Stafford Township School District

Mathematics Curriculum
Grade 5

Adopted: 08/17/2017
Updated: 01/06/2020, 08/03/2021 (enVisions)

Statement of Purpose

The New Jersey Student Learning Standards for Mathematics challenges us to ensure focus, coherence, and rigor in our mathematics curriculum across all elementary grade levels. Additionally, through the Standards for Mathematical Practice, students are encouraged to develop the application of math skills while solving real world problems.

To gain a greater focus, the standards place an emphasis on fewer skills, deepening and strengthening the foundations, thus providing students with the knowledge to apply the skills to situations inside and outside of the classroom. Grades 3 – 5 focus on concepts, skills and problem solving related to multiplication and division of whole numbers and fractions. Within our curriculum, focus is maintained by building students' conceptual skills while developing the deeper understanding and real world application.

Coherence is supported by the alignment of the curriculum, instruction, and assessments. The repeated domains, within the standards, progress through the elementary grades to allow for developmentally appropriate attainment of learning outcomes. The curriculum's suggested pacing allows for the important balance of developing conceptual understanding and procedural skills. Instructional decisions are guided by the use of Board approved resources, problem-based learning and real-world applications that incorporate technology and the 21st century skills.

Rigor, as addressed in the standards, has three main components: conceptual understanding, procedural skills and fluency, and application. The curriculum has been designed with this in mind; there is a progression of skills that guide students from the conceptual phase to the application component. Each understanding of the concepts applies to a relevant, real world experience. The Standards for Mathematical Practice guide educators in helping students develop "processes and proficiencies" through problem solving, reasoning and proof, communication, representations, and connections, adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition. From these standards, each instructional cycle focuses on a few to enable students to develop deeper understanding.

The Standards for Mathematical Practice describe ways in which developing student practitioners, of the discipline of

mathematics, increasingly promote engagement with the subject matter as they grow in mathematical maturity and expertise. This is supported through the scope and sequence of the curriculum.

Primary Interdisciplinary Connections: Science, Social Studies, Language Arts, Technology, and 21st Century Life and Careers. For further clarification see New Jersey Student Learning Standards at http://www.nj.gov/education/cccs/

21st Century Themes: Through instruction in life and career skills, all students acquire the knowledge and skills needed to prepare for life as citizens and workers in the 21st century. For further clarification see http://www.nj.gov/education/aps/cccs/career/

Grade 5 Overview

Operations and Algebraic Thinking

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

Number and Operations in Base Ten

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations- Fractions

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Measurement and Data

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

Mathematical Practices

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

Supporting Mathematical Practices through Questioning

Practice 1: Make sense of problems and persevere in solving them	● What is the problem asking? ● How will you use that information? ● What other information do you need? ● Why did you choose that operation? ● What is another way to solve that problem? ● What did you do first? Why? ● What can you do if you don't know how to solve a problem? ● Have you solved a problem like this one? ● When did you realize your first method would not work? ● How do you know your answer makes sense?
Practice 2: Reason abstractly and quantitatively	● What is a situation that could be represented by this equation? ● What operation did you use to represent the situation ● Why does that operation represent the situation? ● What properties did you use to find the answer? ● How do you know the answer is reasonable?
Practice 3: Construct viable arguments and critique the reasoning of others	● Will that method always work? ● How do you know? ● What do you think about what the other student said? ● Who can tell us about a different method? ● What do you think will happen if …? ● When would that not be true? ● Why do you agree/disagree with what the other student said? ● What do you want to ask the other student about that method? ● How does that drawing support your work?
Practice 4: Model with mathematics	● Why is that a good model for this problem? ● How can you use a simpler problem to help you find the answer? ● What conclusions can you make from your model? ● How would you change your model if…?

Practice 5: Use appropriate tools strategically	● What could you use to help you solve the problem? ● What strategy could you use to make the calculation easier? ● How would estimation help you solve that problem? ● Why did you decide to use…?
Practice 6: Attend to precision	● How do you know your answer is reasonable? ● How can you use math vocabulary in your answer? ● How do you know those answers are equivalent? ● What does that mean?
Practice 7: Look for and make use of structure	● How did you discover the pattern? ● What other patterns can you find? ● What rule did you use to make this group? ● Why can you use that property in this problem? ● How is that like…?
Practice 8: Look for and express regularity in repeated reasoning	● What do you remember about…? ● What happens when…? ● What if you...instead of…? ● What might be a shortcut for…?

Mathematical Practices Rubric

Mathematical Practice	4	3	2	1
MP #1	Made sense of problems, evaluated approaches, and persevere in solving them.	Made sense of problems and persevere in solving them.	Made sense of problems.	With support, made sense of problems.
MP #2	Dug deeply into a problem to analyze and reason abstractly and quantitatively.	Reasoned abstractly and quantitatively.	Represented a complex problem mathematically.	Represented a basic problem mathematically.
MP #3	Analyzed situations, breaking them into cases and building a logical argument with counter-examples. Communicated ideas and responded to others. Provided critique and feedback to others.	Constructed viable arguments and critique the reasoning of others.	Constructed viable arguments.	Compared arguments.
MP #4	Analyzed complex relationships mathematically to solve problems.	Made assumptions and approximations to simplify complex problems.	Applied reasoning to plan an event or solve a problem.	Wrote an equation to describe a situation.
MP #5	Used appropriate tools strategically to solve problems and display solutions.	Used appropriate tools strategically.	Identified available tools to solve a problem and when to use them.	Identified available tools to solve a problem.

