Enduring Understandings	Essential Questions
Students will know: "I can…" • Students will solve one-step word problems by estimating, measuring, and comparing liquid volumes and masses using appropriate tools and units. • Students will know the customary units for measuring capacity and weight. • Students will understand the metric units for measuring capacity and mass. • Students will see how data be represented, interpreted, and analyzed.	**Essential Questions:** • How can you solve one-step word problems by estimating, measuring, and comparing liquid volumes and masses using appropriate tools and units? • What are the customary units for measuring capacity and weight? • What are the metric units for measuring capacity and mass? • How can data be represented, interpreted, and analyzed?

Content	Vocabulary	Skills/Performance Expectations
		Students will be able to: • Use measurement and estimation to solve problems involving intervals of time, liquid volumes, and masses of

		objects. • Measure capacity, mass, and weight. • Relate area to addition and multiplication. • Recognize the difference between perimeter and area. • Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. • Capacity is a measure of the amount of liquid a container can hold. • Mass is a measure of the quantity of

		matter in an object. Weight and mass are different. • The weight of an object is a measure of how heavy an object is. • Geometric measurement: understand concepts of area and relate area to addition and multiplication. • Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measur

		ements .

Stage 2: Assessment Evidence

Assessments

Formative: Other: Teacher Observation

Formative

- Teacher Observation
- Performance Assessments
- Exit Slips
- Anecdotal Records
- Oral Assessments/Conferencing
- Portfolio/Math Journals
- Daily Classwork
- Pre-assessments

Summative: Test: Written

Summative

- Unit Review Assessments
- Unit Associated Tests & Quizzes
- Performance Tasks

Benchmark: Test: Written

Benchmark

- District Approved Assessments

Alternative: Performance: Skill Demonstration

Alternative

- Untimed Fact Practice Assessment
- Reteach Activities and Worksheets
- Project Based Assessments with Scoring Rubric

Stage 3: Learning Plan

Resources

roved text.
roved online supplemental resources; IXL, i-Ready, Khan Academy. Reflex Math

Correlation to Bridges

Suggested Learning Activities

- District Approved Mathematics Program
- Activities with rulers and other measurement tools
- Geoboard tasks involving creation of lines/shapes and measurement
- Collections of items and manipulatives
- Brainpop.com - Geometry and Measurement

Additional Resources by Standard

Multi-Language Learner Accommodations

Notes

Multi-Language Learners:

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow Multilingual Learner students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with Multilingual Learner students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

504 Accommodations

504 Plan:

- Behavior management support.
- Adjusted class schedules or grading.
- Extended time on tests and assignments.
- Verbal, visual, or technology aids.

Special Ed Accommodations

Special Education//Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

At-risk Accommodations

Notes

Students In Need of Academic Support:

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

Gifted and Talented Accommodations

Notes

Gifted and Talented:

- Differentiated assignments/projects/assessments
- Differentiate learning pace using curriculum acceleration
- Curriculum compacting
- Open ended/abstract questions to

Economically Disadvantaged:

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

Culturally Diverse:

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

activate higher level thinking

- Alternative modes of communication
- Student developed extension activities
- Plan self directed inquiry
- Student created rubrics
- Opportunities to push assessment/activity boundaries
- Self centered curriculum allowing for student choice

Stage 4: Reflection

Teacher Reflections

Unit Planner: OCC 5: Data Literacy (20 days)
Math Grade 3

Tuesday, July 29, 2025, 5:58PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 3 / Mathematics / Math Grade 3 / Week 1 - Week 39

Last Updated: Monday, October 14, 2024 by Theresa Eagan

OCC 5: Data Literacy (20 days)

Eagan, Theresa; Gilpin, Katie; Lynch, Caitlin; Meroney, Jamie; Rajeski, Lisa

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

RI.CR.3.1. NJ: 2023 SLS: English Language Arts

RI.CR.3.1. NJ: Grade 3

RI.CR.3.1. Reading Domain

RI.CR.3.1. Reading

RI.CR.3.1. Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers.

MP.4 NJ: 2023 SLS: Mathematics

MP.4 NJ: Grade 3

MP Mathematical Practice

MP.4 Standards for Mathematical Practice

MP.4 Model with mathematics

NJ: 2023 SLS: Mathematics

NJ: Grade 3

Data Literacy

3.DL.A. Understand data-based questions and data collection.

3.DL.A.1. Develop data-based questions and decide what data will answer the question. (e.g. "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?")

3.DL.A.2. Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions.

3.DL.B. Represent and interpret data

3.DL.B.3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

3.DL.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.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Data & Analysis

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.1.5.DA.4: Organize and present climate change data visually to highlight

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

9.2 Career Awareness, Exploration, Preparation, and Training

There are a variety of factors to consider before starting a business.

9.2.5.CAP.7: Identify factors to consider before starting a business.

relationships or support a claim. 	
Interdisciplinary Instruction Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.) • **RI.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. • **MP.4** Model with mathematics.	NJ Mandates **NJ Mandates** **All Grades** **NJ Mandates** **Mandates** Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens. Climate Change: The NJSLS-CLKS includes the skills, knowledge and practices necessary for success in an increasingly complex world and changing natural environment. Climate change is included in these standards. Collaborating to solve a problem, approaching a solution with innovation, and determining the validity of a source of information are all essential skills required in the standards and necessary for students to possess to maintain awareness of and successfully address climate change. Diversity and Inclusion: Requires school districts to include instruction on diversity and inclusion as part of implementation of New Jersey Student Learning Standards.
Additional & Supplementary **Performance Tasks/Use of Technology:** Use online websites to practice and master mathematical facts and fluency	ELA Companion Standards (6th-12th Only)

to enhance and extend learning.

