation
B Critical Thinking and Problem-solving
C. Digital Citizenship
D. Global and Cultural Awareness

9.3: Career and Technical Education

Q. Agriculture
R. Architecture
S. Arts,A/V, Technology
T. Business Management
U. Education
V. Finance
W. Government
X. Health Science
Y. Hospital & Tourism
Z. Human Services
AA. Information Tech.
BB. Law and Public Safety
CC. Manufacturing
DD. Marketing
EE. Science, Technology, Engineering & Math
FF. Trans./Logistics

	K. Information and Media Literacy L. Technology Literacy	

TECHNOLOGY STANDARDS	
8.1: Computer Science A. Computing systems B. Networks and the Internet C. Impacts of Computing **D. Data & Analysis** E. Algorithms & Programming	**8.2 Design Thinking** A. Engineering Design B. Interaction of Technology and Humans **C. Nature of Technology** D. Effects of Technology on the Natural World E. Ethics & Culture
ENDURING UNDERSTANDINGS	**ESSENTIAL QUESTIONS**
Students will understand that: ● Area measurement involves covering a surface. ● Area is measured in square units ● Area is related to the operations of multiplication. ● Perimeter is a linear measure and area is a square measure	● What types of problems involve area? ● Why do we need to measure the area of a surface? ● How do I know which mathematical operation (+, -, x, ÷) to use? ● How do mathematical operations relate to each other?
STUDENT LEARNING OBJECTIVES (Students are learning to / Students are learning that)	
Students are learning to/that… ● A square with side length 1 unit, called “a unit square,” is said to have ‘one square unit of area. ● A unit square can be used to measure area. ● Area is an attribute of a plane figure. ● The number of *n* square units covering a plane figure without gaps or overlaps, determines its area. ● Measure area by counting unit squares including square cm, square m, square in, square ft, and nonstandard units. ● Find the area of a rectangle with whole-number side lengths by tiling it. ● Show that a tiled area is the same as can be found by multiplying the side lengths. ● Multiply side lengths of rectangles to find areas in the context of real world and mathematical problems. ● Represent whole-number products and rectangular areas. ● Multiply and divide within 100 using strategies such as the relationship between multiplication and division or properties of operations (working towards accuracy and efficiency). ● Use tiling to show the area of a rectangle with whole-number side lengths, *a* and *b* + *c*, is composed of two additive areas, *a* × *b* and *a* × *c*.	

- Use area models to represent and explain the distribution property by using mathematical reasoning.
- Apply properties of operations (distributive property & associative property) as strategies to multiply.
- Multiply one-digit whole numbers by multiples of 10 in the range 10 to 90 using strategies based on place value and properties of operations.
- Recognize area as additive by finding areas of rectangles and rectilinear figures.
- Decompose rectilinear figures into non-overlapping rectangles and find their areas to solve real world problems.
- Add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction (working towards accuracy and efficiency).

SUGGESTED ACTIVITIES

- Learning Centers
- Manipulatives
- Interactive websites, including but not limited to:
    - Khan Academy
    - ST Math
    - SplashLearn
    - IXL
- 3.OA.A.3 Two Interpretations of Division
- 3.OA.B.5 Valid Equalities? (Part 2)
- 3.MD.C.7c Introducing the Distributive Property
- 3.OA.C.7 Kiri's Multiplication Matching Game
- 3.OA.D.8 The Class Trip
- 3.OA.D.9 Addition Patterns
- 3.NF.A.1 Naming the Whole for a Fraction
- 3.G.A.2 Representing Half of a Circle

EVIDENCE OF LEARNING

Formative Assessments:	**Summative Assessment:**
Classroom Discussion Exit Slip Checklists Math Boxes Peer Assessment Rubrics Participation and teacher observation Mini Whiteboard Responses Think-Pair-Share Classroom Poll 100 Facts (+, -, x)	Unit Tests End-of-Book Test NJSLA Test
Benchmark Assessment: Star 360 Benchmark Unit Benchmarks	**Alternative Assessments:** Project

