UNIT 8- EDM4

Content Area: **Math**
Course(s):
Time Period: **Trimester 3**
Length: **5 weeks**
Status: **Published**

Course Pacing Guide

The Everyday Mathematics program will prepare all students to apply mathematics in an ever-changing world through the use of basic skills, reasoning, problem-solving strategies and technological resources. It envisions a mathematically rich environment where students are challenged and equipped with math skills and strategies, empowering them to apply mathematics in all aspects of their lives.

Unit	Weeks
Unt 1-Place Value;Multidigit Addition and Subtraction	4 weeks
Unit 2- Multiplication and Geometry	4 weeks
Unit 3- Fractions and Decimals	4 weeks
Unit 4 -Multidigit Multiplication	4 weeks
Unit 5 -Fraction and Mixed Number Computation;Measurement	4 weeks
Unit 6-Division; Angles	4 weeks
Unit 7-Multiplication of a fraction by a Whole Number; Measurement	5 weeks
Unit 8- Fraction Operations; Applications	**5 weeks**

Unit Overview

Students will expand on their knowledge and skills regarding multipying fractions and mutlistep words problems. Students will apply the operations of addition, subtraction, multiplication, and division as well as fractions to area, measurement, data plotting, and geometry.

Enduring Understandings

Multidigit multistep multioperational word problems can be solved accruately and efficiently using close reading and a variety of strategies.

Essential Questions

How can multidigit multistep multioperational word problems can be solved accruately and efficiently?

What strategies can be used when facing a multidigit multistep multioperational word problem?

New Jersey Student Learning Standards (No CCS)

MA.4.OA.A	Use the four operations with whole numbers to solve problems.
MA.4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
MA.4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
MA.4.NF.B.3d	Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
MA.4.NF.B.4c	Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.
MA.4.MD.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

Interdisciplinary Connections

LA.SL.4.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
LA.SL.4.1.C	Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

Technology Standards

TECH.8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems
TECH.8.1.5.A.3	Use a graphic organizer to organize information about problem or issue.

TECH.8.1.5.A.4	Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.
TECH.8.1.5.A.5	Create and use a database to answer basic questions.
TECH.8.1.5.A.6	Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data.
TECH.8.1.5.A.CS1	Understand and use technology systems
TECH.8.1.5.A.CS2	Select and use applications effectively and productively.
TECH.8.1.5.B	Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.5.B.CS1	Apply existing knowledge to generate new ideas, products, or processes.
TECH.8.1.5.D.3	Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.
TECH.8.1.5.D.CS1	Advocate and practice safe, legal, and responsible use of information and technology.
TECH.8.1.5.D.CS2	Demonstrate personal responsibility for lifelong learning
TECH.8.1.5.D.CS3	Exhibit leadership for digital citizenship.
TECH.8.1.5.E.CS3	Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.
TECH.8.1.5.F.CS1	Identify and define authentic problems and significant questions for investigation.
TECH.8.1.5.F.CS2	Plan and manage activities to develop a solution or complete a project.
TECH.8.1.5.F.CS3	Collect and analyze data to identify solutions and/or make informed decisions

21st Century Themes/Careers

CAEP.9.2.8.B.3	Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.
CAEP.9.2.8.B.6	Demonstrate understanding of the necessary preparation and legal requirements to enter the workforce.

Financial Literacy Integration

9.1.4.B.1 Differentiate between financial wants and needs.

9.1.4.B.2 Identify age-appropriate financial goals.

9.1.4.B.3 Explain what a budget is and why it is important.

9.1.4.B.4 Identify common household expense categories and sources of income.

9.1.4.B.5 Identify ways to earn and save.

9.1.4.C.1 Explain why people borrow money and the relationship between credit and debt.

9.1.4.C.2 Identify common sources of credit (e.g., banks, credit card companies) and types of credit (e.g., loans, credit cards, mortgages).

9.1.4.C.3 Compare and contrast credit cards and debit cards and the advantages and disadvantages of using each.

9.1.4.C.4 Determine the relationships among income, expenses, and interest.