Gummy Bear Math

Reaction Time

Core Instructional and Supplemental Materials

Varied Levels of Text:

- Strega Nona by Tomie dePaola
- Life-Size Zoo: From Tiny Rodents to Gigantic Elephants, An Actual-Size Animal Encyclopedia by Teruyuki Komiya

Climate Change

- Students may ask and answer questions about objects that may be reused, objects that may be

recycled, and objects that must be placed in the trash. Students may organize used objects into those categories, and ask and answer questions about the total number of objects, how many are in each category, and how many more or fewer are in one category than in another.	

~KNOWLEDGE~

Enduring Understandings	Essential Questions
Students will know: "I can…" • Use line plots to compare data. • Use bar graphs to represent data. • District Approved Mathemat	**Essential Questions:** • How do line plots allow data to be compared more easily than in a list or a table? • How do line plots can be used to organize and represent data generated by measuring lengths?

ics Program
- Create survey questions and tally students
- Create pictograph where key = 2 or more
- Use rulers to measure to nearest whole and half. Then graph results.
- Brainpop.com - Geometry and Measu

Content	Voca	abula	Skills/Performance Expectations
Students wil	**y**	**able to:**	
• Understa • Represe • In a bar g • The key • Create g • Interpret		nd data-based questions and data collection. t and interpret data. graph, the scale determines how long the bar needs to be to represent each number in a set of data for a pictograph determines the number of pictures needed to represent each number in a set of data. raphs from data. graphs based on key and scale.	

Stage 2: Assessment Evidence

Assessments

Formative: Other
Formative
- Teacher Ob
- Performanc
- Exit Slips
- Anecdotal R
- Oral Assess
- Portfolio/Ma
- Daily Class
- Pre-assess

Summative: Test:
Summative
- Unit Review
- Unit Associ
- Performanc

: Teacher Observation

servation
e Assessments

ecords
ments/Conferencing
th Journals
work
ments
Written

Assessments
ated Tests & Quizzes
e Tasks

Benchmark: Performance: Skill Demonstration
Benchmark

- District Approved Assessments

Alternative: Other: Student Portfolio
Alternative

- Untimed Fact Practice Assessment

Stage 3: Learning Plan

Resources

- District approved text.
- District approved online supplemental resources ; IXL, i-Ready, Khan Academy. Reflex Math

Correlation to Bridges

Suggested Learning Activities

- District Approved Mathematics Program
- Create survey questions and tally students
- Create pictograph where key = 2 or more
- Use rulers to measure to nearest whole and half. Then graph results.
- Brainpop.com - Geometry and Measurement
- Additional Resources by Standard

Multi-Language Learner Accommodations

Notes

Multi-Language Learners:

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow Multilingual Learner

504 Accommodations

504 Plan:

- Behavior management support.
- Adjusted class schedules or grading.
- Extended time on tests and assignments.
- Verbal, visual, or technology aids.

students to interact and communicate with peers • Provide vocabulary ahead of time • Use sentence frames to give students practice with academic language • Pre-teach as often as possible- share videos, articles, vocabulary etc. with Multilingual Learner students prior to use in class • Utilize visual charts/cues • Highlight key words • Provide manipulatives • Frequently check for understanding	

Special Ed Accommodations

Special Education//Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues

- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

At-risk Accommodations

Notes

Students In Need of Academic Support:

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

Gifted and Talented Accommodations

Notes

Gifted and Talented:

- Differentiated assignments/projects/assessments
- Differentiate learning pace using curriculum acceleration
- Curriculum compacting
- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication
- Student developed extension activities
- Plan self directed inquiry
- Student created rubrics
- Opportunities to push assessment/activity boundaries
- Self centered curriculum allowing for student choice

• Allow students to have personal possessions and property in school • Give choice to provide a sense of control **Economically Disadvantaged:** • Provide clear, achievable expectations, do not lower academic requirements for them. • Build a safe and nurturing atmosphere • Be flexible with assignments • Offer several alternatives from which all students can choose. • Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace. • Use real-world examples	

and create mental models for abstract idea • Provide increased knowledge base and vocabulary use about real world experiences. • Share the decision making in class. • Maintain expectations while offering choice and soliciting input **Culturally Diverse:** • Involve families in student learning • Provide social/emotional support • Respect cultural traditions • Build in more group work to encourage interaction with peers • Show photos, videos, and definitions when possible for culturally unique vocabulary • Teach study skills • Provided students	

with necessary academic resources and materials • Allow for alternative assignments • Provide visuals • Assign peer tutor • Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps • Provide positive praise to increase motivation • Provide real world connections and emphasize the value of education • Communicate high expectations for the success of all students • Integrate the arts into learning activities	

Stage 4: Reflection

Teacher Reflections

Math Grade 3

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 3 / Mathematics / Math Grade 3

Tuesday, July 29, 2025, 6:18PM

Last Updated: Monday, October 14, 2024 by Theresa Eagan

Eagan, Theresa; Gilpin, Katie; Lynch, Caitlin; Meroney, Jamie; Rajeski, Lisa

In grade 3 math, students will:

- use addition, subtraction, multiplication, and division to solve story problems
- solve multiplication and division facts accurately and efficiently
- multiply 1-digit numbers by multiples of 10, e.g., 3 x 70
- add and subtract 2- and 3-digit numbers
- compare, recognize, and generate equivalent fractions and place them on a number line
- estimate and measure in time, liquid volume, and masses of objects
- round numbers to nearest 10 or 100
- tell time to the minute
- estimate and measure liquid volume and mass in metric units
- solve area and perimeter problems
- identify and construct different kinds of quadrilaterals
- sort and classify shapes

Unit Planner: OCC 1- Operations and Algebraic Thinking (30 Days)
Grade 4 Math

Tuesday, July 29, 2025, 6:09PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 4 / Mathematics / Grade 4 Math / Week 1

Last Updated: Wednesday, July 17, 2024 by Christine Mille

OCC 1- Operations and Algebraic Thinking (30 Days)

Deus, Mike; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 1: 30 Days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

During the school year the fourth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

The curriculum is aligned to the NJSL for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.The curriculum is aligned to the NJSLS for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.

In Grade 4, instruction focuses broadly on three critical areas:

1. developing understanding and accuracy and efficiency, with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;

2. developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;

3. understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

NJ: 2020 SLS: Social Studies

NJ: End of Grade 12

6.1 U.S. History: America in the World: Era 11. The Great Depression and World War II: World War II (1929–1945)

Governments around the world support universal human rights to varying degrees.

6.1.12.CivicsHR.11.a: Assess the responses of the United States and other nations to the violation of human rights that occurred during the Holocaust and other genocides.

NJ: 2023 SLS: Mathematics

NJ: Grade 4

Operations and Algebraic Thinking

4.OA.A. Use the four operations with whole numbers to solve problems

4.OA.A.1. Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

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.

4.OA.A.3. Solve multi-step 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.

4.OA.B. Gain familiarity with factors and multiples

4.OA.B.4. Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

4.OA.C. Generate and analyze patterns

4.OA.C.5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Impacts of Computing

The development and modification of computing technology is driven by individual's needs and wants and can affect individuals differently.

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

9.1 Personal Financial Literacy: Civic Financial Responsibility

You can give back in areas that matter to you.

9.1.5.CR.1: Compare various ways to give back and relate them to your strengths, interests, and other personal factors.

8.1.5.IC.1: Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.

8.1.5.IC.2: Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.

Many factors influence the accuracy of inferences and predictions.

8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

8.1 Computer Science: Algorithms & Programming

Different algorithms can achieve the same result. Some algorithms are more appropriate for a specific use than others.

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.

Programming languages provide variables, which are used to store and modify data.

8.1.5.AP.2: Create programs that use clearly named variables to store and modify data.

9.1 Personal Financial Literacy: Economic and Government Influences

There is a broader economic system that influences your financial goals.

9.1.5.EG.3: Explain the impact of the economic system on one's personal financial goals.

9.1.5. EG.4: Describe how an individual's financial decisions affect society and contribute to the overall economy.

9.1 Personal Financial Literacy: Financial Psychology

An individual's financial traits and habits affect his/her finances.

9.1.5.FP.1: Illustrate the impact of financial traits on financial decisions.

Spending choices and their intended and unintended consequences impact financial outcomes and personal well- being.

9.1.5.FP.3: Analyze how spending choices and decision-making can result in positive or negative consequences.

9.1.5.FP.4: Explain the role of spending money and how it affects well- being and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).

9.1 Personal Financial Literacy: Planning and Budgeting

There are specific steps associated with creating a budget.

9.1.5.PB.1: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Saving money can impact an individual's ability to address emergencies and accomplish their short-and long-term goals.

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).

Interdisciplinary Instruction

Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.)

- **Science-** science experiments, manipulate data, analyzing data with large numbers, reading and writing large numbers

NJ Mandates

NJ Mandates

All Grades

NJ Mandates

Mandates

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the

- **ELA-** open ended questions, relevant read-alouds related to math are used to introduce and reinforce math concepts

Other titles: Marilyn Burns Math Library List

personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

Additional & Supplementary

Performance Tasks/Use of Technology: Conferencing/Individual Small group

- Open Ended Questions
- Observations
- Google Slide
- SMART Board activities
- Google Forms quizzes
- Kahoot games
- Quizlet review
- YouTube videos
- Flipgrid activities
- Speaker recording

ELA Companion Standards (6th-12th Only)

~KNOWLEDGE~

Enduring Understandings

- How to utilize addition and subtraction to assist with multiplication and division tasks.
- How to explore comparisons.
- How to solve problem situations.
- How to solve multi-step problems with multiplication and division.
- How to identify and describe patterns within the operations.
- How to estimate and use mental math strategies related to multiplication and division.
- How to apply multiplication strategies and models
- How to apply division skills and models.
- How to utilize factors and multiples to assist in problem solving.

Essential Questions

- How can you identify an equation?
- How can you make relationships between numbers using multiplicative comparisons?
- How can you solve multiplicative comparison problems using drawings and equations?
- How can you distinguish between multiplicative and additive comparison problems?
- What are some strategies we can use to solve word problems with the four operations?
- What is a product/quotient?
- How can we use place value patterns and properties of operations to find products and quotients?
- What tells us that our answer is reasonable?
- What strategies can we use to use mental math to solve multiplication and division problems?

Content	Vocabulary	Skills/Performance Expectations
		Students will be able to.. • Identify an equation. • Make relationships between numbers using multiplicative comparisons. • Solve multiplicative comparison problems using drawings and equations. • Distinguish between multiplicative and additive comparison problems. • Identify strategies we can use to solve word problems with the four operations. • Understand what a product/quotient is. • Use place value patterns and properties of operations to find products and quotients. • Explain why an answer is reasonable. • Identify strategies to use mental math in order to solve multiplication and division problems.