INSTRUCTIONAL RESOURCES		
Core Instructional Resource: enVision	**Leveled Texts:** “The Doorbell Rang”	**Supplemental Resources:** ST Math IXL Khan Academy Kahoot Choice Boards

INTEGRATED ACCOMMODATIONS AND MODIFICATIONS

Special Education:
Provide modified notes and access to extra copies online
Provide oral reminders and check student work during independent work time
Model skills/techniques to be mastered
Check and sign assignment planner
Preferential seating
Pair visual prompts with verbal presentations
Modified or scaffolded homework and classwork
Extended time as needed
Provide graphic organizers and study guides

English Learners:
Provide scaffolded assignments and assessments
Pair visual prompts with visual presentations
Check and sign assignment planner
Native Language translation (peer, online assistive technology, translation device, bilingual dictionary)
Extended time for assignment and assessment as needed
Highlight key vocabulary
Use graphic organizers
Provide verbal and written directions
Preferential seating with a English-speaking peer

At Risk of Failure:
Check and sign assignment planner
Encourage class participation and reinforce skills
Model skills and assignments
Extended to time to complete class work
Preferential seating
Provide extra help outside of class and 1:1 instruction when needed
Communicate regularly with students’ other teachers
Provide positive feedback for tasks well done
Encourage student to proofread assessments and projects and ask for teacher proofreading of large writing assignments

Gifted and Talented:

Pose higher-level thinking questions
Provide higher level reading and writing materials for literacy based activities
Probe student to extend thinking beyond the text or connect two or more texts
Provide alternate or project-based assessments and assignments

Students with 504 Plans
Provide extended time as needed
Modify length of writing assignment
Provide short breaks within the lesson
Provide scaffolding for students
Utilize graphic organizers

UNIT
Unit 3: Introductory Fraction Concepts
UNIT SUMMARY
In this unit, students will learn about the foundational fraction concepts. Building on Grade 2 concepts, students will partition circles and rectangles into two, three, or four equal shares, using the words halves, thirds, or fourths. Students will partition shapes into parts with equal areas. They come to understand unit fractions as quantities formed by

separating a whole into equal parts. They use visual fraction models to represent simple fractions, generate simple equivalent fractions, and compare two fractions by reasoning about their size. Students also come to understand fractions as numbers by placing them on the number line, and that all fractions are built from unit fractions.

In addition to fraction concepts, this unit integrates solving word problems involving telling and writing time to the nearest minute, measuring length using rulers and representing the data on line plots, solving two-step word problems using the four operations, and working towards accurately and efficiently adding and subtracting within 1000.

NEW JERSEY STUDENT LEARNING STANDARDS MATHEMATICS

Module A:

3.NF.A.1 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 part of size 1/*b*.

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 ¼ of the area of the shape.*

Module B:

3.MD.A.1 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.

Module C:

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.

a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
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.*
d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two

fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <.

3.MD.B.4 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.

Module D:

3.OA.D.8 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.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

INTERDISCIPLINARY CONNECTIONS

New Jersey Student Learning Standards- English Language Arts:

RI.3.1. Ask and answer questions, and make relevant connections to demonstrate standing of a text, referring explicitly to the text as the basis for the answers.

RI.3.2. Determine the main idea of a text; recount the key details and explain how they support ain idea.

RI.3.3. Describe the relationship between a series of historical events, scientific ideas or pts, or steps in technical procedures in a text, using language that pertains to time, sequence, ause/effect.

RI.3.8. Describe the logical connection between particular sentences and paragraphs in a text comparison, cause/effect, first/second/third in a sequence) to support specific points the author s in a text.

New Jersey Student learning Standards- Social Studies 2020:

6.1.4.B.1. Compare and contrast information that can be found on different types of maps and determine how the information may be useful.

New Jersey Student Learning Standards- Science 2020:

3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

3-ESS2-2. Obtain and combine information to describe climates in different regions of the World.

3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.

