

5th Grade Math Curriculum



Egg Harbor Township School District

State Board Adoption Date of Standards: 5/2016

Unit Overview (Standards Coverage)

Unit	Standards	Unit Focus	Standards for Mathematical Practice	Open Educational Resources
Unit 1 Understanding Number and Operations in Base Ten <i>(14 weeks)</i>	5.NBT.1 5.NBT.2 5.NBT.3 5.NBT.4 5.NBT.5 5.NBT.6 5.NBT.7	<ul style="list-style-type: none"> Understand Place Value Add and Subtract Decimals to Hundredths Fluently Multiply Multi-Digit Whole Numbers Use Models and Strategies to Multiply & Divide Decimals Use Models and Strategies to Divide Whole Numbers 	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments & critique the reasoning of others.	5.NBT.A.1 Which number is it? 5.NBT.A.1 Millions and Billions of People 5.NBT.A.3 Placing Thousandths on Number Line 5.NBT.A.4 Rounding to Tenths and Hundredths 5.NBT.B.5 Elmer's Multiplication Error MobyMax Prodigy PearsonRealize
Unit 2 Number and Operations- Fractions Measurement and Data <i>(13 Weeks)</i>	5.NF.1 5.NF.6 5.NF.2 5.MD.3b 5.NF.4a 5.MD.4 5.NF.4b 5.MD.5 5.NF.5a 5.NF.3 5.NF.5b 5.NF.7a 5.NBT.5 5.NF.7b 5.NF.7	<ul style="list-style-type: none"> Use Equivalent Fractions to Add and Subtract Fractions Apply Understanding of Multiplication to Multiply Fractions Apply Understanding of Division to Divide Fractions Understand Volume Concepts 	MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	5.MD.C.5 Breaking Apart Composite Solids 5.MD.C.5a using Volume to Understand the Associative Property of Multiplication 5.MD.C.5b Cari's Aquarium 5.MD.C Box of Clay 5.NF.A.1 Making S'Mores 5.NF.A.2 Do These Add Up? 5.NF.A Measuring Cups 5.NF.B.3 How Much Pie? 5.NF.B.4b Chavone's Bathroom Tiles MobyMax PearsonRealize
Unit 3 Geometry/ Measurement and Data <i>(11 Weeks)</i>	5.G.1 5.MD.1 5.G.2 5.MD.2 5.G.3 5.MD.5 5.G.4 5.NBT.6 5.NF.2 5.OA.1 5.NF.6 5.OA.2 5.OA.3	<ul style="list-style-type: none"> Convert Measurements Represent & Interpret Data Algebra: Write and Interpret Numerical Expressions Graph Points on the Coordinate Plane Algebra: Analyze Patterns and Relationships Geometric Measurement: Classify 2-D Figures 	MP.8 Look for and express regularity in repeated reasoning	5.G.A.1 Battle Ship Using Grid Paper 5.G.A.2 Meerkat Coordinate Plane Task 5.OA.B.3 Sidewalk Patterns 5.G.B.3 Always, Sometimes, Never 5.G.B.4 What is a Trapezoid? (Part 2) 5.MD.B.2 5.NF.A.1 Fractions on a Line Plot 5.NBT.B.7, 5.NF.B.3 What is 23 divided by 5? 5.NF.B.7c Salad Dressing MobyMax PearsonRealize

This document outlines in detail the answers to following four questions:

1. What do we want our students to know?
2. How do we know if they learned it?
3. What do we do if they did not learn it?
4. What do we do when they did learn it?

Unit 1 MATH 5TH GRADE		
Content & Practice Standards	Interdisciplinary Standards	Critical Knowledge & Skills
<ul style="list-style-type: none"> • 5.NBT.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.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.3 Read, write, and compare decimals to thousandths. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. 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.4 Use place value understanding to round decimals to any place. • 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm. • 5.NBT.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 	<ul style="list-style-type: none"> • RI.5.3. Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. • W.5.2.D Use precise language and domain-specific vocabulary to inform about or explain the topic. • 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems • 8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. • 8.1.5.A.6 Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data. • 8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding. • CRP1. Act as a responsible and contributing citizen and employee. • 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. 	<p>Topic 1:</p> <ul style="list-style-type: none"> • 5.NBT.A Understand the Place Value System <p>Topic2-6:</p> <ul style="list-style-type: none"> • 5.NBT.B Perform operations with multi-digit whole numbers and with decimals to hundredths.