Stage 2: Assessment Evidence

Assessments

4th Math- Assessments

Stage 3: Learning Plan

Resources

- *Additional Resources by Standard
- Illustrative Math Tasks- Grade 4
- Math Milestones - Grade 4 Tasks
- Math Milestones- Grade 4 Level Grids
- Math Is Visual videos & Tasks
- K-5 math teaching resources

Suggested Learning Activities

- Manipulatives and collections of materials
- Tasks involving collaboration and problem-solving amongst the 4 operations
- Multiplication/Division fact practice tasks
- Hands on Activity:

  Conduct a number hunt to compare whole numbers. While conducting the number hunt around the room, students will work together with their peers showing kindness by listening to their thoughts and accepting their opinions.

"A Remainder of One" book & Lesson ideas- Students will read/listen to the story "A Remainder of One" and discuss how it feels to be left out and lonely and that we need to not exclude and include all.

Multi-Language Learner Accommodations 4th Math- Suggestions for Differentiation	504 Accommodations
Special Ed Accommodations	
At-risk Accommodations 4th Math- Suggestions for Differentiation	Gifted and Talented Accommodations 4th Math- Suggestions for Differentiation
Stage 4: Reflection	
Teacher Reflections	

Unit Planner: OCC 2- Number and Operations in Base Ten (50 Days)
Grade 4 Math

Tuesday, July 29, 2025, 6:09PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 4 / Mathematics / Grade 4 Math / Week 1

Last Updated: Thursday, July 18, 2024 by Christine Mille

OCC 2- Number and Operations in Base Ten (50 Days)

Deus, Mike; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 2: 50 Days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

During the school year the fourth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

The curriculum is aligned to the NJSL for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.The curriculum is aligned to the NJSLS for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.

In Grade 4, instruction focuses broadly on three critical areas:

1. developing understanding and accuracy and efficiency, with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;

2. developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;

3. understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

NJ: 2020 SLS: Social Studies

NJ: End of Grade 12

6.1 U.S. History: America in the World: Era 11. The Great Depression and World War II: World War II (1929–1945)

Governments around the world support universal human rights to varying degrees.

6.1.12.CivicsHR.11.a: Assess the responses of the United States and other nations to the violation of human rights that occurred during the Holocaust and other genocides.

NJ: 2023 SLS: Mathematics

NJ: Grade 4

Operations and Algebraic Thinking

4.OA.A. Use the four operations with whole numbers to solve problems

4.OA.A.3. Solve multi-step 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.

Number and Operations in Base Ten

4.NBT.A. Generalize place value understanding for multi-digit whole numbers

4.NBT.A.1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.

4.NBT.A.2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

4.NBT.A.3. Use place value understanding to round multi-digit whole numbers to any place.

4.NBT.B. Use place value understanding and properties of operations to perform multi-digit arithmetic

4.NBT.B.4. With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.

4.NBT.B.5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

4.NBT.B.6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area model.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Impacts of Computing

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

The development and modification of computing technology is driven by individual's needs and wants and can affect individuals differently.

8.1.5.IC.1: Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.

8.1.5.IC.2: Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.

Many factors influence the accuracy of inferences and predictions.

8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

8.1 Computer Science: Algorithms & Programming

Different algorithms can achieve the same result. Some algorithms are more appropriate for a specific use than others.

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.

Programming languages provide variables, which are used to store and modify data.

8.1.5.AP.2: Create programs that use clearly named variables to store and modify data.

9.1 Personal Financial Literacy: Civic Financial Responsibility

You can give back in areas that matter to you.

9.1.5.CR.1: Compare various ways to give back and relate them to your strengths, interests, and other personal factors.

9.1 Personal Financial Literacy: Economic and Government Influences

There is a broader economic system that influences your financial goals.

9.1.5.EG.3: Explain the impact of the economic system on one's personal financial goals.

9.1.5. EG.4: Describe how an individual's financial decisions affect society and contribute to the overall economy.

9.1 Personal Financial Literacy: Financial Psychology

An individual's financial traits and habits affect his/her finances.

9.1.5.FP.1: Illustrate the impact of financial traits on financial decisions.

Spending choices and their intended and unintended consequences impact financial outcomes and personal well- being.

9.1.5.FP.3: Analyze how spending choices and decision-making can result in positive or negative consequences.

9.1.5.FP.4: Explain the role of spending money and how it affects well- being and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).

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There are specific steps associated with creating a budget.

9.1.5.PB.1: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Saving money can impact an individual's ability to address emergencies and accomplish their short-and long-term goals.

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).

Interdisciplinary Instruction

Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as

NJ Mandates

NJ Mandates

All Grades

"interdisciplinary." (Click on the I circle to the right of the standards checkbox.)

- **Science-** science experiments, manipulate data, analyzing data with large numbers, reading and writing large numbers
- **ELA-** open ended questions, relevant read-alouds related to math are used to introduce and reinforce math concepts ($1.00 Word Riddle Book, A Million Fish…More or Less, Anno's Mysterious Multiplying Jar, Math Appeal, One Grain of Rice, etc.)