New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills (2020)

9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions

9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to d one's thinking about a topic of curiosity
9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process
9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem
9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view
9.4.5.IML.2: Create a visual representation to organize information about a problem or issue

2020 New Jersey Student Learning Standards – Computer Science and Design Thinking
8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

21st CENTURY LIFE AND CAREER STANDARDS

Career Readiness, Life Literacies, and Key Skills Practices describe the habits of the mind that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success.

1. Act as a responsible and contributing community member and employee.
2. Attend to financial well-being.
3. Consider the environmental, social and economic impacts of decisions.
4. Demonstrate creativity and innovation.
5. Utilize critical thinking to make sense of problems and persevere in solving them.
6. Model integrity, ethical leadership and effective management.
7. Plan education and career paths aligned to personal goals.
8. Use technology to enhance productivity, increase collaboration and communicate effectively.
9. Work productively in teams while using cultural global competence.

9.1: Personal Financial Literacy	**9.2: Career Awareness, Exploration & Preparation,**	**9.3: Career and Technical Education**

S. Civic Responsibility T. Financial Institutions U. Financial Psychology V. Planning and Budgeting W. Risk Management and Insurance X. Civic Financial Responsibility Y. Credit Profile Z. Economic and Government Influences AA. Credit and Debt Management	**and Training** M. Career Awareness (K-2) **N. Career Awareness and Planning (3-5)** O. Career Awareness and Planning (6-8) P. Career Awareness and Planning (9-12) **9.4 Life Literacies and Key Skills** A. Creativity and Innovation **B Critical Thinking and Problem-solving** C. Digital Citizenship D. Global and Cultural Awareness Q. Information and Media Literacy R. Technology Literacy	GG. Agriculture HH. Architecture II. Arts,A/V, Technology JJ. Business Management KK. Education LL. Finance MM. Government NN. Health Science OO. Hospital & Tourism PP. Human Services QQ. Information Tech. RR. Law and Public Safety SS. Manufacturing TT. Marketing **UU. Science, Technology, Engineering & Math** VV. Trans./Logistics

TECHNOLOGY STANDARDS	
8.1: Computer Science A. Computing systems B. Networks and the Internet C. Impacts of Computing **D. Data & Analysis** E. Algorithms & Programming	**8.2 Design Thinking** A. Engineering Design B. Interaction of Technology and Humans **C. Nature of Technology** D. Effects of Technology on the Natural World E. Ethics & Culture
ENDURING UNDERSTANDINGS	**ESSENTIAL QUESTIONS**
Student will understand that: ● the number one can be broken down into fractional parts that are also numbers ● the place that a digit is located assigns a value to that digit. ● the hour hand moves with the minute hand when telling time. ● word problems may have multi-step operations	● Why is place value important? ● Why do we need fractions? ● Why is it important to tell time to the minute? ● How can you recognize which operation to use in a word problem?

STUDENT LEARNING OBJECTIVES (Students are learning to / Students are learning that)

Students are learning to/that…

- Partition shapes into parts with equal areas.
- Express the area of each part as a unit fraction of the whole.
- A fraction is a quantity formed when a whole is partitioned into equal parts where a unit fraction (*1/b*) is the quantity formed by 1 part when a whole is partitioned into *b* equal parts. (For example, ¼ is the quantity that is formed by 1 part of the 4 total parts when the whole is partitioned into 4 equal parts).
- A fraction *a/b* as the quantity formed by *a* part, where each part has a size of *1/b*. (For example, ¾ is the quantity that is formed by 3 parts of the 4 total parts where each part has a size of ¼.)
- 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.
- Fractions are numbers and can be found or represented on the number line.
- Represent and recognize 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 and that the endpoint of the part based at 0 locates the number *1/b* on the number line.
- Represent and recognize a fraction *a/b* on a number line diagram by marking off a lengths *1/b* from 0 and that its endpoint locates the number *a/b* on the number line.
- Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch.
- Make a line plot showing measurement data, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
- Compare fractions by reasoning about their size.
- Two fractions are equivalent (equal) if they are the same size, or the same point on a number line.
- Recognize and generate simple equivalent fractions.
- Explain why two fractions are equivalent by using a visual fraction model.
- Express whole numbers as fractions.
- Recognize fractions that are equivalent to whole numbers.
- Compare two fractions with the same numerator or the same denominator by reasoning about their size.
- Solve two-step word problems using the four operations.
- Represent two-step word problems using equations with a letter standing for the unknown quantity.
- Assess the reasonableness of answers in two-step word problems using mental computation and estimation strategies including rounding.
- Round whole numbers to the nearest 10 or 100, using place value understanding.
- Add within 1000 with accuracy and efficiency using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Subtract within 1000 with accuracy and efficiency using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

