Washington Township Public Schools
COURSE OF STUDY – CURRICULUM GUIDE

Course: Everyday Mathematics 4 – Grade 5

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Description:

Everyday Mathematics 4 is designed to teach the content required by the Common Core State Standards. In fifth grade, that content focuses on procedures, concepts and applications in three critical areas:

- Developing fluency with addition and subtraction of fractions, and an understanding of multiplication and division of fractions.
- Developing fluency with whole-number and decimal operations, extending division to 2-digit divisors, integrating decimals into the place-value system, and developing understanding of operations with decimals to the hundredths.
- Developing an understanding of volume.

Throughout Everyday Mathematics 4, emphasis is placed on:

- Problem solving in everyday situations and mathematical concepts.
- An instructional design that revisits topics regularly to ensure depth of knowledge and long term learning.
- Distributed practice through games and other daily activities
- Teaching that supports "productive struggle" and maintains high cognitive demand
- Lessons and activities that engage all students and make mathematics fun.

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Revised:
BOE Approval:

MAJOR UNITS OF STUDY

Course Title: **Everyday Math Curriculum Guide – Grade 5**

I. Area and Volume
II. Whole Number Place Value and Operations
III. Fraction Concepts, Addition and Subtraction
IV. Decimal Concepts and Coordinate Grids
V. Operations with Fractions
VI. Investigations in Measurement: Decimal Multiplication and Division
VII. Multiplication of Mixed Numbers: Geometry: Graphs
VIII. Application of Measurement: Computation and Graphing

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 1 OVERVIEW** **Unit Title:** Area and Volume

Unit Description and Objectives:

In this unit, students build in their prior work with area and explore ways to find the area of rectangles with fractional side lengths. Students also learn about volume as an attribute of solid figures. Using improvised units, they explore volume and build toward using cubic units and volume formulas.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
What is volume? How can I find the volume of a rectangular prism? How can measurements be used to solve problems? How do formulas help us make sense of problem solving in our daily life?	Volume is a measure of how much space a solid figure encloses and is measured in cubic units. I can find the volume of a rectangular prism with this formula: V=l x w x h. Measurements can be used to describe, compare, and make sense of phenomena.	What is volume and how does it relate to the attribute of an individual figure? · What tools and units of measurement can be reasonably used to determine length, area and volume? How can area, perimeter, and volume help us to solve problems in everyday life? Why is area measured in square units? Why is volume measured in cubic units? How are area and volume related?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Areas of rectangles with fractional side lengths.

Sub-Concept/Topics:

Volume Concepts

Sub-Concept/Topics:

Developing volume formulas

Theme:

Area and Volume

Conceptual Lens:

See page 2 in teacher manual for mathematical concepts and topics.

Sub-Concept/Topics:

Volume Applications

Sub-Concept/Topics:

Expressions and Grouping Symbols

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Guide Grade 5
Unit Number/Title: Unit 1
Conceptual Lens: Area and Volume
Appropriate Time Allocation (# of Days)**:** 17 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.OA.1	5.NF.4b	5.MD.3a	5.MD.3b
5.MD.4	5.MD.5a	5.MD.5b	5.MD.5c
SMP1	SMP5		

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know)**	**Skill Objectives (Students Will Be Able To :)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
• Introduce the Student Reference Book • Interpret numerical expressions • Explore place value • Introduce area of a rectangle • Introduce volume • Utilize two formulas for finding volume	Evaluate expressions with grouping symbols Write expressions to model situations. Find the area of a rectangle with one fractional side length. Identify objects with volume. Use cubes to find volume. Use formulas to find volume. Find the volume of a figure made of rectangular prisms.	**1.1** Students explore the student reference book. They read about and practice using grouping symbols. **1.2** Review area concepts and explore strategies for finding the area of rectangles. **1.3** Students make sense of two different answers to an area problem. Discuss and compare some solutions and review work. **1.4** Find areas of rectangles with fraction side lengths **1.5** Students explore the concept of volume as they informally compare volumes of thre**e** dimensional objects. **1.6** Use nonstandard units to measure volumes of rectangular prisms. Discuss packing units without gaps or overlaps to obtain an accurate volume measurement.	***TM pgs. 14-90*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **1.1 Literature** **Solving Problems using the Student Reference Book. TM 17, MJ 2-3.** *Students use nonfiction books to compare glossary, index and table of contents to Student Reference Book.* **1.3– Art** **Quilt Area Open Response Activity. TM 26-35.** *In this open response activity, students plan and design a quilt based on mathematical equations.* **1.11 – Music** **Estimating Volumes of Musical Instrument Cases.**	**Unit 1** **Volume and Area** **TM Pages 14-90** ***See page 4 for a detailed list of materials for Unit 1.*** *** Additional Materials Needed for Advanced Preparation** • Multiplication and division fact tables. • Class Data Pad • Solid Objects and packing materials. • Pennies • Quilt or picture of quilt • Nonfiction book. • Full and empty containers.	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Beginning of the Year Assessment (Found in Math Assessment Handbook) Unit 1 Checking Progress Quizzes Operation Time tests **Summative Assessment(s)** Assessment Check in Games: Name that Number Baseball Multiplication Buzz Prism Pile Up

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		1.7 Discuss benefits of using unit cubes to measure volume. Measure volume by counting the number of cubes it takes to fill a rectangular prism. **1.8** Relate volume to multiplication and addition by iterating layers to find the volumes of prisms. **1.9** Explain and apply two different formulas for finding the volume of a rectangular prism. **1.10** Explore units of volume and convert b**etwe**en them. **1.11** Find volumes of figures composed of rectangular prisms and solve real world problems involving volume. **1.12** Play a game to practi**ce** finding volumes of rectangular prisms and write number models for the volumes.	**TM 81, MJ 32, MM 34** *Students review musical instruments to provide background knowledge for computing and estimating the volumes of certain musical instrument cases.* **1.1 – 1.13 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.*		*opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for investigation. Plan and manage		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design,		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
1.1 – Exploring the Student Reference Book – page 15	1.1 – Writing a Reference Book Page p. 15	1.1 – Number Line Activity p. 15	1.1 Activity Card 1: Student Reference Book p. 15
1.2 – Reviewing Equal Groups Activity p. 21	1.2 – Find the Area of Figures with Fractional Side Lengths MM 8	1.2 – Area activity p. 21	1.2 – Finding the Area of Rectangles – Activity Card 2 – MM p. TA3
1. 4 – Tiling squares with fractional side lengths activity p. 37	1.4 – Showing Area Unit Conversions – Activity Card 3 SRB	1.4 – Vocabulary Activity p. 37	1.4 – Finding Areas of Rectangle Activity MM 14
1.5 - Identifying Measureable Attributes – Group Activity p. 43	1.5 – Creating Prisms – Volume Challenge – Activity Card 4.	1.5 – Vocabulary Activity p. 43	1.5 – Detecting Volume by Touch – Activity Card 5
1.6 – Measuring with nonstandard units. MM 17.	1.6 – Building and Measuring the Volume of a Polyhedron – Activity Card 6	1.6 – Vocabulary Activity p. 49	1.6 – Estimating Volume in Nonstandard Units – Activity Card 7.
1.7 – Layer Prism Problems MM 22	1.7 – Exploring Penticubes Activity Card 8 MM 23	1.7 – Vocabulary Activity p. 55	1.7 – Creating prism patterns MM TA3
1.8 – Layering Down Layers p. 61	1.8 – Finding the Volume of a Stick-On Note MM 26	1.8 – Using Visual Aids p. 61	1.8 – Rolling for Prisms Activity Card 9 – MM 27
1.9 – Reviewing an Area Formula p. 67	1.9 – Finding dimensions for given volume Activity Card 10.	1.9 - Vocabulary Activity p. 67	1.9 – Using volume formulas MM 29
1.10 – Converting Linear Measurements MM 31	1.10 – Packing Cubes in a Box – MM 32	1.10 – Math Message Activity p. 73	1.10 – Estimating the volume of a classroom. Activity Card 11.
1.11 – Using cubes to find volume activity p. 79	1.11 – Estimating Volume of a Classroom Object Activity Card 12	1.11 - Math Message Activity p. 79	1.11 – Adding to find volume. Activity card 13.
1.12 Choosing volume strategies p. 85	1.12 – Creating Prism pile up cards. Activity Card 14.	1.12 – Math Message Discussion p. 85	1.12 – Solving Volume Problems MM 37

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 2 OVERVIEW** **Unit Title:** Whole Number Place Value and Operations

Unit Description and Objectives:

In this unit, students explore patterns in the base-10 place value system and ways of representing large numbers. They apply their understanding of place value when estimating and computing with multidigit whole numbers. Students are introduced to U.S. traditional multiplication and review partial quotients division.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations Students will understand that:**	**Guiding Questions**
How can numbers be expressed, ordered and compared? How does the positon of a digit in a number affect its value? How are place value patterns repeated in numbers? How are units within the same system (customary/metric) related? What appropriate methods/units of measurement are necessary to produce solutions to real world problems? How does the metric system relate to multiples of 10? What are efficient methods for finding products and quotients?	Numbers can represent quantity, position, location and relationships. Place value is based upon groups of ten. Identify place value positions. Proficiency with basic facts aids estimation and computation of large and small numbers. Computation involves taking apart and combining numbers using a variety of strategies and approaches.	How do place values compare? What patterns can we identify in the places of numbers? How does the position of a number determine its value? What is the purpose of the decimal place? How are decimal numbers different from whole numbers? What methods can be used to solve mathematical/real world problems? How can we determine which skills or strategies can be used to simplify the problem solving process? How can we determine reasonable results when solving problems? How do we know whether to estimate or compute for exact answers? How does partitioning of numbers and using flexible methods make computation easier?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Measurement and Data

Sub-Concept/Topics:

Number and Operations in Base 10

Sub-Concept/Topics:

Understand Place Value System

Theme:

Whole Number Place Value and Operations

Conceptual Lens:

Refer to pp. 98 in teacher manual for mathematical concepts and topics

Sub-Concept/Topics:

Convert Measurement units

Sub-Concept/Topics:

Perform operations with multidigit whole numbers and with decimals.