Other titles: **Marilyn Burns Math Library List**

NJ Mandates

Mandates

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

Additional & Supplementary

Performance Tasks/Use of Technology:

- Conferencing/Individual Small group
- Open Ended Questions
- Observations
- Google Slide
- SMART Board activities
- Google Forms quizzes
- Kahoot games
- Quizlet review
- YouTube videos
- Flipgrid activities
- Speaker recording

ELA Companion Standards (6th-12th Only)

~KNOWLEDGE~

Enduring Understandings

- How to generalize place value understanding for multi-digit whole numbers.
- How to use the four operations with whole numbers to solve problems.
- How to use place value understanding and properties of operations to perform multi-digit arithmetic.
- How to apply a formula to find the perimeter of a rectangle.

Essential Questions

- How are the digit values related within a number?
- What are some ways to compare the value of numbers?
- What does it mean to round?
- How can we express a multiplication in words?
- What words can we look for in a word problem that would tell us what operation to perform?
- What is an equation?
- How do you set up a multi-digit addition or subtraction algorithm?

	• How can we apply a formula to find the perimeter of a rectangle?

Content	Vocabulary	Skills/Performance Expectations
		Students will be able to.. • Explain how digit values are related within a number. • Explain what are some ways to compare the value of numbers. • Explain what it means to round. • Explain how we can express a multiplication in words. • Explain what words we can look for in a word problem that would tell us what operation to perform. • Explain what an equation is. • Set up a multi-digit addition or subtraction algorithm. • Apply a formula to find the perimeter of a rectangle.

Stage 2: Assessment Evidence

Assessments

4th Math- Assessments

Stage 3: Learning Plan

Resources	Suggested Learning Activities
• *Additional Resources by Standard • Illustrative Math Tasks- Grade 4 • Math Milestones - Grade 4 Tasks • Math Milestones- Grade 4 Level Grids • Math Is Visual videos & Tasks • K-5 Math teaching resources	• Games involving place value and multi-digit whole numbers • Collections of materials and manipulatives • Balloon Rounding: Students take turns holding a balloon, looking at a number and removing a finger (to match the place value amount) to see if the whole number will round up or down - balloon stays in hand if "4 or less" or floats up if "five or more" (model) • Students will work together and collaborate while rolling multiple sets of dice and comparing the numerals and place value amounts (while taking turns and accepting the thoughts of others): ○ Roll the Dice Place Value Comparing
Multi-Language Learner Accommodations 4th Math- Suggestions for Differentiation	504 Accommodations

Special Ed Accommodations	
At-risk Accommodations 4th Math- Suggestions for Differentiation	Gifted and Talented Accommodations 4th Math- Suggestions for Differentiation
Stage 4: Reflection	
Teacher Reflections	

Unit Planner: OCC 3- Number and Operations - Fractions (50 Days)
Grade 4 Math

Tuesday, July 29, 2025, 6:09PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 4 / Mathematics / Grade 4 Math / Week 1

Last Updated: Thursday, July 18, 2024 by Christine Mille

OCC 3- Number and Operations - Fractions (50 Days)

Deus, Mike; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 3: 50 Days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

During the school year the fourth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

The curriculum is aligned to the NJSL for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.The curriculum is aligned to the NJSLS for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.

In Grade 4, instruction focuses broadly on three critical areas:

1. developing understanding and accuracy and efficiency, with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;

2. developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;

3. understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

SL.PE.4.1. NJ: 2023 SLS: English Language Arts

SL.PE.4.1. NJ: Grade 4

SL.PE.4.1. Speaking and Listening Domain

SL.PE.4.1. Speaking and Listening

SL.PE.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.

NJ: 2020 SLS: Science

NJ: Grade 4

3-5 ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

NJ: 2020 SLS: Social Studies

NJ: End of Grade 5

6.3 Active Citizenship in the 21st Century: Geography, People, and the Environment

Human Environment Interaction
Human activities affect environmental characteristics of places or regions resulting in positive and negative impacts.

6.3.5.GeoHE.1: Plan and participate in an advocacy project to inform others about the impact of climate change at the local or state level and propose possible solutions.

NJ: 2023 SLS: Mathematics

NJ: Grade 4

Operations and Algebraic Thinking

4.OA.A. Use the four operations with whole numbers to solve problems

4.OA.A.3. Solve multi-step 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.

Number and Operations - Fractions

4.NF.A. Extend understanding of fractions equivalence and ordering

4.NF.A.1. Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{(n \times a)}{(n \times b)}$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

4.NF.A.2. Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

4.NF.B. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers

4.NF.B.3. Understand a fraction $\frac{a}{b}$ with a > 1 as a sum of fractions $\frac{1}{b}$.
a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}; \frac{3}{8} = \frac{1}{8} + \frac{2}{8}; 2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$
c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
d. 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.

4.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
a. Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$.
b. Understand a multiple of $\frac{a}{b}$ as a multiple of $\frac{1}{b}$, and use this understanding to multiply a fraction by a whole number.
c. 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.

4.NF.C. Understand decimal notation for fractions and compare decimal fractions

4.NF.C.5. Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.

4.NF.C.6. Use decimal notation for fractions with denominators 10 or 100.