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<p>calculation by using equations, rectangular arrays, and/or area models.</p> <ul style="list-style-type: none"> • 5.NBT.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. 	<ul style="list-style-type: none"> • CRP11. Use technology to enhance productivity. • 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. • 3-5-ETS1-1 Engineering Design-Define a simple design problem reflecting a need or want that includes specified criteria for the success and constraints on material, time, and costs. 	
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Unit 1 MATH 5TH GRADE

Stage 1 – Desired Results

UNIT SUMMARY	CORE AND SUPPLEMENTAL MATERIALS/RESOURCES
<p>Students will Understand Place Value, add and Subtract Decimals to hundredths, fluently multiply multi-digit whole numbers, use models and strategies to multiply decimals, use models and strategies to divide whole numbers, and use models and strategies to divide decimals.</p>	<ul style="list-style-type: none"> • Envision 2.0 • Chrome books • Manipulatives

UNDERSTANDINGS

<p>Students will understand :</p> <ul style="list-style-type: none"> • How whole numbers and decimals are written, compared and ordered. • How sums and differences of decimals can be estimated. • The standard procedures for adding and subtracting decimals

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- How sums and differences can be found mentally.
- The standard procedures for estimated and finding products of multi-digit numbers.
- The standard procedures for estimating and finding products involving decimals.
- The standard procedure for division and why it works.
- The standard procedures for estimating and finding quotients involving decimals.

Students will know...	Students will be able to...
<p>Students will know...</p> <ul style="list-style-type: none"> • And understand the place value system to the thousandths • How to perform operations with multi digit whole numbers 	<p>Students will be able to.</p> <ul style="list-style-type: none"> • build on experience with whole numbers and decimals within the base 10 system and have knowledge of exponents with powers of 10. • fluently multiply multi-digit whole numbers using the standard algorithm and find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors • illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. • recognize that the product is not always larger than its factors and that the quotient is not always smaller than the dividend

Stage 2 – Assessment Evidence

<p>Performance Tasks/Use of Technology:</p> <p>Pearsonrealize</p> <p><i>Other Assessments Formative Assessments :</i></p> <p>Prodigy</p> <p>MobyMax</p>	<p><u>Formative</u></p> <ul style="list-style-type: none"> • Teacher Observation • Exit Slips/Check for Understanding • Games • Portfolio/Math Journal /Interactive Notebook • Daily Classwork • Student Activity Pages
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Curricular Framework MATH-5th Grade

Summative:

Topic 1 Test: Understand Place Value

Topic 2 Test: Add and Subtract Decimals to Hundredths

Topic 3 Test: Fluently Multiply Multi-Digit Whole Numbers

Topic 4 Test: Use Models and Strategies to Multiply Decimals

Topic 5 Test: Use Models and Strategies to Divide Whole Numbers

Topic 6 Test: Use Models and Strategies to Divide Decimals

- Projects/Centers

Stage 3 – Learning Plan

Topic 1 Teacher Resources:

- Insect Masses, Toss and Talk, and Display the digits

Topic 2: Teacher Resources:

- Giant Kelp, Think Together, and Clip and Cover

Topic 3: Teacher Resources:

- Our Water Footprint, Think Together, and Toss and Talk

Topic 4: Teacher Resources:

- Solar Energy, Think together, and Tic-Tac-Toe

Topic 5: Teacher Resources:

- Comparing Climates, Clip and Cover, and Team Work

Topic 6: Teacher Resources:

- Measuring Glaciers, Think Together, and Display the Digits

Planned Differentiation & Interventions for Tiers I, II, III, ELL, SPED, and Gift & Talented Students