SUGGESTED ACTIVITIES

- Learning Centers
- Manipulatives
- Interactive websites, including but not limited to:
    - Khan Academy
    - ST Math
    - SplashLearn
    - IXL
- 3.NF.A.2 Closest to 1/2
- 3.NF.A.2 Find 1 Starting from 5/3
- 3.NF.A.2 Locating Fractions Greater than One on the Number Line
- 3.NF.A.3b, 3.G.A.2, 3.MD.C.6 Halves, thirds, and sixths
- 3.MD.A.1 Dajuana's Homework
- 3.MD.A.2 How Heavy?
- 3.MD.D Shapes and their Insides

EVIDENCE OF LEARNING

Formative Assessments:	**Summative Assessment:**
Classroom Discussion Exit Slip Checklists Math Boxes Peer Assessment Rubrics Participation and teacher observation Mini Whiteboard Responses Think-Pair-Share Classroom Poll 100 Facts (+, -, x)	Unit Tests End-of-Book Test NJSLA Test
Benchmark Assessment: Star 360 Benchmark Unit Benchmarks	**Alternative Assessments:** Project

INSTRUCTIONAL RESOURCES

Core Instructional Resource:	**Teacher Created materials:**	**Supplemental Resources:**
enVision	Nearpod Presentations	ST Math IXL Khan Academy Kahoot Choice Boards

INTEGRATED ACCOMMODATIONS AND MODIFICATIONS

Special Education:

Provide modified notes and access to extra copies online
Provide oral reminders and check student work during independent work time
Model skills/techniques to be mastered
Check and sign assignment planner
Preferential seating
Pair visual prompts with verbal presentations
Modified or scaffolded homework and classwork
Extended time as needed
Provide graphic organizers and study guides

English Learners:
Provide scaffolded assignments and assessments
Pair visual prompts with visual presentations
Check and sign assignment planner
Native Language translation (peer, online assistive technology, translation device, bilingual dictionary)
Extended time for assignment and assessment as needed
Highlight key vocabulary
Use graphic organizers
Provide verbal and written directions
Preferential seating with a English-speaking peer

At Risk of Failure:
Check and sign assignment planner
Encourage class participation and reinforce skills
Model skills and assignments
Extended to time to complete class work
Preferential seating
Provide extra help outside of class and 1:1 instruction when needed
Communicate regularly with students' other teachers
Provide positive feedback for tasks well done
Encourage student to proofread assessments and projects and ask for teacher proofreading of large writing assignments

Gifted and Talented:
Pose higher-level thinking questions
Provide higher level reading and writing materials for literacy based activities
Probe student to extend thinking beyond the text or connect two or more texts
Provide alternate or project-based assessments and assignments

Students with 504 Plans
Provide extended time as needed
Modify length of writing assignment
Provide short breaks within the lesson
Provide scaffolding for students
Utilize graphic organizers

UNIT
Unit 4: Spatial Reasoning and Fluency with Operations
UNIT SUMMARY
In the final unit, skills are centered on problem solving with geometry and measurement. Students will measure and estimate liquid volumes and masses. They use the four operations to solve one-step mass or volume word problems. Building upon previous geometry content from earlier grades, they categorize shapes based on shared attributes. Learners solve real world and mathematical problems involving perimeters of polygons. Learners represent data with scaled graphs, and solve one- and two-step word problems using information presented in scaled graphs. To conclude the year, learners revisit addition and subtraction within 1000, and multiplication and division within 100 to demonstrate accurate and efficient use of strategies (fluency).
NEW JERSEY STUDENT LEARNING STANDARDS MATHEMATICS
Module A: **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.