4.NF.C.7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

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Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

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Interdisciplinary Instruction Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.)	NJ Mandates **NJ Mandates** **All Grades** **NJ Mandates** **Mandates** Climate Change: The NJSLS-CLKS includes the skills, knowledge and practices necessary for success in an increasingly complex world and changing natural environment. Climate change is included in these standards. Collaborating to solve a problem, approaching a solution with innovation, and determining the validity of a source of information are all essential skills required in the standards and necessary for students to possess to maintain awareness of and successfully address climate change.
Additional & Supplementary **Performance Tasks/Use of Technology:** • Conferencing/Individual Small group • Open Ended Questions • Observations • Google Slide • SMART Board activities • Google Forms quizzes • Kahoot games	ELA Companion Standards (6th-12th Only)

- Quizlet review
- YouTube videos
- Flipgrid activities
- Speaker recording

~KNOWLEDGE~

Enduring Understandings

- Use concrete and visual models to identify factors of numbers up to 100
- Use divisibility and multiples to determine a factor.
- Identify prime and composite numbers
- Use rules to find patterns and identify features of the pattern

- Connect reasoning about the size of a fraction to a benchmark to compare fractions
- Connect fractional equivalent to a visual model
- Compare fractions with the same numerator and denominator
- Demonstrate decimals and fractions with denominators of 10 and 100
- Solve word problems involving money with four operations
- Use visual models and place value concepts to compare decimals
- Make connections between fractions, decimals, and money
- Sketch and draw an angle with a protractor.
- Recognize angles as additive to solve problems involving angles
- Decompose fractions into a sum of those fractions
- Understand addition and subtracting as joining and separating parts.
- Use models and equations to solve word problems
- Add fractions with denominators of 10 and 100
- Use visual and concrete models and equations to represent and solve word problems involving addition and subtraction of mixed numbers
- Rename mixed numbers as equivalent fractions to add or subtract
- Add and Subtract mixed numbers

Essential Questions

- How can we find all the factors of a whole number?
- When is a number a multiple of another number?
- How can we compare and contrast factors and multiples?
- What determines a pattern? How do we find patterns among a series of numbers?

- How can we tell if 2 fractions are the same

Content

Vocabulary

Skills/Performance Expectations

Students will be able to..

- Find all of the factors of a whole number.
- Identify a multiple of another number.
- Compare and contrast factors and multiples.

		• Determine a pattern, and to find patterns among a series of numbers. • Explain if 2 fractions are the same

Stage 2: Assessment Evidence

Assessments

4th Math- Assessments

Stage 3: Learning Plan

Resources

- *Additional Resources by Standard
- Illustrative Math Tasks- Grade 4
- Math Milestones - Grade 4 Tasks
- Math Milestones- Grade 4 Level Grids
- Math Is Visual videos & Tasks
- K-5 Math teaching resources
- MetricSystemFREEMeasurementBINGOWorksheetFunVideo4th5thGrade-1.pdf

Suggested Learning Activities

- Games involving fractional parts and breaking shapes into various equal segments
- Students can complete Spiral Reviews to review previous concepts
- Virtual manipulatives: Didax Virtual Manipulatives;

  Toy Theater Virtual Manipulatives

- Discuss how important it is to Reduce, Reuse and Recycle and how everyone needs to help to make a difference and how this makes an impact on our Earth.
  - Look up ways we can help our Earth and listen to the story "The 3 R's: Reduce, Reuse, Recycle."
  - Create fraction word problems for

	their peers to solve that include the Earth and ways to Reuse, Reduce or Recycle. ○ Earth Day Math Task
Multi-Language Learner Accommodations 4th Math- Suggestions for Differentiation	504 Accommodations
Special Ed Accommodations	
At-risk Accommodations 4th Math- Suggestions for Differentiation	Gifted and Talented Accommodations 4th Math- Suggestions for Differentiation
Stage 4: Reflection	
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Unit Planner: OCC 4- Measurement (15 Days)
Grade 4 Math

Tuesday, July 29, 2025, 6:09PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 4 / Mathematics / Grade 4 Math / Week 1

Last Updated: Thursday, July 18, 2024 by Christine Mille

OCC 4- Measurement (15 Days)

Deus, Mike; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 4: 15 Days

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During the school year the fourth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

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2. developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;

3. understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

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SL.PE.4.1. NJ: Grade 4

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SL.PE.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.

NJ: 2020 SLS: Science

NJ: Grade 4

3-5 ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

NJ: 2020 SLS: Social Studies

NJ: End of Grade 5

6.3 Active Citizenship in the 21st Century: Geography, People, and the Environment

Human Environment Interaction
Human activities affect environmental characteristics of places or regions resulting in positive and negative impacts.

6.3.5.GeoHE.1: Plan and participate in an advocacy project to inform others about the impact of climate change at the local or state level and propose possible solutions.

NJ: 2023 SLS: Mathematics

NJ: Grade 4

Operations and Algebraic Thinking

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4.OA.A.3. Solve multi-step 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.

Measurement

4.M.A. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit

4.M.A.1. Know relative sizes of measurement units within one system of units including km, m, cm. mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

4.M.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.

4.M.A.3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

4.M.B. Geometric measurement: understand concepts of angle and measure angles

4.M.B.4. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360^{th}}$ of a circle is called a "one-degree angle," and can be used to measure angles.
b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

4.M.B.5. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

4.M.B.6. Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

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NJ Mandates

NJ Mandates

All Grades

NJ Mandates

Mandates

Climate Change: The NJSLS-CLKS includes the skills, knowledge and practices necessary for success in an increasingly complex world and changing natural environment. Climate change is included in these standards. Collaborating to solve a problem, approaching a solution with innovation, and determining the validity of a source of information are all essential skills required in the standards and necessary for students to possess to maintain awareness of and successfully address climate change.