Gifted & Talented:

- “Differentiating the Lesson” in EnVision Math online resources for all sections
- “Additional Topics” in EnVision Math online resources to extend and enhance instruction
- Advanced Center Activities from EnVision Math
- Design Challenges
- Student Choice/Driven Activities
- Group Projects

- MobyMax
- LinkIt
- Rocket Math
- [Intervention Central](#)
- [Do to Learn](#)
- [Differentiation Strategies for Math](#)
- [Discovery Education Math](#)
- [Everyday Mathematics](#)
- [Homework Spot](#)
- [Flash Card Math](#)
- [Math Fact Fluency](#)

Tier I:

- Progress Monitoring/Data Tracking
- EnVision Math “Error Intervention” resource
- Visual Learning examples
- Working Backward problem solving EnVision Math resource
- Flash Cards
- Brain Pop
- Extended Time
- Flexible Grouping
- Centers/Small Group Instruction
- Peer Buddies
- Math Tutoring Center (HS only)
- Math Lab/Tutorial
- MobyMax
- LinkIt!
- Rocket Math
- [Intervention Central](#)
- [Do to Learn](#)
- [Learning Ally](#)
- [Xtramath](#)
- [Differentiation Strategies for Math](#)
- [Discovery Education Math](#)
- [Everyday Mathematics](#)

- [Homework Spot](#)
- [Flash Card Math](#)
- [Math Fact Fluency](#)
- EnVision Math Reteach resource

Tier II:

- EnVision Math Daily Assessment Resource
- Differentiated Instruction assignments through EnVision Math
- MobyMax
- Rocket Math
- Xtramath
- Flash Cards

Tier III:

- Intense Interventions to accelerate progress EnVision Math resource
- Focus Math
- Systematic Assessments to focus on specific deficits

ELL:

- EnVision Math resources available in Spanish
- Letters to Parents are available in the Resources by Chapter book to assist in guiding parents through each chapter and offer helpful suggestions they can use to demonstrate mathematical concepts for their child in daily activities. These letters are editable so teachers can customize them.
- Student Dynamic eBook Audio has the option to be read in English or Spanish
- Multi-Language Glossary for new Math vocabulary is available in 14 different languages.
- Audio version is available in English or Spanish.
- Game Closet can be accessed in English or Spanish, while also allowing for all students to play and understand these educational games.
- ELL Notes included in Teacher Edition to help teachers overcome obstacles.
- Record & Practice Journal and Student Journal available in Spanish.
- Chapter Reviews available in English and Spanish.
- Vocabulary Flash Cards
- Chunking Information
- Math Word Wall/Word Bank
- Multi-Sensory Instruction
- Use of Translation software
- Gradual Release Model
- [TODOS: Mathematics for ALL](#) - Excellence and Equity in Mathematics
- [FABRIC - A Learning Paradigm for ELLs](#) (NJDOE resource)

SPED:

- Menu Math (mostly for very low functioning students)
- MobyMax
- LinkIt!
- Xtramath
- Learning Ally (audio version for textbooks and other published materials) – Also available for 504 students
- Use of specialized equipment such as beeping balls, text to speech and speech to text software, special seats or desks
- Use of hands-on materials for problem solving
- Visual supports and Use of manipulatives
- Extended time to complete tests and assignments
- Graphic Organizers/Study Guides
- Mnemonic tricks to improve memory
- Reducing workload
- Centers/Small Group Instruction
- Adjusting accountability for standards by focusing only on essential standards
- Use of iPads or laptops for students with motor issues that make writing difficult
- Use of tangible rewards (certificates, small toys, etc. per behavior plan)
- Use prompts and model directions/assignments
- Use task analysis to break down activities and lessons into each individual step needed to complete the task
- Use concrete examples to teach concepts
- Have student repeat/rephrase written directions
- Provide multi-sensory, hands-on materials for instruction
- Chunking Information
- Modify all fine motor tasks for example: (fat crayons, pencil grip, adaptive scissors)
- Functional or practical emphasis

504:

- Learning Ally (audio version for textbooks and other published materials)
- Extra help opportunities
- Reduce workload
- Partial credit
- Allow use of calculator, when appropriate
- Modified length and time frame of assignments
- Alternate assessments with extended time

Curricular Framework MATH-5th Grade

- Provide guided notes and study guides as needed (use interactive notebook)
- Preferential Seating
- Extra Practice
- Directions repeated, clarified and reworded
- Breakdown task into manageable units
- Differentiated instruction
- Use of manipulatives

Unit 2 MATH 5TH GRADE		
Content & Practice Standards	Interdisciplinary Standards	Critical Knowledge & Skills
<ul style="list-style-type: none"> • 5.NF.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. In general, $a/b + c/d = (ad + bc)/bd$. • 5.NF.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. • 5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 	<ul style="list-style-type: none"> • 5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth • NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words. • 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems • 8.1.5.A.2 Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures. • 8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. 	<ul style="list-style-type: none"> • Topic 7: • 5.NF.A Use equivalent fractions to add and subtract fractions. • Topic 8&9: • 5.NF.B Apply understanding of multiplication and division to multiply and Divide fractions. • Topic 10: • 5.MD.C Understanding concepts of volume and relate volume to multiplication and addition.

<p>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.</p> <ul style="list-style-type: none"> • 5.NF.4a Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. a. 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 $a \times q \div b$. • 5.NF.4b Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. 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.5a/b Interpret multiplication as scaling (resizing), by: 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. b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number; explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and 	<ul style="list-style-type: none"> • 8.1.5.A.6 Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data. • 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. • 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. • 3-5-ETS1-2 Engineering Design – Generated and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 	
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<p>$a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.</p> <ul style="list-style-type: none">• 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm• 5.NF.7a Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.• 5.NF.7b Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. b. Interpret division of a whole number by a unit fraction & compute quotients.• 5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.• 5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. a. Find the volume of a right rectangular prism with whole-number side lengths and be able to represent using cubes and as a product of the multiplication of three digits. 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. c. Find volumes of solid figures composed of two non-overlapping right		
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<p>rectangular prisms by adding the volumes of the non-overlapping parts.</p>		
Unit 2 MATH 5TH GRADE		
Stage 1 – Desired Results		
UNIT SUMMARY	CORE AND SUPPLEMENTAL MATERIALS/RESOURCES	
<p>Students will use equivalent fractions to add and subtract, apply understanding of multiplication and division to multiply and divide fractions, and understanding Volume</p>	<ul style="list-style-type: none"> • Envision 2.0 • Chrome books • Manipulatives 	
UNDERSTANDINGS		
<p>Students will understand How:</p> <ul style="list-style-type: none"> • Sums and differences of fractions and mixed numbers can be estimated • The standard procedures for adding and subtracting fractions and mixed numbers. • What it means to multiply whole numbers and fractions • How multiplication with whole numbers and fractions can be shown using models and symbols. • How fractions are related to division • How to divide with whole numbers and unit fractions • The meaning of volume of a solid • How the volume of a rectangular prism can be found 		
Students will know...	Students will be able to...	
<ul style="list-style-type: none"> • How to estimate sums and differences of fractions, find common denominators, add and subtract fractions, estimates sums and differences of mixed numbers, and add/subtract mixed numbers. • How to multiply a fraction by a whole number, multiply two fractions, multiply mixed numbers, find the area of a rectangle and apply multiplication as scaling. • How to Apply their understanding of division to divide fractions, represent fractions and mixed numbers as quotients, use multiplication to divide, divide whole numbers and unit fractions. • How to model volume, develop a volume formula, To combine and find the volume of prisms. 	<ul style="list-style-type: none"> • Estimate sums and differences of fractions, find common denominators for fractions, add/subtract fractions, write equivalent fractions to add and subtract fractions, estimate sums and differences of mixed numbers, and add/subtract mixed numbers. • Multiply fractions and whole numbers, multiply two fractions, find the area of a rectangle using fractions, use previously learned strategies to multiply mixed numbers, and compare the size of the product to the size of 1-factor without multiplying to consider multiplication as scaling. • Understand how fractions are related to division, implement division of fractions to show quotients as fractions and mixed numbers, use multiplication to divide a whole number by a unit fraction, and use models to show dividing a whole number by a unit fraction. 	