Module B:

3.G.A.1 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.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Module C:

3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

Module D:

3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.OA.D.8 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.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

INTERDISCIPLINARY CONNECTIONS

New Jersey Student Learning Standards- English Language Arts:

RI.3.1. Ask and answer questions, and make relevant connections to demonstrate standing of a text, referring explicitly to the text as the basis for the answers.

RI.3.2. Determine the main idea of a text; recount the key details and explain how they support ain idea.

RI.3.3. Describe the relationship between a series of historical events, scientific ideas or pts, or steps in technical procedures in a text, using language that pertains to time, sequence, ause/effect.

RI.3.8. Describe the logical connection between particular sentences and paragraphs in a text comparison, cause/effect, first/second/third in a sequence) to support specific points the author s in a text.

New Jersey Student learning Standards- Social Studies 2020:

6.1.4.B.1. Compare and contrast information that can be found on different types of maps and determine how the information may be useful.

New Jersey Student Learning Standards- Science 2020:
3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
3-ESS2-2. Obtain and combine information to describe climates in different regions of the World.
3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

New Jersey Student Learning Standards: Career Readiness, Life Literacies and Key Skills (2020)
9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions
9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to add one's thinking about a topic of curiosity
9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process
9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem
9.4.5.GCA.1: Analyze how culture shapes individual and community perspectives and points of view
9.4.5.IML.2: Create a visual representation to organize information about a problem or issue

2020 New Jersey Student Learning Standards – Computer Science and Design Thinking
8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

21st CENTURY LIFE AND CAREER STANDARDS

Career Readiness, Life Literacies, and Key Skills Practices describe the habits of the mind that all educators in all content areas should seek to develop in their students. They are

practices that have been linked to increase college, career, and life success.

1. Act as a responsible and contributing community member and employee.
2. Attend to financial well-being.
3. Consider the environmental, social and economic impacts of decisions.
4. Demonstrate creativity and innovation.
5. Utilize critical thinking to make sense of problems and persevere in solving them.
6. Model integrity, ethical leadership and effective management.
7. Plan education and career paths aligned to personal goals.
8. Use technology to enhance productivity, increase collaboration and communicate effectively.
9. Work productively in teams while using cultural global competence.

9.1: Personal Financial Literacy	**9.2: Career Awareness, Exploration & Preparation, and Training**	**9.3: Career and Technical Education**
BB. Civic Responsibility CC. Financial Institutions DD. Financial Psychology EE. Planning and Budgeting FF. Risk Management and Insurance GG. Civic Financial Responsibility HH. Credit Profile II. Economic and Government Influences JJ. Credit and Debt Management	S. Career Awareness (K-2) **T. Career Awareness and Planning (3-5)** U. Career Awareness and Planning (6-8) V. Career Awareness and Planning (9-12) **9.4 Life Literacies and Key Skills** A. Creativity and Innovation **B Critical Thinking and Problem-solving** C. Digital Citizenship D. Global and Cultural Awareness W. Information and Media Literacy X. Technology Literacy	WW. Agriculture XX. Architecture YY. Arts,A/V, Technology ZZ. Business Management AAA. Education BBB. Finance CCC. Government DDD. Health Science EEE. Hospital & Tourism FFF. Human Services GGG. Information Tech. HHH. Law and Public Safety III. Manufacturing JJJ. Marketing **KKK. Science, Technology, Engineering & Math** LLL. Trans./Logistics

TECHNOLOGY STANDARDS

8.1: Computer Science	**8.2 Design Thinking**
A. Computing systems B. Networks and the Internet C. Impacts of Computing **D. Data & Analysis** E. Algorithms & Programming	A. Engineering Design B. Interaction of Technology and Humans **C. Nature of Technology** D. Effects of Technology on the Natural World