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Guide Grade 5
Unit Number/Title: Unit 2
Conceptual Lens: Whole numbers, place value and operations
Appropriate Time Allocation (# of Days)**:** 16 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.OA.2	5.NBT.1	5.NBT.2	5.NBT.5
5.BT.6	5.MD.1	SMP1	SMP7
SMP2			

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Understand Place Value Explore exponents and Powers of 10 Practice traditional multiplication Division Mastery Interpreting Remainders	Identify values of digits in a multidigit number. Write numbers in expanded form. Represent powers of 10 in exponential notation. Explain patterns when multiplying by a power of 10. Multiply with U.S. traditional multiplication. Divide multidigit numbers. Interpret a remainder in a division problem.	**2.1** Explore the multiplicative relationships between places in multidigit numbers. **2.2** Explain patterns the number of zeros when multiplying by powers of 10. Use whole number exponents to denote powers of 10. **2.3** Estimates with powers of 10 to solve multiplication problems and check the reasonableness of products. **2.4** Students use U.S. traditional multiplication to multiply 2 digit numbers by 1 digit numbers. **2.5** Use traditional multiplication to multiply multidigit numbers by 1 – digit numbers. **2.6** Use unit conversions within the U.S. customary system to solve multistep problems.	***TM pgs. 98-205*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 2.1–– 2.13 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **2.2 – Science** *Solar System Sightseeing. Activity Card 16.MM 45-46.* **2.3 – Social Studies** **Freight Train Wrap Around Activity Card 17** *Using a map of the United*	**Unit 2** **Volume and Area** **Pages 98-205** *See page 100 for a detailed list of materials for Unit 2.* *** Additional Materials Needed for Advanced Preparation** • Poster paper • Stopwatch • 6 sided die • Practice Poster – Guidelines for Discussion • Colored Pencils	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 2 Progress Check Quizzes Assessment Check in **Summative Assessment(s)** Lesson Warm Up Slate Assessments Games: Number Top-It High-Number Toss Power Up Multiplication Top-It Baseball Multiplication Prism Pile Up Multiplication Wrestling Name That Number Division Dash Division Arrays Division Top It Buzz

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		2.7 Use U.S. traditional multiplication to multiply 2-digit numbers by 2-digit numbers. **2.8** Use U.S. traditional multiplication to multiply multidigit numbers. **2.9** Estimate how much time it would take to tap their desks one million times. Examine solutions using a rubric and in class discussion. **2.10** Students use the relationship between multiplication and division to mentally divide multidigit numbers. **2.11** Review and practice strategies for using partial quotients division to divide whole numbers. **2.12** Use lists and multiples to find and choose partial quotients. **2.13** Solve division number stories and practice interpreting remainders.	*States, students measure freight train weight and distance travelled.* **Lesson 2.5 – Physical Education** **Multiplication Baseball** **MM G3** *Students practice multiplication facts by playing Multiplication Baseball. The rules of the game should be explained and modeled.* **Lesson 2.9 – Science** **One Million Taps** **TM -160-169** *Students form a hypothesis and prove or disprove by experimentation with One Million Taps.* **2.12 – Science** **Exploring Life Spans** **TM 185 – MM 67** *To practice division, students convert ages of world's oldest people and animals from days to years.*		*opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for investigation.		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
2.1 – Modeling numbers with Base 10 blocks p. 111.	2.1 – Explore Base 5 Place Value. MM 43	2.1 – Vocabulary Activity p. 111	2.1 – Calculating to explore place value relationships Activity Card 15 MM TA5
2.2 - Exploring Multiplication by Powers of 10. Activity p. 117	2.2 – Solar system sightseeing. Activity Card 16 MM 45-46	2.2 –Vocabulary card Activity pp. 117	2.2 – Playing Power Up SRB p XXX
2.3 – Practicing extended multiplication facts. SRB p. XXX and MM 48	2.3- Freight Train Wrap Around. Activity card 17.	2.3 - Using concrete objects. P. 123	2.3 – Playing multiplication top-it extended facts. SRB XXX
2.4 – Reviewing partial products multiplication SRB p. XXX	2.4 – Using Place Value to Multiply. MM 50	2.4 – Vocabulary activity p. 129	2.4 Practicing multiplication strategies Activity card 18.
2.5 – Playing multiplication baseball. SRB p. XXX, MM G3	2.5 – Multiplying Larger Numbers MM 52	2.5 – Vocabulary activity p. 135	2.5 – Multiplication Number Stores Activity Card 19, MM 53
2.6 – Counting to convert inches to feet. Activity p. 141	2.6 – Writing Unit Conversion Number Stories. Activity Card 20. MJ p. 52	2.6 – Review common conversion p. 141	2.6 – Converting Units. Activity card 21. SRB XXX
2.7 – Multiplication Wrestling SRB XXX and MM G12	2.7 – Using an ancient multiplication strategy MM 56-57	2.7 – Modeling items p. 147	2.7 – Practicing US traditional multiplication MM 58
2.8 – U.S. Traditional Multiplication Practice p. 155	2.8 – Comparing multiplication strategies Activity card 22.	2.8 Review of algorithm p. 155	2.8 – Playing Multiplication Top It. SRB p XXX
2.10- Playing Division Arrays SRB XXX	2.10 – A New Division Strategy Activity Card 23.	2.10 – Using objects to explain division p. 171	2.10 – Renaming dividends to divide mentally. Activity Card 24.
2.11 – Drawing area models for division p. 177	2.11- Dividing to convert units of length. Activity card 25.	2.11 – Reviewing division p. 177	2.11 – Playing Division Top it p. 177
2.12 – Playing Buzz SRB p. XXX	2.12 – Exploring Life Span MM 67	2.12– Vocabulary activity p. 185	2.12 – Dividing with list of multiples. Activity Card 26
2.13 – Thinking about remainders in context MM 70	2.13 – Writing Division Number Stories Activity Card 27. MM TA11	2.13 – Vocabulary activity p. 191	2.13 – Interpreting remainders in division number stories MM 71

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 3 OVERVIEW** **Unit Title:** Fraction concepts, addition and subtraction

Unit Description and Objectives:

In this unit, students build on fraction concepts from previous grades to understand fractions as division. They also use visual models to make estimates, add and subtract fractions and mixed numbers, and check the reasonableness of their answers. Finally, students explore strategies for solving fraction-of problems.

Essential Questions and Enduring Understandings:

Essential Questions:	Enduring Understandings/Generalizations Students will understand that:	Guiding Questions
How will knowing how to use fractions help me solve complex mathematical problems? How can I find out whether fractions are equivalent? What are a common factor and the greatest common factor? How do I add mixed numbers? How can I subtract fractions with like and unlike denominators? How can I subtract mixed numbers? How are the four operations related to each other?	Fractions are connected to decimals. Understanding decimals enables me to perform the mathematics I need for higher level problems. I can find out if fractions are equivalent by drawing pictures. A number of a factor of two or more numbers is a common factor. The greatest number that is a factor of two or more numbers is the greatest common denominator. I can add mixed numbers by writing each mixed number as an improper fraction; then convert them to have like denominators; finally, add the fractions and write the answer in simplest form. I can subtract fractions with like denominators by keeping the denominator the same and subtracting the numerator. I can subtract with unlike denominators by finding the least common denominator and then subtract. I can subtract mixed numbers by writing them as improper fractions and convert them so they have like denominators. Fractions and decimals represent a relationship between two or more numbers.	Why does your method for comparing fractions work? Why do you need different methods for different fraction comparisons? How do you use estimation to check your answers? Why is it important to understand the meanings of pictures and other representations? How do you check to make sure that your solutions are correct? Why is it useful to know more than one strategy for solving problems?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Numbers and Operations Fractions

Sub-Concept/Topics:

Using equivalent fractions to add and subtract fractions

Sub-Concept/Topics:

Apply and extend previous understandings of multiplication and division to multiply and divide fractions

Theme:

Fraction Concepts, Addition and Subtraction

Conceptual Lens:

Refer to page 206 in teacher manual for mathematical content and topics.

Sub-Concept/Topics:

Use appropriate tools strategically

Sub-Concept/Topics:

Look for and express regularity in repeated reasoning

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Grade 5
Unit Number/Title: Unit 3
Conceptual Lens: Fraction Concepts – Addition and Subtraction.
Appropriate Time Allocation (# of Days): _____

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.NF.1	5.NF.2	5.NF.3	5.NF.4
5.NF.4a	5.NF.6	SMP3	SMP4
SMP7	SMP8		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Connecting fractions to division. Interpreting remainders. Fraction estimation Renaming fractions as mixed numbers. Addition and Subtraction of Fractions Solving Fraction Number Stories Fraction-Of Problems.	Use visual models to solve division number stories with fractional answers. Report the remainder to a division problem as a fraction. Place a fraction on a number line. Estimate answers to fraction addition and subtraction problems. Rename fractions and mixed numbers using the same denominator. Use visual models to add and subtract fractions and mixed numbers. Use visual models to solve fraction addition and subtraction number stories. Solve Fraction of problems.	**3.1** Solve division number stories that lead to fractional answers. **3.2** Solve division number stories and write number models to build an understanding of fractions as division. **3.3** Apply understanding of fractions as division to report remainders as fractions. **3.4** Use number lines to represent, compare and rename fractions. **3.5** Play fraction Top It to devise a rule for making the largest possible fraction. Discuss whether other students' rules work and revise individual rules. **3.6** Use fraction number sense to estimate and assess the reasonableness of answers to fraction addition and subtraction problems. **3.7** Use benchmarks to estimate sums and differences of	***TM pgs. 206-317*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 3.1—3.14 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **3.1 – Art** **Revisiting Fraction Circle Pieces. TM 219, MM 79** *Students draw and color visual models to represent fair share number stories.* **3.5 – ELA** **Game Strategies TM 246-255**	**Unit 3** **Fraction Concepts, Addition and Subtraction** **Pages 206-317** *See page 208 for a detailed list of materials for Unit 3.* *** Additional Materials Needed for Advanced Preparation** • Fraction circles • Scissors • Post-it notes • Index Cards • Poster Paper • String	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 3 Progress Check Quizzes Operation Time Tests **Summative Assessment(s)** Math Messages Slate Review Games: Power Up Prism Pile Up Multiplication Top It Build It Fraction Spin Rename that Mixed Number Division Dash Fraction Capture Fraction of Number Top It