	<ul style="list-style-type: none"> Find the volume of solid figures including, rectangular prisms, using a formula .Find the volume of solid figures including a combination of two or more rectangular prisms.
<p>Stage 2 – Assessment Evidence</p>	
<p>Performance Tasks/Use of Technology:</p> <p>Pearsonrealize</p> <p><i>Other Assessments Formative Assessments :</i></p> <p>Prodigy</p> <p>MobyMax</p>	<p>Other Evidence:</p> <p><u>Formative Assessment:</u></p> <ul style="list-style-type: none"> Teacher Observation Exit Slips/Check for Understanding Games Portfolio/Math Journal /Interactive Notebook Daily Classwork Student Activity Pages <p><u>Summative Assessment:</u></p> <ul style="list-style-type: none"> Topic 7 Test- Use Equivalent Fractions to Add and Subtract Fractions Topic 8 Test- Apply Understanding of Multiplication to Multiply Fractions Topic 9 Test- Apply Understanding of Division to Divide Fractions Topic 10 Test- Understand Volume Concepts Projects/Centers

Stage 3 – Learning Plan

Topic 7: Teacher Resources:

- Measuring Fossils, Tic-Tac-Toe, and Quick Questions

Topic 8: Teacher Resources:

- Cooking Contest, Team Work, and Tic-Tac-Toe

Topic 9: Teacher Resources:

- Partitioning Thermal Energy, Toss and Talk, and Display the Digits

Topic 10: Teacher Resources:

- Electric Circuits, Team Work, and Toss and Talk

Planned Differentiation & Interventions for Tiers I, II, III, ELL, SPED, and Gift & Talented Students

Gifted & Talented:

- “Differentiating the Lesson” in EnVision Math online resources for all sections
- “Additional Topics” in EnVision Math online resources to extend and enhance instruction
- Advanced Center Activities from EnVision Math
- Design Challenges
- Student Choice/Driven Activities
- Group Projects
- MobyMax
- LinkIt
- Rocket Math
- [Intervention Central](#)
- [Do to Learn](#)
- [Differentiation Strategies for Math](#)
- [Discovery Education Math](#)
- [Everyday Mathematics](#)
- [Homework Spot](#)
- [Flash Card Math](#)
- [Math Fact Fluency](#)

Tier I:

- Progress Monitoring/Data Tracking
- EnVision Math “Error Intervention” resource

- Visual Learning examples
- Working Backward problem solving EnVision Math resource
- Flash Cards
- Brain Pop
- Extended Time
- Flexible Grouping
- Centers/Small Group Instruction
- Peer Buddies
- Math Tutoring Center (HS only)
- Math Lab/Tutorial
- MobyMax
- LinkIt!
- Rocket Math
- [Intervention Central](#)
- [Do to Learn](#)
- [Learning Ally](#)
- [Xtramath](#)
- [Differentiation Strategies for Math](#)
- [Discovery Education Math](#)
- [Everyday Mathematics](#)
- [Homework Spot](#)
- [Flash Card Math](#)
- [Math Fact Fluency](#)
- EnVision Math Reteach resource

Tier II:

- EnVision Math Daily Assessment Resource
- Differentiated Instruction assignments through EnVision Math
- MobyMax
- Rocket Math
- Xtramath
- Flash Cards

Tier III:

- Intense Interventions to accelerate progress EnVision Math resource
- Focus Math
- Systematic Assessments to focus on specific deficits

ELL:

- EnVision Math resources available in Spanish
- Letters to Parents are available in the Resources by Chapter book to assist in guiding parents through each chapter and offer helpful suggestions they can use to demonstrate mathematical concepts for their child in daily activities. These letters are editable so teachers can customize them.
- Student Dynamic eBook Audio has the option to be read in English or Spanish
- Multi-Language Glossary for new Math vocabulary is available in 14 different languages.
- Audio version is available in English or Spanish.
- Game Closet can be accessed in English or Spanish, while also allowing for all students to play and understand these educational games.
- ELL Notes included in Teacher Edition to help teachers overcome obstacles.
- Record & Practice Journal available in Spanish.
- Student Journal available in Spanish.
- Chapter Reviews available in English and Spanish.
- Vocabulary Flash Cards
- Chunking Information
- Math Word Wall/Word Bank
- Multi-Sensory Instruction
- Use of Translation software
- Gradual Release Model
- [TODOS: Mathematics for ALL](#) - Excellence and Equity in Mathematics
- [FABRIC - A Learning Paradigm for ELLs](#) (NJDOE resource)

SPED:

- Menu Math (mostly for very low functioning students)
- MobyMax
- LinkIt!
- Xtramath
- Learning Ally (audio version for textbooks and other published materials) – Also available for 504 students
- Use of specialized equipment such as beeping balls, text to speech and speech to text software, special seats or desks
- Use of hands-on materials for problem solving
- Visual supports and Use of manipulatives
- Extended time to complete tests and assignments
- Graphic Organizers/Study Guides
- Mnemonic tricks to improve memory
- Reducing workload
- Centers/Small Group Instruction
- Adjusting accountability for standards by focusing only on essential standards
- Use of iPads or laptops for students with motor issues that make writing difficult

- Use of tangible rewards (certificates, small toys, etc. per behavior plan)
- Use prompts and model directions/assignments
- Use task analysis to break down activities and lessons into each individual step needed to complete the task
- Use concrete examples to teach concepts
- Have student repeat/rephrase written directions
- Provide multi-sensory, hands-on materials for instruction
- Chunking Information
- Modify all fine motor tasks for example: (fat crayons, pencil grip, adaptive scissors)
- Functional or practical emphasis

504:

- Learning Ally (audio version for textbooks and other published materials)
- Extra help opportunities
- Reduce workload
- Partial credit
- Allow use of calculator, when appropriate
- Modified length and time frame of assignments
- Alternate assessments with extended time
- Provide guided notes and study guides as needed (use interactive notebook)
- Preferential Seating
- Extra Practice
- Directions repeated, clarified and reworded
- Breakdown task into manageable units
- Differentiated instruction
- Use of manipulatives

Unit 3 MATH 5TH GRADE		
Content & Practice Standards	Interdisciplinary Standards	Critical Knowledge & Skills
<ul style="list-style-type: none"> • 5.MD.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.NBT.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.5-Fluently multiply multi-digit whole numbers using the standard algorithm. • 5.NBT.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.MD.2-Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots • 5.NF.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 	<ul style="list-style-type: none"> • 5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth • NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words. • 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems • 8.1.5.A.2 Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures. • 8.1.5.A.4 Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data. • 8.1.5.A.6 Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data. • 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. • 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 	<ul style="list-style-type: none"> • Topic 11: • 5.MD.A- Convert Measurements • Topic 12: • 5.MD.B-Represent and Interpret Data • Topic 13 • 5.OA.A- Write and Interpret Numerical Expressions • Topic 14: • 5.G.A- Graph Points on a Coordinate Plane • Topic 15: • 5.OA.B- Algebra: Analyze Patterns and Relationships • Topic 16: • 5.G.B-Geometric Measurement: Classify Two-Dimensional Figures

<p>models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</p> <ul style="list-style-type: none">• 5.NF.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.OA.1-Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols• 5.OA.2-Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.• 5.G.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.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.	<p>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.</p> <ul style="list-style-type: none">• 3-5-ETS1-2 Engineering Design – Generated and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	
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<ul style="list-style-type: none"> • 5.OA.3-Generate two numerical patterns using two given rules. ID 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. • 5.G.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.3-Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category. • 5.G.4- Classify two-dimensional figures in a hierarchy based on properties 		
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Unit 3 MATH 5TH GRADE