	E. Ethics & Culture
ENDURING UNDERSTANDINGS	**ESSENTIAL QUESTIONS**
Student will understand that: ● objects can be measured by different standards of units. ● shapes are categorized by their attributes. ● real world and mathematical problems can be interrelated	● How can we identify different types of quadrilaterals? ● How can finding the perimeter of a shape relate to real world problems? ● How can you recognize which operation to use in a word problem?
STUDENT LEARNING OBJECTIVES (Students are learning to / Students are learning that)	
Students are learning to/that… ● 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. ● Shapes (quadrilaterals) in different categories may share attributes, and that the shared attributes can define a larger category. ● Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. ● Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths and unknown side lengths when given the perimeter. ● Solve real world and mathematical problems involving exhibiting rectangles with the same perimeter/different areas or with the same area/different perimeters. ● Draw a scaled picture graph and/or bar graph to represent a data set with several categories. ● Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. ● Solve two-step word problems using the four operations. ● Represent two-step word problems using equations with a letter standing for the unknown quantity. ● Assess the reasonableness of answers in two-step word problems using mental computation and estimation strategies including rounding. ● Round whole numbers to the nearest 10 or 100, using place value understanding. ● Add and subtract within 1000 with accuracy and efficiency by using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. ● Multiply and divide within 100 using strategies such as: relationship between multiplication and division or properties of operations with accuracy and efficiency. ● Know from memory all products of two one-digit numbers.	
SUGGESTED ACTIVITIES	

- Learning Centers
- Manipulatives
- Interactive websites, including but not limited to:
    - Khan Academy
    - ST Math
    - SplashLearn
    - IXL
- 3.MD.C.7d Three Hidden Rectangles
- 3.OA.D.8 The Stamp Collection
- 3.NBT.A.2, 3.MD.B.3, 3.OA.A.3 Classroom Supplies

EVIDENCE OF LEARNING

Formative Assessments:	**Summative Assessment:**
Classroom Discussion Exit Slip Checklists Math Boxes Peer Assessment Rubrics Participation and teacher observation Mini Whiteboard Responses Think-Pair-Share Classroom Poll 100 Facts (+, -, x)	Unit Tests End-of-Book Test NJSLA Test
Benchmark Assessment: Star 360 Benchmark Unit Benchmarks	**Alternative Assessments:** Project

INSTRUCTIONAL RESOURCES

Core Instructional Resource:	**Leveled Texts:**	**Supplemental Resources:**
enVison	“The Greedy Triangle”	ST Math IXL Khan Academy Kahoot Choice Boards

INTEGRATED ACCOMMODATIONS AND MODIFICATIONS

Special Education:
Provide modified notes and access to extra copies online
Provide oral reminders and check student work during independent work time
Model skills/techniques to be mastered
Check and sign assignment planner
Preferential seating
Pair visual prompts with verbal presentations

Modified or scaffolded homework and classwork
Extended time as needed
Provide graphic organizers and study guides

English Learners:
Provide scaffolded assignments and assessments
Pair visual prompts with visual presentations
Check and sign assignment planner
Native Language translation (peer, online assistive technology, translation device, bilingual dictionary)
Extended time for assignment and assessment as needed
Highlight key vocabulary
Use graphic organizers
Provide verbal and written directions
Preferential seating with a English-speaking peer

At Risk of Failure:
Check and sign assignment planner
Encourage class participation and reinforce skills
Model skills and assignments
Extended to time to complete class work
Preferential seating
Provide extra help outside of class and 1:1 instruction when needed
Communicate regularly with students' other teachers
Provide positive feedback for tasks well done
Encourage student to proofread assessments and projects and ask for teacher proofreading of large writing assignments

Gifted and Talented:
Pose higher-level thinking questions
Provide higher level reading and writing materials for literacy based activities
Probe student to extend thinking beyond the text or connect two or more texts
Provide alternate or project-based assessments and assignments

Students with 504 Plans
Provide extended time as needed
Modify length of writing assignment
Provide short breaks within the lesson
Provide scaffolding for students
Utilize graphic organizers