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		fractions. **3.8** Rename mixed numbers and fractions greater than 1 by composing and breaking apart wholes. **3.9** Explore strategies and tools for adding and subtracting fractions and mixed numbers. **3.10** Use fraction circle pieces to generate equivalent fractions and add fractions. **3.11** Play Fraction Capture to practice breaking apart and adding fractions. **3.12** Identify problem solving strategies and solve a variety of fraction number stories. **3.13** Solve fraction-of problems to build readiness for multiplying fractions by whole numbers. **3.14** Solve fractions-of problems with fractional answers to continue building readiness for multiplying fractions by whole numbers.	*Students construct a detailed open response to open response problem. Peers edit and groups revise.* **3.12 – Practical Art Making Minestrone TM 293, MM 109** *Students create and utilize a recipe for Minestrone Soup to practice fraction number stories.*		*opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for investigation.		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
3.1 – Revisiting Fraction Circle Pieces MM 79	3.1 – Looking for Patterns in Fair Share Number Stories MM 78	3.1 – Vocabulary Activity p. 219	3.1 – Solving Fair Share Number Stories Activity Card 28
3.2 - Reviewing the meaning of operations activity p. 225	3.2 – Exploring relationships in number stories MM 81	3.2 – Vocabulary Activity p. 219	3.2 – Writing Fraction Number Stories. Activity card 29, MJ 75, MM TA11
3.3 – Modeling Fractional remainders p. 233	3.3 – Share a cost MM 85	3.3 – Vocabulary Activity p. 233	3.3 –Activity Card 30 Remainder Tic-tac Toe
3.4 – Building Number Lines MM 87	3.4 – Exploring Fractions of a Ruler MM 88	3.4 – Find and Locate vocabulary p. 239	3.4 – Renaming and Comparing Fractions and Mixed Numbers Activity Card 31
3.6 – Developing Fraction Number Sense SRB XXX-XXX	3.6 – Increase-Decrease Activity Card 32	3.6 – Calculator Practice p 257	3.6 – Identifying unreasonable answers MM 95
3.7 – Using fraction circles to place fractions on a number line. MM97	3.7 – Playing Fraction Top-It Activity Card 33	3.7– Using think aloud statements activity pp. 263	3.7 – Using benchmarks to estimate sums and differences. MM 98
3.8 – Renaming Whole Numbers activity p. 269	3.8 – Finding a rule for number names. MM 100	3.8 – Vocabulary Activity p. 269	3.8 – Renaming mixed numbers. Activity Card 34
3.9 - Counting by unit fractions activity p. 275	3.9 – Writing fraction stories MM TA11	3.9 – Fraction vocabulary activity p. 275	3.9 – Solving Fraction number stories. Activity Card 35
3.10- Representing fractions with fraction circle pieces activity p. 281	3.10 – Finding fractions that sum to 1. Activity card 36 and MM 105	3.10- Using think alouds activity p. 281	3.10- Finding fraction problems that do not belong. MM 106
3.11 – Writing fractions as sums of unit fractions activity p. 287	3.11- Playing Break it Up! Activity card 27.	3.11 Vocabulary activity p. 287	3.11 – Breaking apart fractions. Activity card 28.
3.12 – Creating a menu of fraction operations. MJ 1- back pages Unit 3	3.12 – Working backward to write fraction number stories. Activity card 39,	3.12 – Number story discussion p. 293	3.12 – Making Minestrone activity MM 109 and TA 20
3.13 - Reviewing flexibility of the whole activity p. 299	3.13 – Interpreting representations. MM 111	3.13 – Vocabulary activity p. 299	3.13- Solving Fraction-Of problems. Activity Card 40.

UNIT OVERVIEW

Course Title: Everyday Math 4 – Grade 5

Unit #: **UNIT 4 OVERVIEW** **Unit Title:** Decimal Concepts and Coordinate Grids.

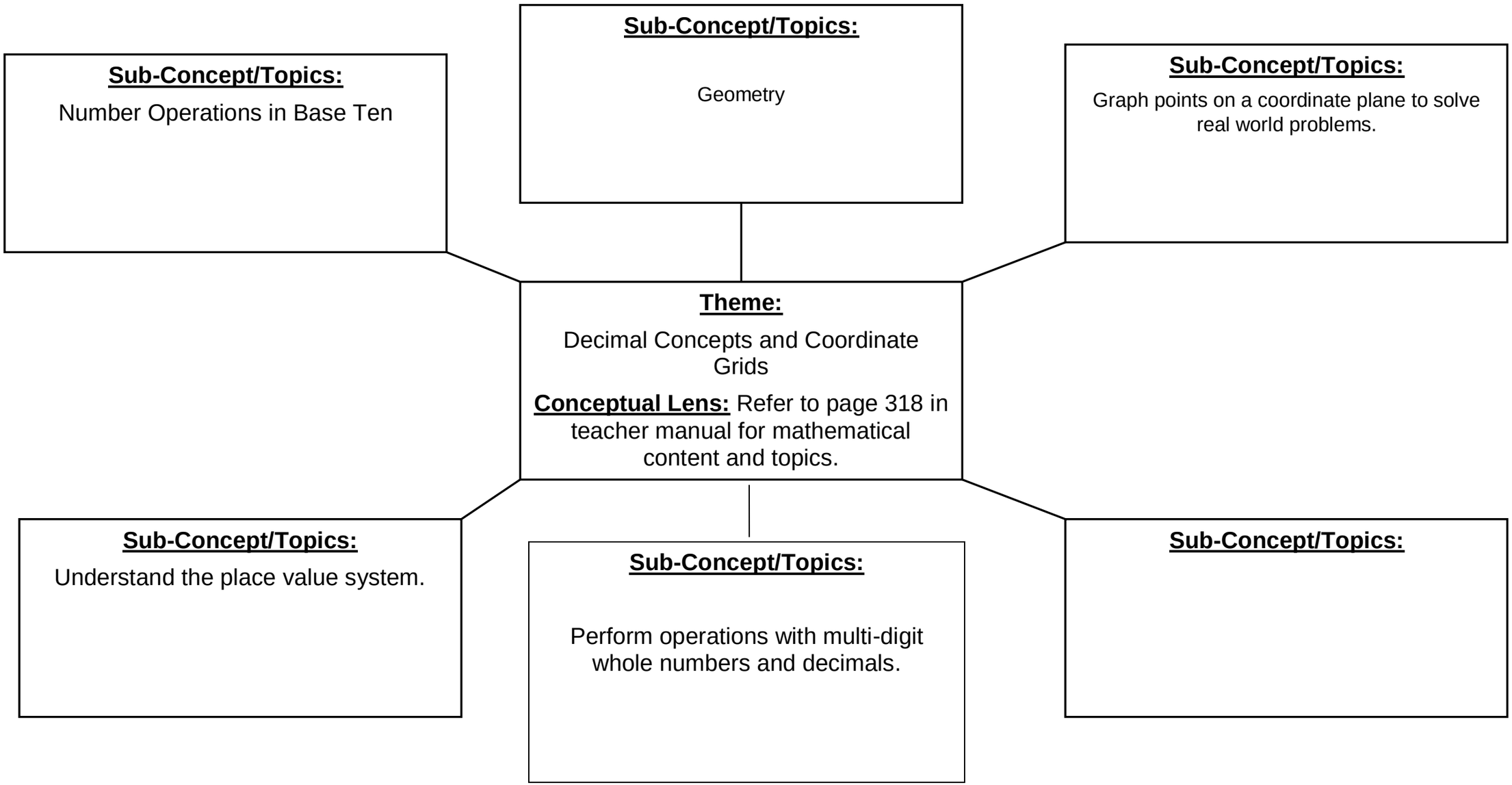
Unit Description and Objectives:

In this unit, students extend their understanding of the base-10 place value system to include decimals. They read, write and represent decimals though thousandths in a variety of ways and learn strategies to compare, order and round decimals. Students are also introduced to the first quadrant of the coordinate grid. Finally, they apply whole number algorithms to add and subtract decimals.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations Students will understand that:**	**Guiding Questions**
How can I write quotients as equations? How can I read and write decimals? How do I compare decimals? How do I round decimals? What are different ways to display data? How can data be used to answer questions? Why is it important to organize data? How are coordinates used to find a point a point on a plane?	I can use models to understand decimals. I can read a decimal number from left to right; the number to the right of the decimal is the whole number. I can use place value to write decimals in expanded form. I can compare decimals by looking at each value from left to right. I can round decimals the same way I round whole numbers. I can use place value to add or subtract decimals. Points, lines and planes are the foundation of geometry. Ordered pairs show an exact location on an ordered plane.	What does the denominator represent in a fraction? What does the numerator represent in a fraction? How can addition/subtraction of fractions be represented by objects, pictures, words and numbers? What are real world situations when fractions are used to represent numbers? What are real world situations when decimals are used to represent numbers? How can and decimals be written in equivalent forms? What kinds of models can be used to represent and decimals? What are different ways to display data? How can data be used to answer questions? Why is it important to organize data? How are coordinates used to find a point a point on a plane? How do you remember the rules for plotting an ordered pair?