9.1.4.C.5 Determine personal responsibility related to borrowing and lending.

9.1.4.C.6 Summarize ways to avoid credit problems.

9.1.4.D.1 Determine various ways to save.

9.1.4.D.2 Explain what it means to “invest.”

9.1.4.D.3 Distinguish between saving and investing.

9.1.4.E.1 Determine factors that influence consumer decisions related to money.

9.1.4.E.2 Apply comparison shopping skills to purchasing decisions.

9.1.4.F.1 Demonstrate an understanding of individual financial obligations and community financial obligations.

9.1.4.F.2 Explain the roles of philanthropy, volunteer service, and charitable contributions, and analyze their impact on community development and quality of living.

9.1.4.G.1 Describe how valuable items might be damaged or lost and ways to protect them.

Instructional Strategies & Learning Activities

Instructional Strategies:

- interactive math notebook
- sentence starters (open response)
- full circle protractor
- pattern blocks
- measuring sticks/rulers marked in 1/4ths
- Measurement conversion charts

Leanrning Activities:

- Angle Add Up (8.2)
- Fishy Fraction Problem (8.11)
- Name that Number (8.13)

Differentiated Instruction

- Curriculum Mapping

- Inquiry/Problem-Based Learning
- Learning preferences integration (visual, auditory, kinesthetic)
- Sentence & Discussion Stems (Open Responses/Explain your answer)
- Tiered Learning Targets
- Learning Through Play
- Relationship-Building & Team-Building
- Self-Directed Learning
- Choice Boards
- Student Data Inventories
- Mastery Learning (feedback toward goal)
- Goal-Setting & Learning Contracts
- Game-Based Learning
- Grouping
- Rubrics
- Learning Menus
- Jigsaws
- Learning Through Workstations
- Concept Attainment
- Flipped Classroom
- Mentoring
- Assessment Design & Backwards Planning
- Student Interest & Inventory Data

Formative Assessments

Mid-Unit quiz

Anecdotal Records/Checklist

Exit tickets

Workshop Activities

Summative Assessment

EDM4 Unit 8 Assessment and Self-Assessment

Benchmark Assessments

EOY EDM4 Assessment (to be put into S assessment folder for next grade and input data in Link it)

Alternate Assessments

Results of Form C Link it for strategy groups

Resources & Technology

EDM4 wesbite

IXL 4th grade

BOE Approved Texts

EDM4 McGraw Hill Teacher Manuals

Everyday Math Journal

Everyday Math Home Links

Everyday Math Skills Link

Closure

- Snowstorm - Students write down what they learned on a piece of scratch paper and wad it up. Given a signal, they throw their paper snowballs in the air. Then each learner picks up a nearby response and reads it aloud.
- DJ Summary - Learners write what they learned in the form of a favorite song. Offer to let one or two sing thier summary.
- Gallery Walk - On chart paper, small groups of students write and draw what they learned. After the completed works are attached to the classroom walls, others students affix post-its to the posters to extend on the ideas, add questions.
- Low-Stakes Quizzes - Give a short quiz using technologies like Kahoot or a Google form.
- Have students write down three quiz questions (to ask at the beginning of the next class).
- Question Stems - Have students write questions about the lesson on cards, using question stems framed around Bloom's Taxonomy. Have students exchange cards and answer the question they have acquired.
- Kids answer the following prompts: "What takeaways from the lesson will be important to know three