MP #6	Attends to precision and details when calculating and communicating. Examined details of claims and made explicit use of definitions.	Attends to precision and details when calculating and communicating.	Where accurate when calculating and communicating.	Where clear when calculating and communicating.
MP #7	Recognized complex patterns and could see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. Applied patterns to solve problems.	Recognized complex patterns and used those to solve problems.	Recognized complex patterns.	Recognized patterns.
MP #8	Maintained oversight of the whole process while paying attention to details. Continued to evaluate the reasonableness of intermediate results.	Looked for and expressed regularity in repeated reasoning. Found general methods or shortcuts.	Found methods that can be used in multiple applications.	Identified efficient methods in solving some problems.

Operations and Algebraic Thinking	**Topics 13 &15: Duration: April-May 15 Days**
Standards	
5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
5.OA.A.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.
5.OA.B.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting* number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.
	Interdisciplinary Connections
	Language Arts Standards
SL.5.1.A	Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion.
SL.5.1.B	Follow agreed-upon rules for discussions and carry out assigned roles.
	Technology Standards
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
	21st Century Life and Careers Century Life and Career Skills: 21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace. http://www.state.nj.us/education/aps/cccs/career/

	9.1 Personal Financial Literacy This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers. **9.2 Career Awareness, Exploration, and Preparation** This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. **9.3 Career and Technical Education** This standard outlines what students should know and be able to do upon completion of a CTE Program of Study. **Career Ready Practices** CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Essential Understandings	**Essential Questions**
Students will understand that… ● Any number, measure, numerical or algebraic expression, or equation can be represented in a variety of ways that have the same value. ● The four operations are interrelated, and the properties of each may be used to understand the others.	● How are numerical expressions written and interpreted? ● What are ways to analyze patterns to identify relationships? ● In what order must operations be evaluated to find the solution of a problem?
Evidence of Student Learning	
Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**

● Create a coordinate town ● Mathematical Me project using order of operations equations STEM **Theme: Analyze Patterns** The first official skyscraper was built in Chicago in 1884 and had10 stories. It was the first building to use structural steel as its frame, in addition to iron. The Burj Khalifa in Dubai is the tallest skyscraper today, with 209 floors. Explain that using steel for the inner frame of a building allows for the outside of a building to have more windows. Most buildings use a pattern of glass and concrete for the outer walls today.	**Formative Assessments** ● Oral Questioning ● Partners ● Student Conference ● Self-Assessment ● Think-Pair-Share ● Hand Signals ● Peer Reflections ● Constructive Response ● Teacher Observation ● Exit Slip ● Class work **Summative Assessments** ● Quizzes ● Tests ● Unit Projects ● Presentations ● District Benchmarks ● State Assessment **Benchmark Assessment** ● enVisions Benchmark Assessment ● iReady Benchmark Assessment **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Chapter Tests ● Modified/Teacher Created Mid-Chapter Quiz ● Visual Representation of Skills Assess ● Modified Classwork Assignments

<table>
<tr><td></td><td>

- Modified Benchmarks
- EnVision Reteach Activities and Worksheets
- Project Based Assessments with Scoring Rubric

</td></tr>
<tr><td colspan="2">Math Practice</td></tr>
<tr><td colspan="2">MP3 Construct viable arguments and critique the reasoning of others.
MP6 Attend to precision.
MP7 Look for and make use of structure
MP8 Look for and express regularity in repeated reasoning.</td></tr>
<tr><td colspan="2">Vocabulary</td></tr>
<tr><td colspan="2">Numerical Expression, Evaluate, Order of Operations ,Parenthesis, Brackets, Braces, corresponding terms, number sequence</td></tr>
<tr><td colspan="2">Knowledge and Skills</td></tr>
<tr><td>Content</td><td>Skills</td></tr>
<tr><td>Write and interpret numerical expressions.

Analyze patterns and relationships.

Students will know…

- How to write and interpret numerical expressions.
- How to analyze patterns and relationships.

</td><td>Students will be able to …

- Use properties of operations to solve problems
- Use order of operations to solve problems
- Write and graph ordered pairs on a coordinate grid

</td></tr>
<tr><td colspan="2">Instructional Plan</td></tr>
<tr><td>Suggested Activities</td><td>Resources</td></tr>
<tr><td>Math Fact Bump - Students will use a multiplication bump board and will roll dice to try to get as many of their pieces on the board as they can. Students roll two dice and multiply the numbers on the dice together. The student then places their game piece on the product of their two</td><td>Bump Boards, dice (2 six-sided or 2 ten-sided), timer (to set how long students will play with their partner)</td></tr>
</table>