UNIT GRAPHIC ORGANIZER



CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Grade 5
Unit Number/Title: Unit 4
Conceptual Lens: Decimal Concepts – Coordinate Grids
Appropriate Time Allocation (# of Days)**:** 18 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.NBT.1	5.NBT.3a	5.NBT.3b	5.NBT.4
5.NBT.7	5.G.1	5.6.2	SMP1
SMP2	SMP6	SMP7	

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know :)**	**Skill Objectives (Students Will Be Able To :)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
Decimal Place Value Comparing and Ordering decimals Rounding Decimals Solving Problems on a Coordinate Grid Decimal Addition and Subtraction.	Read and write decimals in words, numbers and expanded form. Compare decimals. Round decimals. Plot points on a coordinate grid. Use a coordinate grid to answer questions and solve problems. Shad grids to add and subtract decimals. Use algorithms to add and subtract decimals.	**4.1** Extend place value patterns to decimals and practice reading and writing decimals to the thousandths. **4.2** Represent decimals to the thousandths place using base 10 numerals, number names, fractions, and thousandths grids. **4.3** Introduction to expanded form of decimals. **4.4** Use place value strategies to compare decimals to the thousandths. **4.5** Use number lines and place value understanding to round decimals to a given place. **4.6** Introduce coordinate grids and use ordered pairs to plot and identify points. **4.7** Play Hidden Treasure to practice plotting points on a coordinate grid. **4.8** Represent mathematical problems on a coordinate grid by plotting points to	***TM pgs. 318-431*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 4.1—4.14 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **Lesson 4.4 – Physical Education** **Exploring Batting Averages MM 129 TM 351** *Students utilize current batting averages of local sports teams to extend knowledge of fractions.* **Lesson 4.6 – Social Studies** **Creating Designs with**	**Unit 4** **Decimal Concept and Coordinate Grids** **Pages 318-431** *See page 320 for a detailed list of materials for Unit 4.* *** Additional Materials Needed for Advanced Preparation** • Fraction circles • Number cards • Paper Clip • Colored pencils • Road Maps • Political Maps • Money – Bills • Money –coins	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 4 Progress Check Quizzes Operation Time Tests **Summative Assessment(s)** Math Messages Slate Activities Games: Fraction of Fraction Capture Decimal Top-it Rename that Mixed Number Over and Up Squares Hidden Treasure High Number Toss Decimal Top-it Prism Pile-Up Speed and Save

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		form pictures and applying rules to ordered pairs. **4.9** Form ordered pairs, graph them, and interpret coordinate values in context. **4.10** Develop and apply a rule to enlarge a picture on a coordinate grid. Discuss rules and pictures to revise work. **4.11** Shade grids to represent and sole decimal addition and subtraction problems. **4.12** Review whole number addition algorithms and use them to add decimals. **4.13** Review whole number subtraction algorithms and use them to subtract decimals. **4.14** Apply decimal addition and subtraction strategies to add and subtract money.	**Coordinate Grids. TM 365, MM 137-138** *Students practice plotting and reading coordinate grids utilizing a map of the cities in Ireland.* **4.7 – Social Studies** **Using Latitude and Longitude TM 371 and Activity Card 49** *Using a sampling of world maps, students deepen understanding of coordinate pairs by using latitude and longitude. Activity Card 49.* **4.10- Art** **Folder Art Activity. TM 388-396** *Folder Art – Open response activity provides the students will the tools to enlarge a drawing to scale using coordinate grids.*		*opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for investigation.		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
4.1 – Representing Time 10 Patterns activity p. 331	4.1 – Writing many names for decimals. MM 122	4.1 – Pattern vocabulary activity p. 331	4.1 – Reading and writing decimals. Activity Card 42 and MM 121.
4.2 – Using place value to interpret decimals to hundredths MM TA 22 and TA24.	4.2 – Exploring decimals with metric units. MM 124	4.2 –Vocabulary activity p. 339	4.2 – Representing decimals with thousandths grids. Activity card 43 and MM TA23
4.3 – Identifying the value of a digit activity. MM TA24,	4.3 –Exploring decimals through the millionths. MM 126-127.	4.3 – Vocabulary activity p. 345	4.3 – Using expanded form. Activity card
4.4 – Testing ideas about digits activity p. 351	4.4 – Exploring batting averages. MM 129	4.4 – Reviewing greater than and less than, p. 351	4.4 – Playing Build-it Decimal version. Activity card 45 and MM G15
4.5 – Relating shaded grids to a number line. MM 131.	4.5 – Rounding repeating decimals. MM 132	4.5 - Physical response prompts page 357	4.5 – Spinning to round, Activity card 46 and MM 133
4.6 – Exploring map features activity, page 365	4.6 – Created designs with decimal coordinates MM137-138 and TA28	4.6 – Vocabulary activity p. 365	4.6 – Plotting your initials. Activity card 47 and MM136 TA28
4.7 – Plotting people and objects on a floor grid activity, page 371	4.7 – Using latitude and longitude. Activity card 49 and MM 141-142	4.7 – Vocabulary activity p. 371	4.7 – Playing blocks to the Target Activity card 48.
4.8 – What's my Rule? MM 144	4.8 – Connect the Dots Challenge. Activity card 50	4.8 – Vocabulary activity p. 377	4.8 – Plotting a mystery word. MM 145 and TA28
4.9 – Matching graphs to contexts. MM 147	4.9 – Finding rules for graphs. MM 148	4.9 – Vocabulary activity p. 383	4.9 – Interpreting data from a grid. Activity Card 51 and MM 149
4.11- Exchanging base 10 blocks. MM TA22	4.11- Writing decimal addition and subtraction fact families. Activity card 53 and MM TA22	4.11- Introduce multiple contexts for the word grid, p. 399	4.11 Solving more decimal addition and subtraction problems with grids. MM TA22
4.12 – Reviewing addition algorithms. SRB xxx-xxx	4.12 – Adding Times. Activity card 54	4.12 – Building background knowledge p. 407	4.12 – Playing Decimal Top-It. SRB xxx
4.13 – Reviewing subtraction algorithms. SRB xxx-xxx	4.13 – Making a Big Difference. Activity card 55.	4.13 – Demonstrating counting up, page 413	4.13 –Playing decimal top-it TA23 and TA25.
4.14 – Connecting money to decimals, page 419	4.14 – Playing a variation of spend and save. SRB xxx, MM G27	4.14 – Role play of math message, p. 419	4.14 Adding and subtracting of money amounts. Activity card 56.

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 5 OVERVIEW** **Unit Title:** Operations with Fractions

Unit Description and Objectives:

In this unit, students deepen their understanding of fractions and develop strategies for addition and subtracting fractions and mixed numbers with unlike denominators. They also connect fraction-of thinking to multiplication and generalize a fraction multiplication algorithm. Finally, students are introduce to fraction division.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
How can I multiply fractions and mixed numbers? How can I divide fractions? How do I add mixed numbers? How can I subtract fractions with like and unlike denominators? How can I subtract mixed numbers? How are common fractions alike and different?	Fractions are connected to decimals Understanding decimals enables me to perform the mathematics I need for higher level problems. I can find out if fractions are equivalent by drawing pictures. A number of a factor of two or more numbers is a common factor. The greatest number that is a factor of two or more numbers is the greatest common denominator. I can add mixed numbers by writing each mixed number as an improper fraction; then convert them to have like denominators; finally, add the fractions and write the answer in simplest form. I can subtract fractions with like denominators by keeping the denominator the same and subtracting the numerator. I can subtract with unlike denominators by finding the least common denominator and then subtract. I can subtract mixed numbers by writing them as improper fractions and convert them so they have like denominators.	How can a whole number be represented by fractional parts of equal sized portions? What is an equivalent fraction? What fractional expressions can be used to represent numbers greater than one? How can you create equivalent fractions? How do you create an equivalent mixed number for an improper fraction? How can an improper fraction be generated from a mixed number? What methods can be used to compare fractions? How are common denominators used to compare fractions? What does the denominator represent in a fraction? What does the numerator represent in a fraction?

		How can addition/subtraction of fractions be represented by objects, pictures, words and numbers? What are real world situations when fractions are used to represent numbers?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Number and Operations

Fractions

Sub-Concept/Topics:

Use equivalent fractions

Sub-Concept/Topics:

Use algorithms for operations of fractions

Theme:

Operations with Fractions

Conceptual Lens:

Refer to page 432 in teacher manual for mathematical content and topics.

Sub-Concept/Topics:

Finding Common Denominators

Sub-Concept/Topics:

Solve Fraction-Of Problems

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Grade 5
Unit Number/Title: Unit 5
Conceptual Lens: Operations with Fractions
Appropriate Time Allocation (# of Days)**:** 18 days

5.NT.5	5.NF.1	5.NF.2	5.NF.4a
5.NF.4b	5.NF.5	5.NF.7	SMP3
SMP4	SMP6	SMP7	

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know :)**	**Skill Objectives (Students Will Be Able To :)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
Finding Common Denominators Addition of Mixed Numbers and Fractions Subtraction of Mixed Numbers and Fractions Fractions of Fractions Fraction Multiplication Fraction Division	Find common denominators. Add and subtract mixed numbers and fractions with unlike denominators. Multiply fractions by whole numbers. Multiply fractions using paper folding, area models or an algorithm. Explain why multiplying a fraction by a fraction equal to 1 gives an equivalent fraction. Divide a unit fraction by a whole number. Divide a whole number by a unit fraction.	**5,1** Use equivalent fractions t**o** find common denominators and solve problems. **5.2** Practice strategies for finding common denominators. Use common denominators to add and subtract fractions**.** **5.3** Solve problems involving the addition of fractions and mixed numbers. **5.4** Solve problems involving the subtraction of fractions and mixed numbers. **5.5** Solve fraction of problems and connect these problems to multiplication of fractions by whole numbers. **5.6** Discuss and apply strategies for multiplying fractions by whole numbers. **5.7** Apply and extend knowledge of finding fractions of whole numbers to find fractions of fractions. **5.8** Use area models to find	***TM pgs. 432-534*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 5.1—5.14 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **5.1 – Practical Arts** **Recipe Equivalents, TM 445, MM 167** *Students use a variety of recipes to find equivalent fractions with common denominators. MM 167*	**Unit 5** **Operations with Fractions** **Pages 432-534** *See page 434 for a detailed list of materials for Unit 5.* *** Additional Materials Needed for Advanced Preparation** • Fraction circles • Six sided die • Scissors • Glue • Tape • Poster/chart paper • Coins	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will*	5.NF.1 5.NF.2 5.NF.3 5.NF.4 5.NF.4a 5.NF.4b 5.NF.5 5.NF.5a 5.NF.5b 5.NF.6 5.NF.7 5.NF.7a 5.NF.7b 5.NF.7c **Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 5 Progress Check Quizzes Operation Time Tests **Summative Assessment(s)** Assessment Check in Math Messages Slate Activities Games: Decimal Top-it Hidden Treasure Buzz or Bizz-Buzz Build-it Fraction Of Fraction Top-it Division Top-it Multiplication Top –it Fraction Top-it Spend and Save