Stage 1 – Desired Results

UNIT SUMMARY	CORE AND SUPPLEMENTAL MATERIALS/RESOURCES
<p>Students will apply understanding of volume concepts, convert measurements, represent and interpret data, write and interpret numerical expressions, graph points on the coordinate plane, analyze patterns and relationships in algebra, and classify two-dimensional figures.</p>	<ul style="list-style-type: none"> • Envision 2.0 • Chrome books • Manipulatives

UNDERSTANDINGS

<p>Students will Understand:</p> <ul style="list-style-type: none"> • Customary Measurements and how they are related. • Metric Measurement Units and how they are related. • Line Plots and how they can be used to represent data and answer questions. • How the value of a numerical expression is found. • How points are plotted, how relationships are shown on a graph. • How number patterns can be analyzed and graphed.

Curricular Framework MATH-5th Grade

<ul style="list-style-type: none"> • How number patterns and graphs can be used to solve problems. • How triangles and quadrilaterals can be described, classified ,and named 	
Students will know...	Students will be able to...
<ul style="list-style-type: none"> • How to convert customary units of measurement. • How to convert metric units of measurement • How to analyze line plots, and how to make line plots. • How to apply the order of operations, evaluate, write, and interpret numerical expressions. • How to apply their knowledge of the coordinate system graph data and solve problems using ordered pairs. • How to analyze numerical patterns and graph relationships. • How to classify triangles and quadrilaterals. 	<p><i>Students will be able to:</i></p> <ul style="list-style-type: none"> • Apply their understanding of multiplication and division to convert among customary units of measurements, and Metric units of measurements. • Read and analyze line plots: organize, display, and use data in a line plot. • Apply the order of operations to evaluate expressions. Write and interpret simple expressions that show calculations with numbers. • Locate, graph, and analyze points on a coordinate grid. • Analyze numerical patterns, use tables to identify relationships, and graph ordered pairs generated from number sequences. • Classify triangles by their angles and sides, and classify quadrilaterals by their properties using a hierarchy.

Stage 2 – Assessment Evidence

<p>Performance Tasks/Use of Technology:</p> <p>Pearsonrealize</p> <p><i>Other Assessments Formative Assessments :</i></p> <p>Prodigy</p> <p>MobyMax</p>	<p><u>Formative</u></p> <ul style="list-style-type: none"> • Teacher Observation • Exit Slips/Check for Understanding • Games • Portfolio/Math Journal /Interactive Notebook • Daily Classwork • Student Activity Pages <p><u>Summative:</u></p> <ul style="list-style-type: none"> • Topic 11 Test- Convert Measurements • Topic 12 Test- Represent and Interpret Data • Topic 13 Test- Algebra: Write and Interpret Numerical Expressions • Topic 14 Test: Graph Points on the Coordinate Plane • Topic 15 Test: Algebra: Analyze Patterns and Relationships • Topic 16 Test: Geometric Measurement: Classify Two-Dimensional Figures • Projects/Centers
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Stage 3 – Learning Plan

Topic 11 Teacher Resources:

- How do Hoodoos Stack up?, Display the Digits, and Teamwork

Topic 12 Teacher Resources:

- California Condor Recover and Deforestation

Topic 13 Teacher Resources:

- Ups and Downs in a Food Web and Team Work

Topic 14 Teacher Resources:

- Constellations and Sun dials

Topic 15 Teacher Resources:

- Phyllotaxis, and Rotating Planets

Topic 16 Teacher Resources:

- Bison Ranching and Honey Bees

Planned Differentiation & Interventions for Tiers I, II, III, ELL, SPED, and Gift & Talented Students

Gifted & Talented:

- “Differentiating the Lesson” in EnVision Math online resources for all sections
- “Additional Topics” in EnVision Math online resources to extend and enhance instruction
- Advanced Center Activities from EnVision Math
- Design Challenges
- Student Choice/Driven Activities
- Group Projects
- MobyMax
- LinkIt
- Rocket Math
- [Intervention Central](#)
- [Do to Learn](#)
- [Differentiation Strategies for Math](#)
- [Discovery Education Math](#)
- [Everyday Mathematics](#)
- [Homework Spot](#)
- [Flash Card Math](#)
- [Math Fact Fluency](#)