dice. Next, the student's partner does the same thing, and they continue to take turns for the given amount of time they have. The student with the most number of pieces on the board wins when the time is up.	
enVision Topic 13 "Pick A Project" Choice Activities - Students will choose a project to practice whole numbers and decimals written, compared, and ordered ● *Project 13A –The Wreck of the Atocha:* Students will write a Treasure Adventure Mystery Story. ● *Project 13B –Origin of the Games:* Students will design a Game Using Dominoes. ● *Project 13C –Proper Procedures:* Students will program a Robot.	enVision Pick a Project Descriptions and Materials (listed below): ● Project 13A: paper, pencil ● Project 13B: double-six dominos, sticky notes or sticky nametags, paper, pencil ● Project 13C: paper, internet
enVision Topic 15 "Pick A Project" Choice Activities - Students will choose a project to practice whole numbers and decimals written, compared, and ordered ● *Project 15A –Piano Keyboard:* Students will learn more About Keyboards and look for patterns ● *Project 15B –Gopher Tortoises:* Students will write word problems that involve patterns. ● *Project 15C –String Art:* Students will make a pattern design with string and a paper plate/square cardboard.	enVision Pick a Project Descriptions and Materials (listed below): ● Project 15A: poster board, markers ● Project 15B: paper, pencil ● Project 15C: Paper plate or square piece of cardboard, string, scissors, markers
Math Literature	
Textbook: *enVision Mathematics Common Core*, Savvas Learning Company LLC., 2020 *Jim and the Beanstalk* by Raymond Briggs *Spaghetti and Meatballs for All! A Mathematical Story* by Marilyn Burns	
Websites	
Interactive arithmetic lessons Online resources Online videos	www.aaamath.com https://www.education.com/resources/fifth-grade/math/ www.flocabulary.com

Interactive games Games, powerpoint, instructional aides enVision Digital Math Tools & Manipulatives	www.kahoot.com http://internet4classrooms.com/ https://media.pk12ls.com/curriculum/math/Tools/MTindex.html
Accommodations and Modifications	
Basic Skills ● 1:1 ● Grab and Go centers ● Repeating Directions ● Small Group ● Manipulatives ● Interactive Notes ● Reteach/Enrichment Pages for each lesson (RTI)	
Economically Disadvantaged ● 1:1 ● Grab and Go centers ● Repeating Directions ● Small Group ● Manipulatives ● Interactive Notes ● Reteach/Enrichment Pages for each lesson (RTI)	
Gifted and Talented • Open ended/abstract questions to activate higher level thinking • Alternative modes of communication • Student developed extension activities • Plan self-directed inquiry	
English Language Learners ● Elicit Prior Knowledge ● Rephrase ● Understand Context ● Scaffold Language	

- Restate
- Cooperative Grouping
- Peer Buddy

Special Education/504 Plans

- One on one instruction
- Adaptive devices
- Provide differentiated instruction as needed
- Follow all IEP modifications/504 plan
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

Students at Risk of Failure:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Give choice to provide a sense of control

Number and Operations in Base Ten	**Topics 1-6, Duration: September-December 60 DAYS**
Standards	
5.NBT.A.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.
5.NBT.A.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
5.NBT.A.3	Read, write, and compare decimals to thousandths.
5.NBT.A.3.A	Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).
5.NBT.A.3.B	Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
5.NBT.A.4	Use place value understanding to round decimals to any place.
5.NBT.B.5	Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
5.NBT.B.6	Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
5.NBT.B.7	Add, subtract, multiply, and divide decimals to hundredths, 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 and explain the reasoning used.

	Interdisciplinary Connections
	Language Arts Standards
SL.5.1.A	Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion.
SL.5.1.B	Follow agreed-upon rules for discussions and carry out assigned roles.
	Technology Standards
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
	21st Century Life and Careers Century Life and Career Skills: 21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace. http://www.state.nj.us/education/aps/cccs/career/ **9.1 Personal Financial Literacy** This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers. **9.2 Career Awareness, Exploration, and Preparation** This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. **9.3 Career and Technical Education** This standard outlines what students should know and be able to do upon completion of a CTE Program of Study. **Career Ready Practices** CRP2. Apply appropriate academic and technical skills.

	CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Essential Understandings	**Essential Questions**
Students will understand that… ● numeric fluency includes both the understanding of and the ability to appropriately use numbers ● Computational fluency includes understanding not only the meaning, but also the appropriate use of numerical operations and place value. ● Formulate, represent and use algorithms to add, subtract, multiply and divide whole numbers, decimals and percents with accuracy and efficiency. ● The magnitude of numbers affects the outcome of operations on them.	● How can place value understanding help us compare, order, and round whole numbers and decimals? ● How can we apply and extend previous understandings of adding and subtracting decimals? ● What algorithms are used to easily multiply and divide whole numbers and decimals? ● How can we decide what operation to use when presented with a problem? ● How can you describe the relationship between two place value positions? ● How do you read, write and represent numbers?

Evidence of Student Learning

Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**
STEM **Theme: Pollinating Insects** Have students estimate the number of insects there are for all the people in their household, for the class, and for the entire school. Help students organize and record their data in a chart. Remind students that many flowering plants rely on insect pollination.	**Formative Assessments** ● Oral Questioning ● Partners ● Student Conference ● Self-Assessment ● Think-Pair-Share

STEM **Theme: Producers and Consumer** A food web connects all living things. Without each producer, consumer, and decomposer, the food web falls apart and eventually everything is affected. Explain that consumers that eat only plants are called herbivores, consumers that eat only other animals are called carnivores, and consumers that eat both are called omnivores.	● Hand Signals ● Peer Reflections ● Constructive Response ● Teacher Observation ● Exit Slip ● Class work **Summative Assessments** ● Quizzes ● Tests ● Unit Projects ● Presentations ● District Benchmarks ● State Assessment **Benchmark Assessment** ● iReady Benchmark Assessment **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Chapter Tests ● Modified/Teacher Created Mid-Chapter Quiz ● Visual Representation of Skills Assess ● Modified Classwork Assignments ● Modified Benchmarks ● EnVision Reteach Activities and Worksheets ● Project Based Assessments with Scoring Rubric
Mathematical Practice	
MP3 Construct viable arguments and critique the reasoning of others. MP6 Attend to precision.	