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		fraction products. **5.9** Use area models to understand and apply an algorithm for fraction multiplication. **5.10** Solve a fraction number story by interpreting a drawing that models the situation. **5.11** Relate the multiplication rule for equivalent fractions to the effect of multiplying by 1. **5.12** Create story contexts for fraction multiplication problems **5.13** Use visual models to divide unit fractions by whole numbers. **5.14** Use visual models to divide whole numbers by unit fractions.	**5.8 – Science** **Designing a Community Park TM 489, MM 188** *Students analyze two detailed park blueprints to design a community park. MM 188* **5.10- ELA** **Sharing Breakfast. TM 500-507** *Students construct a detailed written open constructed response. Receive feedback from peers and revise and edit response as necessary.*		*provide students with the opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					investigation. Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
5.1 – Reviewing the multiplication rule for equivalent fractions. MM 166	5.1 –Recipe equivalents. MM 167	5.1-Vocabulary activity p. 445	5.1 – Finding a common denominator. Activity card 57
5.2 - Playing Buzz or Bizz Buzz SRB 294	5.2 – Playing Build it with common denominators. Activity card 58, SRB 293	5.2 – Use visual aids and role play to practice vocabulary p. 451	5.2- Practicing with common denominators. MM 169
5.3 – Renaming fractions greater than one as mixed numbers. MM 171	5.3 – Exploring a pattern for fraction addition. MM 174	5.3- Use visual aids to introduce vocabulary, p. 459	5.3 – Adding fractions and mixed numbers to get four in a row. Activity card 59, MM 172-173
5.4 – Renaming mixed numbers. MM 176	5.4 – Exploring a pattern for fraction subtraction. MM 177	5.4 – Use think alouds and pictures to review vocabulary p. 465	5.4 – Subtracting fractions and mixed numbers to get three in a row. Activity card 60.
5.5 – Reviewing fraction-of problems with unit fractions activity p. 471	5.5 – Solving fill in the blank fraction-of problems. MM 181	5.5 – Build on prior knowledge p. 471	5.5 – Solving fraction-of problems. Activity card 61.
5.6- Reviewing division strategies activity p. 477	5.6 – Predicting sizes of products. Activity card 62.	5.6 – Vocabulary activity p. 477	5.6 – Multiplying whole numbers and fractions. Activity card 63
5.7 – Labeling fractions on folded paper activity p. 483	5.7 – Solving a multistep fraction of problem. MM 184	5.7 – Vocabulary activity p. 483	5.7 – Finding fractions of fractions. Activity Card 64, MM G24
5.8- Labeling fractions on a number line. MM 187	5.8 – Designing a community park. MM 188	5.8 – Vocabulary activity p. 489	5.8 – Using area models to multiply fractions. Activity card 65 and MM 186
5.9 – Looking for patterns in area models. MJ 178-179	5.9 – Multiplying fractions greater than 1. MM 190	5.9 – Vocabulary activity p. 495	5.9 – Using an algorithm to multiply fractions. Activity card 66, MM TA30
5.11 – Revisiting the multiplication rule for equivalent fractions MM 195	5.11- Explaining a division rule for equivalent fractions MM 196	5.11 – Using visual aids to explore vocabulary p. 511	5.11- Comparing factors and products. Activity Card 67, MM 197
5.12 – Creating realistic number stories activity. P. 517	5.12 – Comparing story contexts MM 201	5.12 – Vocabulary activity p. 517	5.12 – Writing and solving fraction number stories Activity Card 68 , MM TA11
5.13 – Reviewing the relationship between multiplication and division activity p. 523	5.13 – Exploring division with non-unit fractions. MM 204	5.13 – Introduction of vocabulary terms p. 523	5.13 – Diving unit fractions by whole numbers. Activity card 69
5.14 – Finding the number of groups activity p. 529	5.14 – Dividing fractions by fractions MM 206	5.14 – Vocabulary activity p. 529	5.14 – Dividing whole numbers by unit fractions. Activity card 70.

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 6 OVERVIEW** **Unit Title:** Investigations in Measurement: Decimal Multiplication and Division

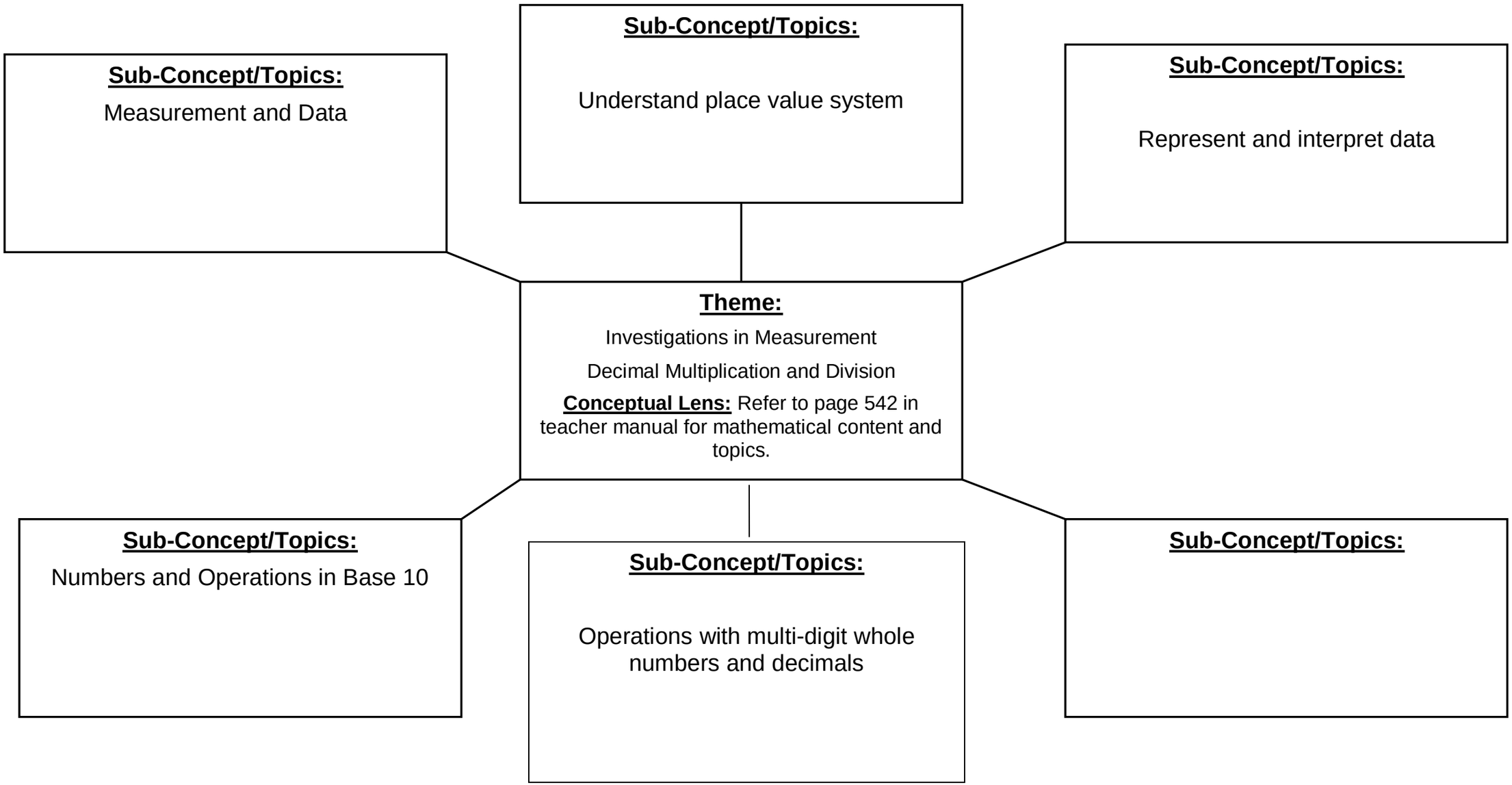
Unit Description and Objectives:

In this unit, students apply their understanding of place value to multiply and divide decimals by powers of 10. They investigate how patterns in used to convert powers of 10 can be used to convert measurements in metric units, learn how line plots can be used to organize and analyze measurement data, and explore of method of finding volumes of figures that are not rectangular prisms. Students also extend whole-number methods to multiply and divide decimal.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
How can I use multiples? What are the key words to look for when I choose multiplication to solve a problem? How can I divide whole numbers? How can I add or subtract decimals? How do I multiply decimals? How do I divide decimals? How can I apply what I have learned about measurement? What are different ways to display data? How can data be used to answer questions? Why is it important to organize data? How are coordinates used to find a point a point on a plane?	I can remove zeros from the factors to compute multiples. The key words to look for when I am choosing multiplication are: times, of, twice, and product. When I divide whole numbers, multiplication and division are inverse operations. When I divide, I can user the result to write an equation that represents the dividend. I can use models to understand decimals. I can use a pattern to multiply a decimal number by 10, 100 or 1,000. I can multiply decimals by doing the same process as whole numbers and then finding the total number of decimal places in the factors; finally I can count that many places from the right n the product to place the decimal point. I can use the relationship between multiplication and division to understand decimal division. A line plot shows how closely grouped together or how spread out over a range the data are. I can use line plots to solve problems in possibly more than one operation.	Why it is important to know the value of each digit? Why do we compare numbers? What do commas and decimal points mean in numbers? When might you add, subtract or multiply decimal numbers in real life? What do numbers on the left hand side of the decimal point represent?

