

Grade 3 Unit 8 Multiplication and Division

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

Course Pacing Guide

Unit 8 - Multiplication and Division

3 Cycles - 9 Lessons

8.1 - Measuring to the Nearest $\frac{1}{2}$ Inch - 2 Days

8.2 - Extended Facts: Multiplication and Division - 1 Day

8.3 - Factors of Counting Numbers - 2 Days

8.4 - Open Response: Setting Up Chairs - 2 Days

8.5 - Playing Factor Bingo - 1 Day

8.6 - Sharing Money - 1 Day

8.7 - Exploration: Exploring Number Lines, Fractions and Area - 1 Day

8.8 - Solid Shapes - 1 Day

Test Review Day - 1 Day

Unit 8 Test - 1 Day

Correct and Reflect 1 Day

Unit Overview

In this Unit, students will be able to:

- deepen and apply their understanding of multiplication and division.
- deepen and apply their understanding of measurement.
- depend and apply their understanding of shapes.

Enduring Understandings

By the End of Unit 8. expect children to:

- use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities by using drawings and equations with a symbol for the unknown number to represent the problem.
- understand division as an unknown-factor problem.
- know from memory all square products and products of one-digit numbers and 0, 1, 2, 3, 5, 9, and 10, and to fluently multiply and divide within 100 using strategies such as the relationship between multiplication and division or properties of operations.
- measure lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units - whole numbers, halves, or quarters.
- understand that shapes in different categories may share attributes, and that the shared attributes can define a larger category. Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Essential Questions

8.1 - What part of rulers help you measure to the nearest $\frac{1}{4}$ inch?

8.2 - What strategies can you use to solve extended multiplication and division facts?

8.3 - What is a factor? How can you find factors?

8.4 - How can you make a conjecture and argument about a problem?

8.5 - How can you use what you know about factors to play factor bingo?

8.6 - How can you use \$10 and \$1 bills to practice equal-sharing situations?

8.7 - What do you notice when you compare fractions? How can you create an equivalent fraction? What is area? How can you find the area of a rectangle?

8.8 - What are some shared attributes of prisms?

New Jersey Student Learning Standards (No CCS)

MA.3.OA.A.3

Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

MA.3.OA.B.6	Understand division as an unknown-factor problem.
MA.3.OA.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
MA.3.MD.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
MA.3.G.A.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Amistad Integration

[Amistad Integration Document](#)

[The Girl With a Mind for Math: The Story of Raye Montague](#) by Julia Finley Mosca

Holocaust/Genocide Education

- Teach district mandated diversity lessons
- Incorporate Responsive Classroom Program into classroom community

Interdisciplinary Connections

LA.RL.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.W.3.4	With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
LA.SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.

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.
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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.CS1	Understand and use technology systems

21st Century Themes/Careers

CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
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Financial Literacy Integration

[3rd Grade Math Financial Integration Lessons](#)

- 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:

- Quick Look Cards
- Fraction Circles
- Pattern Block Template
- 12 inch ruler
- tape measure
- number cards
- beakers
- geoboards

Learning Activities/Hands on Activities

- 8-2 Roll to 1,000 with Multiplication
- 8-3 Array Bingo
- 8-3 Finding Factors
- 8-5, 8-7 Factor Bingo
- 8-5 Speed Factor Bingo
- 8-6 Beat the Calculator
- 8-7 Fraction Number-Line Squeeze

Differentiated Instruction

- See Teacher's Manual p. 733, 739, 745, 761, 767, 773, 779
- Use Data from Tech-Exit Tickets, Exit Slips, and Progress Monitoring to group students for each skill
- Student "May Do" Activities
- Sentence and Discussion Stems - Especially for Open Response
- Visual Anchor Charts for current, previous, and next lessons
- Interactive Notebook

- Hands On Learning/Activities

Formative Assessments

Exit Tickets in Haddonfield 3rd Grade Drive

Summative Assessment

Unit 8 Progress Check - See Everyday Math Online Resources or Assessment Handbook

Benchmark Assessments

Teachers may use:

~EDM4 Beginning of the Year Assessment (To create initial groupings based on EDM4 skills)

~EDM4 EOY Assessment (for SGO---to show year long growth at EOY)

~Fall Link It Form A (To create strategy groups based on specific skills and standards)

Alternate Assessments

Progress Monitoring by Standard on Link-It

Resources & Technology

Haddonfield 3rd Grade Shared Google Drive

IXL Related Skills:

Third Grade - BB3-4 Measuring

Third Grade - F1-13 - Multiplication Skill Builders

Third Grade - P3 - Rounding Money Amounts

Third Grade - S1-S13 - Money

Third Grade - EE - Three Dimensional Shapes

BOE Approved Texts

McGraw Hill Education - Everyday Math Manual - Volumes 1 and 2

Closure

See Exit Tickets Above

- 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.
- 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 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 . . .)"

ELL

- Alternate Responses

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

Special Education

- Shorten assignments to focus on mastery of key concepts.
- 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.
- Provide a computer for written work.
- Seat the student close to the teacher or a positive role model.
- Provide an unobstructed view of the chalkboard, teacher, movie screen, etc.
- 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.
- Allow the student to complete an independent project as an alternative test.
- 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.

504

- 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
- pre-approved nurse's office visits and accompaniment to visits
- occupational or physical therapy

At Risk

- Use of mnemonics
- Have student restate information
- Provision of notes or outlines
- Concrete examples
- Assistance in maintaining uncluttered space
- Weekly home-school communication tools (notebook, daily log, phone calls or email messages)
- 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
- Film or video supplements in place of reading text
- Pass/no pass option
- 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

- 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