<table>
<tr><td colspan="2">MP7 Look for and make use of structure
MP8 Look for and express regularity in repeated reasoning.</td></tr>
<tr><td colspan="2">Vocabulary</td></tr>
<tr><td colspan="2">Power Exponent, Expanded Form, Base Value, Thousandths, Equivalent Decimals, Compatible Numbers, Associative Property of Addition, Commutative Property of Addition, Compensation, underestimate, overestimate, partial products, variable</td></tr>
<tr><td colspan="2">Knowledge and Skills</td></tr>
<tr><td>Content</td><td>Skills</td></tr>
<tr><td>Understand the place value system.
Perform operations with multi-digit whole numbers and with decimals to hundredths.

Students will know…
● To understand the place value system to the thousandths.
● How to perform operations with multi-digit whole numbers and with decimals to hundredths.</td><td>Students will be able to …
● Multiply multi-digit numbers and decimals
● Divide and estimate quotients using whole numbers
● Compare, round, add and subtract decimal to the thousandths place
● Divide Decimals</td></tr>
<tr><td colspan="2">Instructional Plan</td></tr>
<tr><td>Suggested Activities</td><td>Resources</td></tr>
<tr><td>Number sense game - Players draw 4 cards, place the cards in place value order to try to create the largest 4-digit number. Whoever created the largest 4-digit number wins the round.</td><td>Math number cards</td></tr>
<tr><td>Place Value game- Students will participate in a game that demonstrates their knowledge of place value. In two teams, students will send one person at a time to come to the board, where they will place sentence strips over numbers identifying the correct place value. Students will work as a team to complete a 4+ digit number with correct place values.</td><td>Sentence strips with place value names written on them, magnets for the back of sentence strips, white board, expo markers</td></tr>
</table>

Vocabulary Activity - Students will compare and contrast vocabulary words that they can use as clues to determine if they are solving an addition or subtraction word problem. A t-chart or venn diagram can be used to organize these ideas. Possible Vocabulary Words: add, subtract, sum, difference, plus, both, join, in all, combined, increased, how many more, left, less than, take away, minus, remain)	T-chart or venn diagram, list of vocabulary words, sample word problems to practice this skill with
enVision Topic 1 "Pick A Project" Choice Activities - Students will choose a project to practice whole numbers and decimals written, compared, and ordered ● *Project 1A –All About Manatees:* Research manatees and create a poster about the manatees using numbers as facts. ● *Project 1B – Playing with Blocks:* Students will create a game for 2 or more players that involves comparing groups of place-value blocks. ● *Project 1C –Planetary Distances:* Students will use books or the internet to research the distance from the sun to each planet in our solar system. Create a chart to record each distance, in miles, in both standard notation and scientific notation	enVision Pick a Project Descriptions and Materials (listed below): ● Project 1A: Books about manatees, Internet, poster board, markers ● Project 1B: lace-value blocks, poster board, construction paper, ● Project 1C: Books about the solar system, Internet, poster board, markers
enVision Topic 2 "Pick A Project" Choice Activities - Students will choose a project to practice whole numbers and decimals written, compared, and ordered ● *Project 2A –Alligators and Crocodile:* Research the largest crocodile ever measured. Record its length in meters and your source of information. Next, measure your teacher's height in meters. Make sure that both measurements are correct up to the hundredths place. ● *Project 2B – Home of the Best Amusement Parks:* Students will create a brochure for their theme park. That includes pricing and facts with numbers.	enVision Pick a Project Descriptions and Materials (listed below): ● Project 2A: Internet access or books about reptiles ● Project 2B: Drawing Paper ● Project 2C: Colored paper, clay, poster board, glue

• *Project 2C –Calorie Information in Restaurant Menus:* Students will plan their meal and use money and count calories. Find the exact number of calories in your meal, and compare it with your target of 1,000 to 1,500 calories. Find the total cost of your meal.	
Math Literature	
Textbook: *enVision Mathematics Common Core*, Savvas Learning Company LLC., 2020 *The Water Hole* by Graeme Base *Zin! Zin! Zin! a Violin* by Lloyd Moss	
Websites	
Interactive arithmetic lessons Online resources Online videos Interactive games Games, powerpoint, instructional aides enVision Digital Math Tools & Manipulatives	www.aaamath.com https://www.education.com/resources/fifth-grade/math/ www.flocabulary.com www.kahoot.com http://internet4classrooms.com/ https://media.pk12ls.com/curriculum/math/Tools/MTindex.html
Accommodations & Modifications	
Basic Skills • 1:1 • Grab and Go centers • Repeating Directions • Small Group • Manipulatives • Interactive Notes • Reteach/Enrichment Pages for each lesson (RTI)	
Economically Disadvantaged • 1:1 • Grab and Go centers	

- Repeating Directions
- Small Group
- Manipulatives
- Interactive Notes
- Reteach/Enrichment Pages for each lesson (RTI)

Gifted and Talented

- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication
- Student developed extension activities
- Plan self-directed inquiry

English Language Learners

- Elicit Prior Knowledge
- Rephrase
- Understand Context
- Scaffold Language
- Restate
- Cooperative Grouping
- Peer Buddy