UNIT GRAPHIC ORGANIZER



CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Grade 5
Unit Number/Title: Unit 6
Conceptual Lens: Investigations in Measurement and Decimal Multiplication
Appropriate Time Allocation (# of Days)**:** 16 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.NBT.1	5.NBT.2	5.NBT.6	5.NBT.7
5.MD.2	5.MD.3	5.MD.5	SMP1
SMP2	SMP4	SMP6	

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
Multiplying and Dividing Decimals by Powers of 10. Converting Measurements in the metric system. Line Plots Working with data in line plots. Applying Volume Concepts Multiplication of Decimals Division of Decimals	Multiply and divide decimals by powers of 10. Convert between measurement units in the metric system. Represent fractional data on line plots. Answer questions about data on line plots. Estimate answers to decimal multiplication and division problems. Multiply decimals Divide decimals.	**6.1** Use a calculator to multiply and divide decimals by powers of 10. **6.2** Exponent Ball – to practice dividing and multiplying decimals by powers of 10. **6.3** Apply understanding of multiplication and division by powers of 10. **6.4** Create line plots to display measurement data in fractions of a unit. **6.5** Use information presented in line plots to solve problems. **6.6** Apply knowledge of volume concepts to calculate volume of a building. **6.7** Use displacement to measure volumes of objects. **6.8** Use estimation and number sense to predict the relative size of decimal products and quotients. **6.9** Learn two strategies for solving decimal	***TM pgs. 542-645*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 6.1—6.14 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **Lesson 6.1 – Science Multiplying and dividing by powers of 10. TM 555, Activity Card 71.** *Students explore the number of times a human heart beats and illustrates finding in exponential*	**Unit 6 Measurement Decimal Multiplication and Division Pages 542-645** *See page 544 for a detailed list of materials for Unit 6.* *** Additional Materials Needed for Advanced Preparation** • Base Ten Blocks • Base Ten flats • Tape measure • 6 sided die • Coins • Connecting cubes • Centimeter Ruler • Rubber Bands • Index cards • Chart Paper • Scissors	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 6 Progress Check Quizzes Operation Time Tests **Summative Assessment(s)** Assessment Check in Math Messages Slate Activities Games: Exponent Ball Decimal Top-It Prism-Pile Up Doggone Decimal Spend and Save Division Top-It Fraction Top-It

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		multiplication problems. **6.10** Solve a multistep number stories using decimals and explain why answers make sense. **6.11** Discuss how estimation can used to place the decimal point when dividing decimals by whole numbers. **6.12** Create equivalent problems to solve division problems involving decimal dividends and divisors. **6.13** Collect reaction time data and create a line plot.	*notation.* **Lesson 6.2 – Science Comparing Animal Weights TM 563, MM 214** *Using a variety of animal weights, students practice multiplication and division by evaluating scientific data.* **Lesson 6.3 – Science Converting Distance to the Moon. TM 569, MM 216.** *Students practice converting metric units by utilizing scientific data about the location and distance of planets.* **Lesson 6.5 – Physical Education Comparing Diving Scores, TM 581, MM 222-223** *Students utilize data of* competitive *divers to* extend work on creating *and analyzing line plots.* **Lesson 6.10 – ELA Fundraising Activity – TM 610-617** *Students write an open response on the Fundraising Activity. Peers edit and review responses. Revisions are made to the open response as necessary.*		*opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for investigation.		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
6.1 – Exchanging base 10 blocks to represent place value shifts. MM TA33	6.1 – Exploring multiplication with powers of 10. MM 212	6.1- Vocabulary activity p. 555	6.1 – Multiplying and Dividing by Powers of 10. Activity card 71.
6.2 – Placing values with a range of numbers. MM G28,	6.2 – Forming expressions with Powers of 10. Activity card 72.	6.2 – Activate background knowledge p. 563	6.2 – Comparing animal weights MM 214
6.3 – Using unit conversations to rename measurements. SRB 328	6.3 – Converting the distance to the moon. MM 216.	6.3 – Connecting currency knowledge p. 569	6.3 – Converting measurements in the metric system. Activity card 73.
6.4 – Labelling number lines with fractional increments. MM 218	6.4 – Conducting a measurement investigation. Activity card 74.	6.4 – Role play to introduce vocabulary p. 575	6.4 – Using a line plot to solve problems. MM 219
6.5 – Interpreting line plot data activity p. 581	6.5 – Comparing diving scores. MM 222-223.	6.5 – Vocabulary activity p. 581	6.5 – Using line plots to solve problems. Activity card 75. MJ 208
6.6 – Reviewing volume strategies. Activity card 13.	6.6 – Solving a packaging problem. Activity card 76 and MM 227	6.6 – Vocabulary activity p. 587	6.6 – Playing Prism Pile Up. SRB 319
6.7 – Reviewing liters and milliliters activity p. 593	6.7 – Solving overflow problems. Activity card 77 and MJ 215	6.7 – Vocabulary activity p. 593	6.7 – Exploring the volume of the human heart and brain. MM 229
6.8 – Estimating whole number products and quotients activity p. 599	6.8 – Estimating decimal products and quotients in number stories. MM 231.	6.8 - Using think alouds to discuss vocabulary p. 599	6.8 – Practicing decimal estimation. Activity card 78
6.9 –Practicing whole number multiplication activity p. 605	6.9 – Solving real-world decimal multiplication problems. MM 234	6.9 – Noun and verb form practice p. 605	6.9 – Comparing decimal products. Activity card 79 and MJ 219-220
6.11 – Playing Division Top It- SRB 325	6.11 – Exploring column division. SRB and MM 239	6.11- Role play activity p. 621	6.11- Dividing decimals by whole numbers. Activity card 80.
6.12 – Reviewing prerequisite skills for decimal division. MM 241	6.12 – Finding a more precise answer. MM 242	6.12 – Currency activity p. 627	6.12 – Dividing decimals by decimals, Activity card 81.
6.13 – Thinking about decimals as data points. MM 245	6.13 – Collecting and interpreting data. Activity card 82.	6.13 – Vocabulary activity p. 633	6.1443 – Comparing left hand and right hand reaction times. MJ 230- 231, MM 244

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 7 OVERVIEW** **Unit Title:** Multiplication of Mixed Numbers; Geometry, Graphs

Unit Description and Objectives:

In this unit, students learn two methods for multiplying mixed numbers. They use these methods to find the area of rectangles with fractional side lengths and to solve problems involving fractional data in line plots. Students also review attributes of two dimensional figures and classify shapes in a hierarchy based on properties. Finally, students graph points on coordinate grids to visualize numerical patterns and represent real-world problems.

Essential Questions and Enduring Understandings:

Essential Questions:	Enduring Understandings/Generalizations Students will understand that:	Guiding Questions
What is a coordinate plane? What are the properties of two-dimensional figures? How can triangles be classified? What are the types of triangles? How can quadrilaterals be classified? How are lists, tables, charts, and diagrams used to illustrate mathematical relationships? How can you identify relationships between pairs of numbers in a table? How can information be gathered, recorded and analyzed?	A coordinate plane is a two dimensional system in which the coordinates of a point are described by its distance from two perpendicular number lines. The pair of numbers used to locate appoint on the plane is the ordered pair. The x-coordinate is the first number in on ordered pair. Polygons figures have different shapes and different sizes – it is a closed plane figure whose sides are line segments. They are regular if all their sides are the same length; they are triangles if they have three sides; they are quadrilaterals if they have four sides. The types of angles are: right angles, acute angles and obtuse angles. A triangle can be classified by the lengths of the sides and the measures of its angles. A quadrilateral can be classified by the characteristics of their sides and their angles. Geometry is everywhere there are shapes. Objects can be described and compared according to their geometric attributes.	What is true of all equilateral triangles? What is true of all right triangles? How are all triangles alike? Why do we give letters names to quadrangles and other polygons? How are 2D shapes different from 3D shapes? What can you learn from discussing the similarities and differences of polygons?

UNIT GRAPHIC ORGANIZER

Sub-Concept/Topics:

Analyze Patterns and Relationships

Sub-Concept/Topics:

Apply and extend previous understandings of multiplication and division

Sub-Concept/Topics:

Classify two dimensional figures based on properties

Theme:

Multiplication of Mixed Numbers: Geometry; Graphs

Conceptual Lens:

Refer to page 646 in teacher manual for mathematical content and topics.

Sub-Concept/Topics:

Geometry

Sub-Concept/Topics:

Numbers and Operations: Fractions

Sub-Concept/Topics:

CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Grade 5
Unit Number/Title: Unit 7
Conceptual Lens: Multiplication of Mixed Numbers: Graphs: Geometry
Appropriate Time Allocation (# of Days)**:** 17 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.OA.3	5.NF.1	5.NF.4	5.NF.4b
5.NF.7	5.MD.2	5.G3	5.G4
SMP1	SMP2	SMP4	SMP6

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know :)**	**Skill Objectives (Students Will Be Able To :)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
Multiplication of Mixed Numbers Fraction Division Classifying triangles Classifying quadrilaterals Collecting and using Fractional Data Visualizing Patterns Rules, Tables and Graphs.	Multiply mixed numbers by fractions, whole numbers, and mixed numbers. Find the areas of rectangles with fractional side lengths. Use common denominators to divide fractions. Use categories and subcategories to think about the properties of shapes. Classify figures in a hierarchy. Use rules to continue patterns and write rules for relationships in in/out tables. Write ordered pairs from a table and graph the points.	**7.1** Use area models and partial products to multiply mixed numbers. **7.2** Multiply mixed numbers by renaming factors as fractions and using a fraction multiplication algorithm**.** **7.3** Multiply mixed numbers to find the area of rectangles with fractional side lengths. **7.4** Solve fraction division problems by renaming dividends and divisors with a common denominator. **7.5** Classify triangles in a hierarchy based on properties. **7.6** Classify quadrilaterals in a hierarchy based upon properties. **7.7** Play a game to practice naming and classifying quadrilaterals. **7.8** Create a hierarchy with given polygons. **7.9**	***TM pgs. 646-753*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 7.1—7.14 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **7.3 – Computer/Technology Exploring Resolution of Digital Displays. TM 673, MM 256** *Students utilize the resolution of a variety of lap top screens to extend knowledge of finding area and perimeter.*	**Unit 7** **Multiplication of Mixed Numbers, Geometry, Graphs** **Pages 646-753** *See page 648 for a detailed list of materials for Unit 7.* *** Additional Materials Needed for Advanced Preparation** • Number Cards • Fraction Circles • 6 sided die • Meter stick • Stopwatch • Index Cards • Post-it notes • Colored Pencils • Transparency Sheets • Masking Tape	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will provide students with the*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 7 Progress Check Quizzes Operation Time Tests **Summative Assessment(s)** Assessment Check in Math Messages Slate Activities Games: Spoon Scramble Exponent Ball Doggone Decimal Fraction Top It What My Attribute Rule Property Pandemonium Decimal Domination