Additional & Supplementary

Performance Tasks/Use of Technology:

- Conferencing/Individual Small group
- Open Ended Questions
- Observations
- Google Slide
- SMART Board activities
- Google Forms quizzes
- Kahoot games

ELA Companion Standards (6th-12th Only)

- Quizlet review
- YouTube videos
- Flipgrid activities
- Speaker recording

~KNOWLEDGE~

Enduring Understandings

- Identify customary and metric measurement benchmarks
- Compare customary units of length, weight, and liquid volume
- Compare metric units of length, mass, and liquid volume
- Solve problems using measurements
- Compare units of time
- Solve problems involving elapsed time and start/finish time
- Practice with mixed measures

Essential Questions

- When might it be helpful to measure objects in different units?
- How are length, weight, and volume the same/different?
- When might you use length/weight/volume to measure an object?
- Which type of tool would you use to measure (customary and metric)?
- Compare how many cups it takes to fill a larger object. Are there any patterns?
- How does knowing the smaller units of a larger measurement tool help you solve a problem?
- What tool is the best tool to measure …?
- Is there a relationship between gallons and quarts, etc…?
- Why is it important to know how much time has passed?
- How does multiplication and division help you determine units of time?

Content

Vocabulary

Skills/Performance Expectations

Students will be able to..

- Identify when it might be helpful to measure objects in different units.
- Identify and explain how length, weight, and volume are the same/different.
- Explain when to use length/weight/volume to measure an object.
- Explain which type of tool you would use to measure (customary and metric).
- Compare how many cups it takes to fill a larger object, and identify if there are any patterns.
- Explain how knowing the smaller units of a larger

		measurement tool help you solve a problem. • Identify what tool is the best tool to measure. • Explain why it is important to know how much time has passed. • Explain how multiplication and division help you determine units of time.

Stage 2: Assessment Evidence

Assessments

4th Math- Assessments

Stage 3: Learning Plan

Resources	Suggested Learning Activities
• *Additional Resources by Standard • Illustrative Math Tasks- Grade 4 • Math Milestones - Grade 4 Tasks • Math Milestones- Grade 4 Level Grids • Math Is Visual videos & Tasks • K-5 Math teaching resources	• Activities involving measurement of items and angles (using tools) • Manipulatives and collections of materials to measure and compare • Geoboard creations and measurements • Discuss how important it is to Reduce, Reuse and Recycle and how everyone needs to help to make a difference and how this makes an impact on our Earth. Look up ways we can help our Earth and listen to the story "Why Should I Recycle?." Create measurement word problems for their peers to solve that include the Earth and ways to Reuse, Reduce or Recycle.
Multi-Language Learner Accommodations 4th Math- Suggestions for Differentiation	504 Accommodations
Special Ed Accommodations	
At-risk Accommodations 4th Math- Suggestions for Differentiation	Gifted and Talented Accommodations 4th Math- Suggestions for Differentiation

Stage 4: Reflection

Teacher Reflections

Unit Planner: OCC 5- Data Literacy (15 Days)
Grade 4 Math

Tuesday, July 29, 2025, 6:09PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 4 / Mathematics / Grade 4 Math / Week 1

Last Updated: Thursday, July 18, 2024 by Christine Mille

OCC 5- Data Literacy (15 Days)

Deus, Mike; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 5: 15 Days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

During the school year the fourth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

The curriculum is aligned to the NJSL for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.The curriculum is aligned to the NJSLS for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.

In Grade 4, instruction focuses broadly on three critical areas:

1. developing understanding and accuracy and efficiency, with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;

2. developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;

3. understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

SL.PE.4.1. NJ: 2023 SLS: English Language Arts

SL.PE.4.1. NJ: Grade 4

SL.PE.4.1. Speaking and Listening Domain

SL.PE.4.1. Speaking and Listening

SL.PE.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.

NJ: 2020 SLS: Science

NJ: Grade 4

3-5 ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

NJ: 2020 SLS: Social Studies

NJ: End of Grade 5

6.1 U.S. History: America in the World: Civics, Government, and Human Rights

Effective conflict resolution is possible when evidence, diverse perspectives, and intended/unintended consequences are considered.

6.1.5.CivicsPD.3: Explain how and why it is important that people from diverse cultures collaborate to find solutions to community, state, national, and global challenges.

6.1 U.S. History: America in the World: Geography, People, and the Environment

Human Environment Interaction

Human activities affect environmental characteristics of places or regions resulting in positive and negative impacts.

6.1.5.GeoHE.1: Use a variety of sources from multiple perspectives, including aerial photographs or satellite images to describe how human activity has impacted the physical environment during different periods of time in New Jersey and the United States.

NJ: 2023 SLS: Mathematics

NJ: Grade 4

Operations and Algebraic Thinking

4.OA.A. Use the four operations with whole numbers to solve problems

4.OA.A.3. Solve multi-step 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.

Data Literacy

4.DL.A. Organize data and understand data visualizations

4.DL.A.1. Create data-based questions, generate ideas based on the questions, and then refine the questions.

4.DL.A.2. Develop strategies to collect various types of data and organize data digitally.

4.DL.A.3. Understand that subsets of data can be selected and analyzed for a particular purpose.

4.DL.A.4. Analyze visualizations of a single data set, share explanations and draw conclusions that the data supports.

4.DL.B. Represent and interpret measurement data

4.DL.B.5. Make a line plot to display a data set of measurements in fractions of a unit (½, ¼, ⅛). Solve problems involving addition and subtraction of fractions by using information presented in line plots.

Number and Operations in Base Ten

4.NBT.A. Generalize place value understanding for multi-digit whole numbers

4.NBT.A.1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.

4.NBT.A.2. Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

4.NBT.A.3. Use place value understanding to round multi-digit whole numbers to any place.