Special Education/504 Plans

- One on one instruction
- Adaptive devices
- Provide differentiated instruction as needed
- Follow all IEP modifications/504 plan
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

Students at Risk of Failure:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences

- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Give choice to provide a sense of control

Number and Operations-Fractions	**Topics 7-9; Duration: January/February 34 Days**
Standards	
5.NF.A.1	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*
5.NF.A.2	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2*.
5.NF.B.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*
5.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
5.NF.B.4A	Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. *For example, use a visual fraction model to show (2/3) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)*
5.NF.B.4B	Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
5.NF.B.5	Interpret multiplication as scaling (resizing), by:

5.NF.B.5.A	Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. Given number in a specified set makes an equation or inequality true
5.NF.B.5.B	Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
5.NF.B.5.B.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.
5.NF.B.5.B.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions, such inequalities on number line diagrams.
5.NF.B.5.B.7.A	Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3*.
5.NF.B.5.B.7.B	Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4*.
5.NF.B.5.B.7.C	Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?*
	Interdisciplinary Connections
	Language Arts Standards
SL.5.1.A	Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion.
SL.5.1.B	Follow agreed-upon rules for discussions and carry out assigned roles.
	Technology Standards
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

	21st Century Life and Careers Century Life and Career Skills: 21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace. http://www.state.nj.us/education/aps/cccs/career/ **9.1 Personal Financial Literacy** This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers. **9.2 Career Awareness, Exploration, and Preparation** This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. **9.3 Career and Technical Education** This standard outlines what students should know and be able to do upon completion of a CTE Program of Study. **Career Ready Practices** CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.
Essential Understandings	**Essential Questions**
Students will understand that… ● Fractions, decimals, and percentages express the relationship between two numbers. ● Fractions are a part of a whole, part of a set, part of an area, and locations on the number line.	● How can fractions be modeled, compared, and ordered? ● How are common fractions and decimals alike and different? ● How is computation with rational numbers

<table>
<tr><td>

- Fractions can be read, written, ordered, compared, modeled, and computed in a variety of ways, including equivalents, improper, and mixed numbers.

</td><td>

similar and different to whole number computation?
- How can you make reasonable estimates of fraction sums, differences, products and quotients?
- How can you add, subtract, multiply and divide fractions?

</td></tr>
<tr><td colspan="2">Evidence of Student Learning</td></tr>
<tr><td>Performance Tasks: Activities to provide evidence for student learning of content and cognitive skills.</td><td>Other Assessments</td></tr>
<tr><td>

STEM Theme: Fossils Tell Story Tell students that fossils provide information about the environment long ago. Most fossils are found on land that was once under water. The layers of sediment that are on top of the layer where the fossils are found give scientists information about their age and how living things have changed.

STEM Theme: Kitchen Chemistry: Have students help you list other examples of physical changes that occur in the kitchen. Discuss what materials or ingredients might be used to bring about the change.
Explain how food can attain different physical states.
For example, how does water change to water vapor, or how does baking with baking soda create bubbles that expand in high temperatures, causing cakes to rise?

</td><td>

Formative Assessments

- Oral Questioning
- Partners
- Student Conference
- Self-Assessment
- Think-Pair-Share
- Hand Signals
- Peer Reflections
- Constructive Response
- Teacher Observation
- Exit Slip
- Class work

Summative Assessments

- Daily Review
- Quizzes
- Tests
- Unit Projects
- Presentations
- District Benchmarks
- State Assessment

</td></tr>
</table>

	● National/State/District Wide Assessments **Benchmark Assessment** ● iReady Benchmark Assessment ● envision Benchmark Assessment **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Topic Tests ● Modified/Teacher Created Topic Quiz ● Visual Representation of Skills Assess ● Modified Classwork Assignments ● Modified Benchmarks ● EnVision Reteach Activities and Worksheets ● Project Based Assessments with Scoring Rubric
Mathematical Practice	
MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP. 4 Model with mathematics. MP.6 Attend to precision MP.8 Look for and express regularity in repeated reasoning.	
Vocabulary	
Benchmark fraction, equivalent fractions, common denominator, mixed numbers	
Knowledge and Skills	
Content	**Skills**
Use equivalent fractions as a strategy to add and subtract fractions.	Students will be able to … ● Add and subtract fractions/mixed numbers

Apply and extend previous understandings of multiplication and division to multiply and divide fractions. Students will know how… ● To use equivalent fractions as a strategy to add and subtract fractions. ● To apply and extend previous understandings of multiplication and division to multiply and divide fractions.	● Multiply fractions/mixed numbers ● Divide Fractions
Instructional Plan	
Place Value Yahtzee- Students roll 2 dice and whoever has the higher number when added together takes the cards for the round.	Dice
Place Value Stomp - Index Cards with numbers are laid out on the floor in front of each student. Teacher or student leader names a place value and the student needs to stomp of the place value called and say the number in that place value.	Index cards with numbers
enVision Topic 8 "Pick A Project" Choice Activities - Students will choose a project to practice whole numbers and decimals written, compared, and ordered ● *Project 8A –Patchwork Quilts: Students will design a quilt* ● *Project 8B –A Sticky Note Mosaic:* Students will use sticky notes to create a pattern or picture mosaic on a wall or construction paper. ● *Project 8C –Calcium in the Human Body:* Students will analyze menus for Calcium-Rich Foods. Present your analysis in a report to share with the class. ● *Project 8D-Caverns:* Students will create a scale of a model of a cave. Display them on poster board, in diorama, or however you like. Label each object with	enVision Pick a Project Descriptions and Materials (listed below): ● Project 8A: Fabric or paper, scissors, paper, pencil ● Project 8B: sticky notes, pencil ● Project 8C: paper, pencil ● Project 8D:

the size of the actual object, the size of the model, and your calculations	
Math Literature	
Textbook: *enVision Mathematics Common Core*, Savvas Learning Company LLC., 2020 *Fractions in Disguise: A Math Adventure* by Edward Einhorn *Apple Fractions* by Jerry Pallotta	
Webites	
Interactive arithmetic lessons Online resources Online videos Interactive games Games, powerpoint, instructional aides enVision Digital Math Tools & Manipulatives	www.aaamath.com https://www.education.com/resources/fifth-grade/math/ www.flocabulary.com www.kahoot.com http://internet4classrooms.com/ https://media.pk12ls.com/curriculum/math/Tools/MTindex.html
Accommodations & Modifications	
Basic Skills ● 1:1 ● Grab and Go centers ● Repeating Directions ● Small Group ● Manipulatives ● Interactive Notes ● Reteach/Enrichment Pages for each lesson (RTI)	
Economically Disadvantaged ● 1:1 ● Grab and Go centers ● Repeating Directions ● Small Group ● Manipulatives ● Interactive Notes ● Reteach/Enrichment Pages for each lesson (RTI)	

Gifted and Talented

- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication
- Student developed extension activities
- Plan self directed inquiry

English Language Learners

- Elicit Prior Knowledge
- Rephrase
- Understand Context
- Scaffold Language
- Restate
- Cooperative Grouping
- Peer Buddy

Special Education/504 Plans

- One on one instruction
- Adaptive devices
- Provide differentiated instruction as needed
- Follow all IEP modifications/504 plan
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

Students at Risk of Failure:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Give choice to provide a sense of control

Measurement and Data	**Topics 10-12: Duration: March-April 25 Days**
Standards	
5.MD.A.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
5.MD.B.2	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. *For example, given* different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.
5.MD.C.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
5.MD.C.3.A	A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.
5.MD.C.3.B	A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.
5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
5.MD.C.5	Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
5.MD.C.5.A	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
5.MD.C.5.B	Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
5.MD.C.5.C	Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

	Interdisciplinary Connections
	Language Arts Standards
SL.5.1.A	Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion.
SL.5.1.B	Follow agreed-upon rules for discussions and carry out assigned roles.
	Technology Standards
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
	21st Century Life and Careers Century Life and Career Skills: 21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace. http://www.state.nj.us/education/aps/cccs/career/ **9.1 Personal Financial Literacy** This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers. **9.2 Career Awareness, Exploration, and Preparation** This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. **9.3 Career and Technical Education** This standard outlines what students should know and be able to do upon completion of a CTE Program of Study. **Career Ready Practices** CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

<table>
<tr><th>Essential Understandings</th><th>Essential Questions</th></tr>
<tr><td>Students will understand that…
They will build on their prior knowledge of related measurement units to determine equivalent measurements.
Prior to making actual conversions, they examine the units to be converted, determine if the converted amount will be more or less units than the original unit, and explain their reasoning.
They use several strategies to convert measurements. When converting metric measurement, students apply their understanding of place value and decimals.</td><td>What types of problems are solved with measurement and what tools would be used?
How do units within a system relate to each other?
When is an estimate more appropriate than an actual measurement?
How can you compare and convert customary and metric units of length, capacity, and weight?
How can you identify, describe, and classify three-dimensional figures?
How can you find the volume of a rectangular prism using a formula?</td></tr>
<tr><th colspan="2">Evidence of Student Learning</th></tr>
<tr><td>Performance Tasks: Activities to provide evidence for student learning of content and cognitive skills.</td><td>Other Assessments</td></tr>
<tr><td>Measurement Scavenger Hunt- Indoor Activities

Measurement Chain- Who Has? I Have?</td><td>Formative Assessments
Oral Questioning
Partners
Student Conference
Self-Assessment
Think-Pair-Share
Hand Signals
Peer Reflections
Constructive Response
Teacher Observation
Exit Slip
Class work
Summative Assessments</td></tr>
</table>

	● Fluency Practice ● Daily Review ● Quizzes ● Tests ● Unit Projects ● Presentations ● District Benchmarks ● State Assessment **Benchmark Assessment** ● IReady Benchmark Assessment ● enVision Benchmark Assessment **Alternative Assessments** ● Untimed Fact Practice Assessment ● Manipulative Driven Assessment ● Modified/Teacher Created Chapter Tests ● Modified/Teacher Created Mid-Chapter Quiz ● Visual Representation of Skills Assess ● Modified Classwork Assignments ● Modified Benchmarks ● EnVision Reteach Activities and Worksheets ● Project Based Assessments with Scoring Rubric
Mathematical Practice	
MP.2 Reason abstractly and quantitatively. MP.5 Attend to precision MP.6 Attend to precision. MP.7 Look for and make use of structure.	
Vocabulary	
Data, line plot, volume, cubic unit, cube, rectangular prism, unit cube, formula, foot, inch, yard, mile, capacity, gallon, quart, pint, cup, fluid ounce, weight, ton, pound, ounce, kilometer, meter, centimeter, millimeter, liter, milliliter, mass, milligram, gram, kilogram	

<table>
<tr><th colspan="2">Knowledge and Skills</th></tr>
<tr><th>Content</th><th>Skills</th></tr>
<tr><td>Convert like measurement units within a given measurement system. Represent and interpret data.