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		Organize and represent fractional data on a line plot. **7.10.** Use rules to generate sequences, identify relationships between corresponding terms, graph points on a coordinate grid. **7.11** Analyze patterns and rules in tables of rules, create graphs to represent the data. **7.12** Use rules, tables, and graphs to compare real-world relationships and solve problems. **7.13** Identify relationships between patterns.	**7.8 – ELA** **Hierarchy of Polygons. TM 706-715** *Students write an open response to A Hierarchy of Polygons explorations. Peer editing and revising of open response as necessary.* **7.12 – Physical Education** **Graphing Race Results. TM 735, Activity Card 93, MM 287** *Students use actual Olympic race results to extend understanding of constructing graphs from data.* **7.13 – Science** **Using Formulas TM 741 and MM 291** *To extend practice* of reading graphs and tables, *students utilize actual data representing volcanic eruptions.*		*opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/ (Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for investigation.		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
7.1- Reviewing area models. MM 251	7.1 – Exploring patterns in partial products MM 252	7.1. Vocabulary activity p. 659	7.1 – Multiplying mixed numbers. Activity card 83.
7.2 - Reviewing an algorithm for fraction multiplication MM TA30	7.2 – Multiplying mixed numbers in context. MM 254	7.2 – Vocabulary activity p. 665	7.2 – Comparing methods for multiplying mixed numbers. Activity Card 84.
7.3 – Examining squares with unit fraction side lengths MM 257	7.3 – Exploring the resolution of digital displays MM 256	7.3 – Use think aloud statements to support vocabulary p. 673	7.3 – Finding the area of rectangles with fractional side lengths. Activity card 85, MM TA35
7.4 – Using visual models for fraction multiplication. MM 259	7.4 – Using common denominators to divide fractions by fractions. MM 260	7.4 – Vocabulary activity p. 679	7. 4– Practicing fraction division – Activity card 86.
7.6 – Reviewing attributes MM 266	7.6 – Solving quadrilateral challenge problems. MJ 251, MM 267	7.6 Vocabulary activity p. 693	7.6 – Counting categories. Activity card 88, MM 266.
7.7 – Finding multiple names for objects. MJ 250.	7.7 – Exploring mystery hierarchies. Activity card 89, MM 269	7.7 – Review terms in Property Pandemonium p. 701	7.7 – Drawing figures. MM 270, MJ 251
7.9 – Exploring equivalent fractions on a ruler. MM 275	7.9 – Thinking about precision with fractional data. Activity card 90	7.9 – Vocabulary activity p. 717	7.9 – Plotting fractional data with unlike denominators. MM 276
7.10- Identifying and describing rules activity p. 723	7.10- Visualizing patterns in data. MM 279	7.10- Vocabulary activity p. 723	7.10- Visualizing patterns and relationships. Activity card 91.
7.11 – Interpreting coordinate grid scales. MM 284	7.11- Graphing your super power. Activity card 92, MM 283	7.11- Role playing activity p. 729	7.11- Making tables from graphs. MM 282
7.12 – Modeling turtle race. MM 288	7.12 – Graphing race results. Activity card 93, MM 287	7.12 – Role playing activity p. 735	7.12 – Comparing gas mileage MM 286
7.13 – Testing and using rules activity p. 741	7.13- Exploring relationships between patterns. Activity card 94, MM 290	7.13 – Vocabulary activity p. 741	7.13 – Using formulas MM 291

UNIT OVERVIEW

Course Title: Everyday Mathematics 4 – Grade 5

Unit #: **UNIT 8 OVERVIEW** **Unit Title:** Measurement, Computation and Graphing

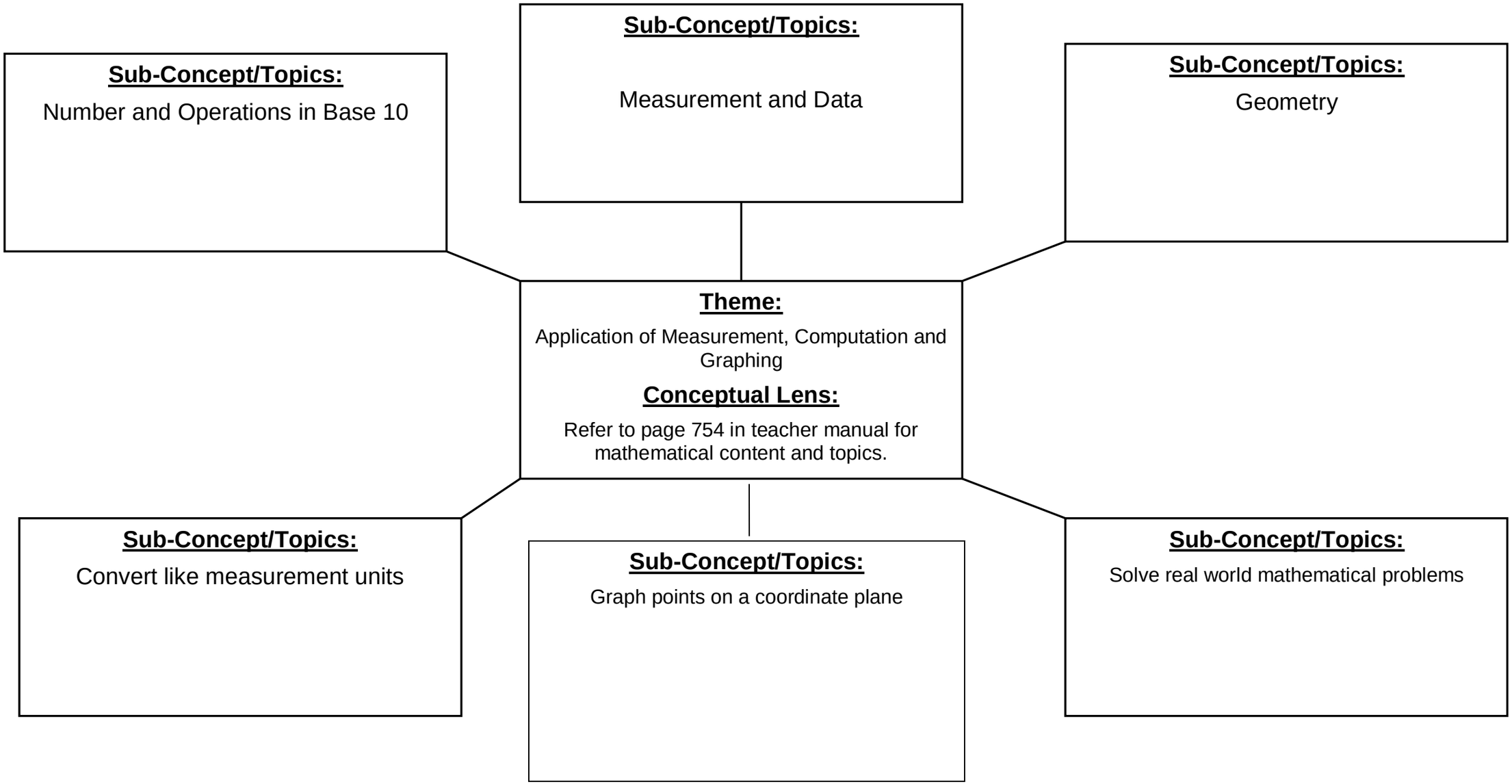
Unit Description and Objectives:

In this unit, students apply and extend many skills and concepts they have learned throughout the year to engaging real world concepts. Problems include planning of an athletic center, selecting fish tanks based upon area and volume guidelines, creating a budget for an animal shelter, and calculating how long it would take to earn one million dollars. Students also graph and analyze data from heart rate and pendulum investigations. If time permits, many of the activities in this unit can be extended over several days.

Essential Questions and Enduring Understandings:

Essential Questions:	**Enduring Understandings/Generalizations** **Students will understand that:**	**Guiding Questions**
How is math used to solve real world problems? How can you decide when to use an exact answer and when to use an estimate? How do place value concepts help us compare, contrast and order numbers?	Mathematics is used to solve real world problems by choosing an appropriate mathematical representation.	In Unit 8, the students apply previously mastered skills and content to real life situations. Guiding questions will vary based upon each group within each lesson.