Tier I:

- Progress Monitoring/Data Tracking
- EnVision Math “Error Intervention” resource
- Visual Learning examples
- Working Backward problem solving EnVision Math resource
- Flash Cards
- Brain Pop
- Extended Time
- Flexible Grouping
- Centers/Small Group Instruction
- Peer Buddies
- Math Lab/Tutorial
- MobyMax
- LinkIt!
- Rocket Math
- [Intervention Central](#)
- [Do to Learn](#)
- [Learning Ally](#)
- [Xtramath](#)
- [Differentiation Strategies for Math](#)
- [Discovery Education Math](#)
- [Everyday Mathematics](#)
- [Homework Spot](#)
- [Flash Card Math](#)
- [Math Fact Fluency](#)
- EnVision Math Reteach resource

Tier II:

- EnVision Math Daily Assessment Resource
- Differentiated Instruction assignments through EnVision Math
- MobyMax
- Rocket Math
- Xtramath
- Flash Cards

Tier III:

- Intense Interventions to accelerate progress EnVision Math resource
- Focus Math
- Systematic Assessments to focus on specific deficits

ELL:

- EnVision Math resources available in Spanish
- Letters to Parents are available in the Resources by Chapter book to assist in guiding parents through each chapter and offer helpful suggestions they can use to demonstrate mathematical concepts for their child in daily activities. These letters are editable so teachers can customize them.
- Student Dynamic eBook Audio has the option to be read in English or Spanish
- Multi-Language Glossary for new Math vocabulary is available in 14 different languages.
- Audio version is available in English or Spanish.
- Game Closet can be accessed in English or Spanish, while also allowing for all students to play and understand these educational games.
- ELL Notes included in Teacher Edition to help teachers overcome obstacles.
- Record & Practice Journal available in Spanish.
- Student Journal available in Spanish.
- Chapter Reviews available in English and Spanish.
- Vocabulary Flash Cards
- Chunking Information
- Math Word Wall/Word Bank
- Multi-Sensory Instruction
- Use of Translation software
- Gradual Release Model
- [TODOS: Mathematics for ALL](#) - Excellence and Equity in Mathematics
- [FABRIC - A Learning Paradigm for ELLs](#) (NJDOE resource)

SPED:

- Menu Math (mostly for very low functioning students)
- MobyMax
- LinkIt!
- Xtramath
- Learning Ally (audio version for textbooks and other published materials) – Also available for 504 students
- Use of specialized equipment such as beeping balls, text to speech and speech to text software, special seats or desks
- Use of hands-on materials for problem solving
- Visual supports and Use of manipulatives
- Extended time to complete tests and assignments
- Graphic Organizers/Study Guides
- Mnemonic tricks to improve memory
- Reducing workload
- Centers/Small Group Instruction
- Adjusting accountability for standards by focusing only on essential standards
- Use of iPads or laptops for students with motor issues that make writing difficult

- Use of tangible rewards (certificates, small toys, etc. per behavior plan)
- Use prompts and model directions/assignments
- Use task analysis to break down activities and lessons into each individual step needed to complete the task
- Use concrete examples to teach concepts
- Have student repeat/rephrase written directions
- Provide multi-sensory, hands-on materials for instruction
- Chunking Information
- Modify all fine motor tasks for example: (fat crayons, pencil grip, adaptive scissors)
- Functional or practical emphasis

504:

- Learning Ally (audio version for textbooks and other published materials)
- Extra help opportunities
- Reduce workload
- Partial credit
- Allow use of calculator, when appropriate
- Modified length and time frame of assignments
- Alternate assessments with extended time
- Provide guided notes and study guides as needed (use interactive notebook)
- Preferential Seating
- Extra Practice
- Directions repeated, clarified and reworded
- Breakdown task into manageable units
- Differentiated instruction
- Use of manipulatives