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Students will know…
● the difference between various standard units of measurement
● how to create visual displays of data how to recognize and apply concepts related to volume</td><td>Students will be able to …
● Use a line plot to find the average in a set of data
● Compare and convert Customary Units and Metric of capacity, length, and weight
● Investigate volume
● Identify, describe and classify 3D figures</td></tr>
<tr><th colspan="2">Instructional Plan</th></tr>
<tr><th>Suggested Activities</th><th>Resources</th></tr>
<tr><td>Measuring our World: Students will bring in all different sizes of cardboard boxes (cereal, crackers, oatmeal, etc.). Students will measure the length, width, and height. Then, they can find the area of each side of the box or the volume.</td><td>Boxes, rulers</td></tr>
<tr><td>Angle Park - Students will create a playground park using a specific number of right, acute, and obtuse angles. They also need to label these angles.</td><td>Paper, ruler, protractor, coloring utensils</td></tr>
<tr><td>Students will use protractors to construct angles. Students should indicate whether the angles is acute, obtuse, or right, after measuring with the protractor.</td><td>Protractors, paper</td></tr>
</table>

<table>
<tr><td>enVision Topic 11 “Pick A Project” Choice Activities -
Students will choose a project to practice whole numbers and decimals written, compared, and ordered
● Project 11A –Florida Skyscrapers: Students will build a skyscraper with unit cubes.
● Project 11B –Curious Cats: Students will build and design a cat tree
● Project 11C –Trucks: Students will analyze the transport of boxed packages in a new truck</td><td>enVision Pick a Project Descriptions and Materials (listed below):

● Project 11A: unit cubes, white paper, pencil
● Project 11B: paper, pencil
● Project 11C: paper, pencil, graph paper</td></tr>
<tr><td colspan="2">Math Literature</td></tr>
<tr><td colspan="2">Textbook: enVision Mathematics Common Core, Savvas Learning Company LLC., 2020

How Tall, How Short, How Far Away by David A. Adler
How Long or How Wide by Brian Cleary</td></tr>
<tr><td colspan="2">Websites</td></tr>
<tr><td>Interactive arithmetic lessons
Online resources
Online videos
Interactive games
Games, powerpoint, instructional aides
enVision Digital Math Tools & Manipulatives</td><td>www.aaamath.com
https://www.education.com/resources/fifth-grade/math/
www.flocabulary.com
www.kahoot.com
http://internet4classrooms.com/
https://media.pk12ls.com/curriculum/math/Tools/MTindex.html</td></tr>
<tr><td colspan="2">Accommodations & Modifications</td></tr>
<tr><td colspan="2">Basic Skills
● 1:1
● Grab and Go centers
● Repeating Directions
● Small Group
● Manipulatives
● Interactive Notes
● Reteach/Enrichment Pages for each lesson (RTI)</td></tr>
</table>

Economically Disadvantaged

- 1:1
- Grab and Go centers
- Repeating Directions
- Small Group
- Manipulatives
- Interactive Notes
- Reteach/Enrichment Pages for each lesson (RTI)

Gifted and Talented

- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication
- Student developed extension activities
- Plan self-directed inquiry

English Language Learners

- Elicit Prior Knowledge
- Rephrase
- Understand Context
- Scaffold Language
- Restate
- Cooperative Grouping
- Peer Buddy

Special Education/504 Plans

- One on one instruction
- Adaptive devices
- Provide differentiated instruction as needed
- Follow all IEP modifications/504 plan
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

Students at Risk of Failure:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Give choice to provide a sense of control

Topic: Geometry	**Topics 14 &16 Duration: April, June 12 days**
Standards	
5.G.A.1	Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
5.G.B.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.
5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties
	Interdisciplinary Connections
	Language Arts Standards
SL.5.1.A	Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion.
SL.5.1.B	Follow agreed-upon rules for discussions and carry out assigned roles.
	Technology Standards
8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
	21st Century Life and Careers Century Life and Career Skills: 21st century life and career skills enable students to make informed decisions that prepare them to engage as active citizens in a dynamic global society and to successfully meet the challenges and opportunities of the 21st century global workplace. http://www.state.nj.us/education/aps/cccs/career/

	9.1 Personal Financial Literacy This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers. **9.2 Career Awareness, Exploration, and Preparation** This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. **9.3 Career and Technical Education** This standard outlines what students should know and be able to do upon completion of a CTE Program of Study. **Career Ready Practices** CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Essential Understandings	**Essential Questions**
Students will understand that… ● coordinate geometry can be used to represent and verify geometric/algebraic relationships ● Geometric properties can be used to construct geometric figures.	● How can geometric/algebraic relationships best be represented and verified? ● How do geometric relationships help us to solve problems and/or make sense of phenomena?

Evidence of Student Learning	
Performance Tasks: *Activities to provide evidence for student learning of content and cognitive skills.*	**Other Assessments**
	Formative Assessments ● Oral Questioning

STEM **Theme: Earth's Rotation**
Explain that Earth rotates on an axis, which is an imaginary line from the North Pole to the South Pole. How long is one rotation of Earth? [24 hours]
Explain that our clocks are set to follow Earth's rotation from noon to noon; this is how the day is divided into 24 hours.