UNIT GRAPHIC ORGANIZER



CURRICULUM UNIT PLAN

Course Title/Grade: Everyday Mathematics Curriculum Grade 5
Unit Number/Title: Unit 8
Conceptual Lens: Application of Measurement, Computation and Graphing
Appropriate Time Allocation (# of Days)**:** 16 days

Primary Core Content Standards referenced With Cumulative Progress Indicators			
5.NBT.4	5.NBT.7	5.NF.4	5.NF.5
5.NF.6	5.MD.1	5.G.1	5.G.2
SMP1	SMP4	SMP6	SMP7

Topics/Concepts (Incl. time / # days per topic)	**Critical Content (Students Will Know :)**	**Skill Objectives (Students Will Be Able To :)**	**Instructional/Learning Activities & Interdisciplinary Connections**	**Instructional Resources**	**Technology & 21st C Skills Integration (Specify)**	**NJCCCS w/ CPI Reference**	**Evaluation/ Assessment:**
Applying the rectangular method for area. Application of area and volume concepts	Use unit conversions to solve problems. Find areas of rectangles with mixed number side lengths to solve real-world problems. Find volumes to solve real world problems. Multiply and divide whole numbers and decimals to solve real world problems. Create graphs. Use graphs to answer questions.	**8.1** Make area conversions to find areas of sports playing surfaces in square feet. **8.2** Apply knowledge of rectangular areas to find areas of nonrectangular shapes. **8.3** Apply length, area and volume concepts to plan a home aquarium. **8.4** Open Response: Use representations to solve a problem about the volume of a rectangular prism. **8.5** Devise a plan for opening and operating an animal shelter for one year. **8.6** Calculate how long it would take to earn a $1,000,000 at different hourly wages. **8.7** Calculate how long it would take to pay off the National Debt at different pay scales. **8.8** Convert measurement of units and perform operations with multidigit whole	***TM pgs. 754-842*** ***Every lesson includes differentiation options for several groups of learners including Readiness, Enrichment, Extra Practice and Beginning English Language Learner Support. Refer to the last page of each lesson for these instructional learning activities. They are also listed on the following page.*** **Lessons 8.1—8.12 – ELA** *Teacher models and reviews key vocabulary terms.* • *Essential content specific vocabulary can be found in the introductory material on the first page of every lesson.* **Lesson 8.1 – Sci/Tech** **Planning an Athletic Center** **TM 766-772** *Students use knowledge of area to design a 4-acre athletic center for their community.* **Lesson 8.2 – Sci/Tech** **Applying the Rectangle**	**Unit 8** **Applications of Measurement, Computation and Graphing** **Pages 754-842** *See page 756 for a detailed list of materials for Unit 8.* *** Additional Materials Needed for Advanced Preparation** • Number Cards • 6 sided dice • Tape measures • Yardstick • Stopwatch • Poster Paper • Gallon milk container • Map • Scissors • String Pendulum • Encyclopedias	**Standards** **8.1.5.E.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Plan strategies to guide inquiry. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. *Students utilize a variety of websites and videos as digital tools to analyze, synthesize and solve problems. Online daily assessment checks will*	**Standards** **8.1.5.E.1** **8.1.5.F.1** **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1**	**Formative Assessments:** Unit 8 Progress Check Quizzes Operation Time Tests **Summative Assessment(s)** Assessment Check in Math Messages Slate Activities Games: Exponent Ball Property Pandemonium Decimal Domination Spoon Scramble

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
		numbers and decimals to solve time and distance problems. **8.9** Collect heart rate data and apply knowledge of multiplication unit conversions to find the number of time the heart beats in different units of time. **8.10** Graph heart rate data and use graphs to analyze data. **8.11** Apply knowledge of coordinate grids and place value to investigate the effect of pendulum length on pendulum swing time. **8.12** Use graphs to investigate the effect of arc size on a pendulum's swing time.	**Method for Area. TM 772-777.** *To extend understanding of volume, students design a fish tank to meet specific criteria.* **Lesson 8.4 – ELA** **A Treasure Hunt. TM 784-791.** *Students construct a written open response to A Treasure Hunt. Peers review and provide feedback. Revisions and edits are made too open response as necessary.* **Lesson 8.5 – Science** **Spending $1,000,000 TM 794-799** *Using scientific data on the various weights of zoo animals, students apply and extend their knowledge of decimals.* **Lesson 8.7 – Science** **Estimating Space Travel Time TM 807, MM 319** *Students practice computing with large number based upon scientific data regarding Space Travel.* **Lesson 8.8 – Science** **Solving Cheetah Problems. TM 813.** *Students utilize animal and human breathing rates to practice modeling with data and unit conversions.* **Lesson 8.9 – Physical Education/Science** **Finding Animal Heart Rates. TM 819, MM 323** *Using a variety of data based*		*provide students with the opportunity to apply and practice lesson concepts and skills.* *http://www.mathplayground.com/common_core_state_standards_for_mathematics_grade_5.html* *http://www.mathplayground.com/mathvideos.html* *https://www.khanacademy.org/commoncore/grade-5-G* *http://newtech.coe.uh.edu/* *(Great resource with hundreds of 21st century activities)* *http://connected.mcgraw-hill.com/connected/login.do* **8.1.5.F.1** Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. Identify and define authentic problems and significant questions for		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
			upon collected exercise data, students will practice creating and interpreting graphs. They make scientific predications about the data.		investigation. Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions *In each unit, an open ended response lesson provides opportunities for individuals to collaborate with planning and managing a variety of activities. They collect and analyze data to identify solutions and make informed decisions.* • *Based upon the activity and mastery level of the students in a group, a variety of websites should be used to explore possible solutions.* **8.2.5.C.1** **8.2.5.D.1** **8.2.5.D.2** **8.2.5.E.1** Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop		

Topics/Concepts (Incl. time / # days per topic)	Critical Content (Students Will Know :)	Skill Objectives (Students Will Be Able To :)	Instructional/Learning Activities & Interdisciplinary Connections	Instructional Resources	Technology & 21st C Skills Integration (Specify)	NJCCCS w/ CPI Reference	Evaluation/ Assessment:
					an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment. *Through the integration and interdisciplinary connections in each unit, students will develop the understanding that math relates to the individual and global society.* • Activity cards and enrichment activities provide a variety of options for developing computational strategies. *The following is an excellent site to access real life collaborative math projects.* • http://www.mathwirBe.com/archives/enrichment.html		

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Special Education Students
8.1 – Converting among U.S. customary lengths. SRB	8.1 Converting between measurement systems. Activity card 95 and SRB pl. 328	8.1 – Vocabulary activity p. 767	8.1 – Converting ground areas from square feet to acres. MM 298
8.2 Finding areas of rectangles with MM TA3	8.2 Applying the rectangle method to more shapes. MM 301.	8.2 – Use think alouds to understand the word, prefix, p. 773	8.2 – Practicing the rectangle method. Activity Card 96 MM TA3
8.3 – Reviewing length, area and volume activity, p. 779	8.3 – Designing a fish tank. Activity card 97, MJ 285, MM 303-304	8.3 – Using role plays to understand vocabulary, p. 779	8.3 – Solving Measurement problems. Activity Card 98 and MM 305
8.5 – Reviewing estimation strategies activity p. 795	8.5 – Using fractions to adjust spending. Activity Card 99, MJ 290-291.	8.5 – Vocabulary activity p. 795	8.5 – Solving a "Weighty Problem". MM 310.
8.6 – Representing measures in multiple units activity p. 801.	8.6 – Solving a Water Fountain Problem. MM 314	8.6 – Vocabulary activity p. 801	8.6 – Exploring salaries for different jobs. MM 315
8.7 –Working with large numbers activity p. 807	8.7 – Comparing national debts. Activity Card 100.	8.7 – Role play with money, p. 807	8.7 – Estimating space travel times. MM 318
8.8 – Solving cheetah problems activity p. 813	8.8 – Extending the footstep problem. Activity Card 101, MJ 300-301, MM 320	8,8 – Vocabulary activity p. 813	8.8- Calculating ages in different units. MM 321
8.9 – Applying conversions to solve problems activity p. 819	8.9 – Investigating breathing rates. Activity card 102, MJ 305.	8.9 – Body part vocabulary p. 819	8.9 – Finding Animal Heart Rates. MM 323.
8.10- Making multistep unit conversions. SRB p 328	8.10- Donating Blood. MM 325	8.10 Vocabulary activity p. 825	8.10- Investigating Heart Rate. Activity Card 103, MJ 305 MM 326-327
8.11- Plotting points with decimal coordinates. MM 329	8.11- Exploring pendulum clocks. MJ 312, MM 330	8.11- Vocabulary activity p. 831	8.11- Using the pendulum length graph. Activity Card 104, MJ 313
8.12 – Reviewing how to interpret graphs. MJ 260-261	8.12 – Researching Pendulums. Activity card 105	8.12 – Vocabulary activity p. 837	8.12- Investigating the effect of Bob Weight. MM 332

CROSS-CONTENT STANDARDS ANALYSIS

Course Title: Everyday Mathematics 4 **Grade:** 5

Unit Title:	Visual and Performing Arts	Comp. Health & Physical Ed.	English Language Arts	Mathematics	Science	Social Studies	World Languages	Technology	21st Century Life & Careers
Unit 1	1.2.5.A.2 1.2.5.A.1		R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5					8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	
Unit 2		2.5.4.A.1 2.5.6.C.2	R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5		5.1.4.A.3 5.14.B.2 5.1.4.B.4 5.1.4.C.2 5.1.12.D.2	61.4.B.1 61.4.B.2		8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	
Unit 3	61.4.B.1 61.4.B.2		R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5..5					8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	
Unit 4	61.4.B.1 61.4.B.2	2.5.4.A.1 2.5.6.C.2	R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5			61.4.B.1 61.4.B.2		8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	
Unit 5			R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5					8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	

Unit Title:	Visual and Performing Arts	Comp. Health & Physical Ed.	English Language Arts	Mathematics	Science	Social Studies	World Languages	Technology	21st Century Life & Careers
Unit 6		2.5.4.A.1 2.5.6.C.2	R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5		5.1.4.A.3 5.14.B.2 5.1.4.B.4 5.1.4.C.2 5.1.12.D.2			8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	
Unit 7		2.5.4.A.1 2.5.6.C.2	R1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5		5.1.4.A.3 5.14.B.2 5.1.4.B.4 5.1.4.C.2 5.12.12.D.2			8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	
Unit 8		2.5.4.A.1 2.5.6.C.2	R.1.5.4 R1.5.7 W.5.1.B W.5.2.B W.5.5		5.1.4.A.3 5.14.B.2 5.1.4.B.4 5.1.4.C.2 5.1.12.D.2			8.1.5.E.1 8.1.5.F.1 8.2.5.C.1 8.2.5.D.1 8.2.5.D.2 8.2.5.E.1	

***All core content areas may not be applicable in a particular course.**

Washington Township Public Schools
Department of Student Personnel Services

CURRICULUM MODIFICATION

The regular curriculum is modified for Special Education students enrolled in both self-contained and resource center classes.

Modifications address individual learning rates, styles, needs and the varying abilities of all special populations served in the programs available in the district.

The intent is three-fold:

- To provide alternative materials, techniques and evaluation criteria to address the range of students' needs;
- To parallel the regular curriculum in skill, content sequence and coverage to prepare students for mainstreaming;
- To maximize students' potential for movement to less restrictive environments.

In the event there is a conflict between the prescribed curriculum and the IEP for an individual student, the IEP will take precedence and will constitute the individually prescribed proficiencies for the student.