years from now? Why?
- Have students dramatize a real-life application of a skill.
- Ask a question. Give students ten seconds to confer with peers before you call on a random student to answer. Repeat.
- Have kids orally describe a concept, procedure, or skill in terms so simple that a child in first grade would get it.
- Direct kids to raise their hands if they can answer your questions. Classmates agree (thumbs up) or disagree (thumbs down) with the response.
- Have kids create a cheat sheet of information that would be useful for a quiz on the day's topic.
- Kids write notes to peers describing what they learned from them during class discussions.
- Ask students to summarize the main idea in under 60 seconds to another student acting as a well-known personality who works in your discipline. After summarizing, students should identify why the famous person might find the idea significant.
- Have students complete the following sentence: "The [concept, skill, word] is like _____ because _____."
- Ask students to write what they learned, and any lingering questions on an "exit ticket". Before they leave class, have them put their exit tickets in a folder or bin labeled either "Got It," "More Practice, Please," or "I Need Some Help!"
- After writing down the learning outcome, ask students to take a card, circle one of the following options, and return the card to you before they leave: "Stop (I'm totally confused. Go (I'm ready to move on.)" or "Proceed with caution (I could use some clarification on . . .)"
- Post-It parking lot

ELL

- Alternate Responses
- Advance Notes
- Extended Time
- Teacher Modeling
- Simplified Written and Verbal Instructions
- Frequent Breaks
- E-Dictionaires
- Google Translate

Special Education

- Shorten assignments to focus on mastery of key concepts.
- Substitute alternatives for written assignments (clay models, posters, panoramas, collections, etc.)

- Specify and list exactly what the student will need to learn to pass.
- Evaluate the classroom structure against the student's needs (flexible structure, firm limits, etc.).
- Keep workspaces clear of unrelated materials.
- Keep the classroom quiet during intense learning times.
- Reduce visual distractions in the classroom (mobiles, etc.).
- Provide a computer for written work and open responses.
- Seat the student close to the teacher or a positive role model.
- Use a study carrel. (Provide extras so that the student is not singled out.)
- Provide an unobstructed view of the chalkboard, teacher, movie screen, etc.
- Keep extra supplies of classroom materials (pencils, books) on hand.
- Maintain adequate space between desks.
- Give directions in small steps and in as few words as possible.
- Number and sequence the steps in a task.
- Have student repeat the directions for a task.
- Provide visual aids.
- Go over directions orally.
- Provide a vocabulary list with definitions.
- Permit as much time as needed to finish tests.
- Allow tests to be taken in a room with few distractions (e.g., the library).
- Have test materials read to the student, and allow oral responses.
- Divide tests into small sections of similar questions or problems.
- Give progress reports instead of grades.
- Grade spelling separately from content.
- Show a model of the end product of directions (e.g., a completed math problem or finished quiz).
- Stand near the student when giving directions or presenting a lesson.
- Mark the correct answers rather than the incorrect ones.
- Permit a student to rework missed problems for a better grade.
- Average grades out when assignments are reworked, or grade on corrected work.
- Use a pass-fail or an alternative grading system when the student is assessed on his or her own growth.

- preferential seating
- extended time on tests and assignments
- reduced homework or classwork
- verbal, visual, or technology aids
- modified textbooks or audio-video materials
- behavior management support
- adjusted class schedules or grading
- verbal testing
- excused lateness, absence, or missed classwork
- occupational or physical therapy

At Risk

- Use of mnemonics
- Have student restate information
- Provision of notes or outlines
- Concrete examples
- Use of a study carrel
- Assistance in maintaining uncluttered space
- Weekly home-school communication tools (notebook, daily log, phone calls or email messages)
- Peer or scribe note-taking
- Lab and math sheets with highlighted instructions
- Graph paper to assist in organizing or lining up math problems
- Use of manipulatives
- No penalty for spelling errors or sloppy handwriting
- Follow a routine/schedule
- Teach time management skills
- Verbal and visual cues regarding directions and staying on task
- Adjusted assignment timelines
- Visual daily schedule
- Immediate feedback
- Work-in-progress check
- Pace long-term projects
- Preview test procedures
- Cue/model expected behavior
- Use de-escalating strategies
- Use peer supports and mentoring
- Have parent sign homework/behavior chart
- Chart progress and maintain data

Gifted and Talented

Examples may include:

- Offer the Most Difficult First
- Pretest for Volunteers
- Offer choice
- Speak to Student Interests
- Allow G/T students to work together
- Tiered learning
- Focus on effort and practice

- Encourage risk taking

*Add to or remove any of these as you see fit.