STEM **Theme: Ecosystems**
Compare and contrast the ecosystem in the photo with your local ecosystem. Discuss how a *habitat* is different from an *ecosystem*. There can be many different habitats in one ecosystem.
Emphasize that an ecosystem covers all the *interactions* within a shared physical environment.

- Partners
- Student Conference
- Self-Assessment
- Think-Pair-Share
- Hand Signals
- Peer Reflections
- Constructive Response
- Teacher Observation
- Exit Slip
- Class work

Summative Assessments
- Quizzes
- Tests
- Unit Projects
- Presentations
- District Benchmarks
- State Assessment

Benchmark Assessment
- iReady Benchmark Assessment

Alternative Assessments
- Untimed Fact Practice Assessment
- Manipulative Driven Assessment
- Modified/Teacher Created Chapter Tests
- Modified/Teacher Created Mid-Chapter Quiz
- Visual Representation of Skills Assess
- Modified Classwork Assignments
- Modified Benchmarks
- EnVision Reteach Activities and Worksheets
- Project Based Assessments with Scoring Rubric

<table>
<tr><th colspan="2">Vocabulary</th></tr>
<tr><td colspan="2">Coordinate grid; Ordered pair; x-axis ; y-axis; Origin ; x-coordinate; y-Coordinate
Equilateral triangle; Isosceles triangle; Scalene triangle; Right triangle; Acute triangle; Obtuse triangle
Trapezoid; Parallelogram; Rectangle; Rhombus; Square</td></tr>
<tr><th colspan="2">Knowledge and Skills</th></tr>
<tr><th>Content</th><th>Skills</th></tr>
<tr><td>Graph points on the coordinate plane to solve real-world and mathematical problems.

Classify two-dimensional figures into categories based on their properties.

Students will know…
● how to classify two-dimensional figures
● that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category</td><td>Students will be able to …
● Classify and Identify polygons
● Identify and plot points on a coordinate grid
● Use a line graph to analyze real world data</td></tr>
<tr><th colspan="2">Instructional Plan</th></tr>
<tr><th>Suggested Activities</th><th>Resources</th></tr>
<tr><td>Part and Whole - Students will identify shapes that have lines of symmetry and draw those lines of symmetry.</td><td>Part and Whole Level A Activity:
https://www.insidemathematics.org/sites/default/files/assets/inside-problem-solving/inside_problem_solving_part_and_whole_levela_student_2021.pdf</td></tr>
<tr><td>Piece it Together - Students will use pattern blocks to compare the area and perimeter of each shape and create different combinations of pattern blocks to cover a hexagon.</td><td>Piece it Together Level A Activity:
https://www.insidemathematics.org/sites/default/files/assets/inside-problem-</td></tr>
</table>

Students can also discuss perpendicular and parallel lines in each shape.	solving/inside_problem_solving_piece_it_together_level a_student_2021.pdf
enVision Topic 14 "Pick A Project" Choice Activities - Students will choose a project to practice whole numbers and decimals written, compared, and ordered ● *Project 14A –Planning Cities:* Students will research maps of large cities in your state and design your own city ● *Project 14B –Game Time:* Students will design a game Capture the Squares. ● *Project 14C-Search and Rescue Dogs:* Students will write a story about you and your dog searching for a missing hike ● *Project 14D –Math and Art:* Students will draw and color a picture on a grid	enVision Pick a Project Descriptions and Materials (listed below): ● Project 14A: coordinate grid, pencil ● Project 14B: 0-by-10 coordinate grids, number cubes, game pieces ● Project 14C: 10-by-10 coordinate grid, pencil, paper ● Project 14 D: coordinate grid, pencil, paper
Math Literature	
Textbook: *enVision Mathematics Common Core*, Savvas Learning Company LLC., 2020 *Changes, Changes* by Pat Hutchins *The Fly on the Ceiling* by Julie Glass Greedy Math Triangle Grandfather's Tang Story with tangrams Polygon SCOOT	
Websites	
Interactive arithmetic lessons Online resources Online videos Interactive games Games, powerpoint, instructional aides enVision Digital Math Tools & Manipulatives	www.aaamath.com https://www.education.com/resources/fifth-grade/math/ www.flocabulary.com www.kahoot.com http://internet4classrooms.com/ https://media.pk12ls.com/curriculum/math/Tools/MTindex.html

Accommodations & Modifications
Basic Skills ● 1:1 ● Grab and Go centers ● Repeating Directions ● Small Group ● Manipulatives ● Interactive Notes ● Reteach/Enrichment Pages for each lesson (RTI)
Economically Disadvantaged ● 1:1 ● Grab and Go centers ● Repeating Directions ● Small Group ● Manipulatives ● Interactive Notes ● Reteach/Enrichment Pages for each lesson (RTI)
Gifted and Talented • Open ended/abstract questions to activate higher level thinking • Alternative modes of communication • Student developed extension activities • Plan self-directed inquiry
English Language Learners ● Elicit Prior Knowledge ● Rephrase ● Understand Context ● Scaffold Language ● Restate ● Cooperative Grouping ● Peer Buddy

Special Education/504 Plans

- One on one instruction
- Adaptive devices
- Provide differentiated instruction as needed
- Follow all IEP modifications/504 plan
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

Students at Risk of Failure:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Give choice to provide a sense of control