4.NBT.B. Use place value understanding and properties of operations to perform multi-digit arithmetic

4.NBT.B.4. With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.

4.NBT.B.5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

4.NBT.B.6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area model.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Computing Systems

Software and hardware work together as a system to accomplish tasks (e.g., sending, receiving, processing, and storing units of information).

8.1.5.CS.2: Model how computer software and hardware work together as a system to accomplish tasks.

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

9.1 Personal Financial Literacy: Civic Financial Responsibility

You can give back in areas that matter to you.

9.1.5.CR.1: Compare various ways to give back and relate them to your strengths, interests, and other personal factors.

9.1 Personal Financial Literacy: Economic and Government Influences

There is a broader economic system that influences your financial goals.

9.1.5.EG.3: Explain the impact of the economic system on one's personal financial goals.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.

Many factors influence the accuracy of inferences and predictions.

8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

8.1 Computer Science: Algorithms & Programming

Different algorithms can achieve the same result. Some algorithms are more appropriate for a specific use than others.

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.

Programming languages provide variables, which are used to store and modify data.

8.1.5.AP.2: Create programs that use clearly named variables to store and modify data.

9.1.5. EG.4: Describe how an individual's financial decisions affect society and contribute to the overall economy.

9.1 Personal Financial Literacy: Financial Psychology

An individual's financial traits and habits affect his/her finances.

9.1.5.FP.1: Illustrate the impact of financial traits on financial decisions.

Spending choices and their intended and unintended consequences impact financial outcomes and personal well- being.

9.1.5.FP.3: Analyze how spending choices and decision-making can result in positive or negative consequences.

9.1.5.FP.4: Explain the role of spending money and how it affects well- being and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).

9.1 Personal Financial Literacy: Planning and Budgeting

There are specific steps associated with creating a budget.

9.1.5.PB.1: Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Saving money can impact an individual's ability to address emergencies and accomplish their short-and long-term goals.

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).

Interdisciplinary Instruction

Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.)

NJ Mandates

NJ Mandates

All Grades

NJ Mandates

Mandates

Climate Change: The NJSLS-CLKS includes the skills, knowledge and practices necessary for success in an increasingly complex world and changing natural environment. Climate change is included in these standards. Collaborating to solve a problem, approaching a solution with innovation, and determining the validity of a source of information are all essential skills required in the standards and necessary for students to possess to maintain awareness of and successfully address climate change.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

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NJ Mandates

NJ Mandates

All Grades

NJ Mandates

Mandates

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	Diversity and Inclusion: Requires school districts to include instruction on diversity and inclusion as part of implementation of New Jersey Student Learning Standards.
Additional & Supplementary **Performance Tasks/Use of Technology:** • Conferencing/Individual Small group • Open Ended Questions • Observations • Google Slide • SMART Board activities • Google Forms quizzes • Kahoot games • Quizlet review • YouTube videos • Flipgrid activities • Speaker recording	ELA Companion Standards (6th-12th Only)

~KNOWLEDGE~

Enduring Understandings	Essential Questions
• Represent and interpret line plots • Some data can be represented using a line plot and the line plot can be used to answer several questions about the data • Solve problems using data sets and subsets • Numbers can be represented and compared in many ways within a data set • Some problems can be solved by breaking apart or changing the problem into simpler ones, solving simpler ones, and using these solutions to solve the original problem • Recording information in a table can help	• How do you represent and interpret data and data subsets? • How does a line plot help you organize the data we collect? • How do we use information from one type of data display to another? • How can we create word problems using comparative data? • How do we determine missing parts within a table/graph? • How can we interpret data to determine a rule and/or pattern? • How can a pattern help you solve a problem within a data set?

Content	Vocabulary	Skills/Performance Expectations
		Students will be able to..

		• Represent and interpret data and data subsets. • Explain how a line plot helps you organize the data that is collected. • Use information from one type of data display to another. • Create word problems using comparative data. • Determine missing parts within a table/graph. • Interpret data to determine a rule and/or pattern. • Explain how a pattern can help solve a problem within a data set.

Stage 2: Assessment Evidence

Assessments

4th Math- Assessments

Stage 3: Learning Plan

Resources

- *Additional Resources by Standard
- Illustrative Math Tasks- Grade 4
- Math Milestones - Grade 4 Tasks
- Math Milestones- Grade 4 Level Grids
- Math Is Visual videos & Tasks
- K-5 Math teaching resources

Suggested Learning Activities

- Activities involving organization of items and interpreting results (using tools)
- Manipulatives and collections of materials
- Geoboard creations and data correlations
- Read the story "One".

  I Do: Read the story "One". We Do: Discuss why it's important to speak kindly to others and how it affects others. They Do: After reading the book and discussing, create a line plot on tracking how many times students use positive words in the classroom.

- Discuss how important it is to Reduce, Reuse and Recycle and how everyone needs to help to make a difference and how this makes an impact on our Earth.
  - Look up ways we can help our Earth and listen to the story "Why Should I Recycle?."
  - Create data word problems for their peers to solve that include the Earth and ways to Reuse, Reduce or Recycle.

Multi-Language Learner Accommodations

4th Math- Suggestions for Differentiation

504 Accommodations

Special Ed Accommodations

At-risk Accommodations	Gifted and Talented Accommodations
4th Math- Suggestions for Differentiation	4th Math- Suggestions for Differentiation

Stage 4: Reflection

Teacher Reflections

Unit Planner: OCC 6- Geometry (20 Days)
Grade 4 Math

Tuesday, July 29, 2025, 6:09PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 4 / Mathematics / Grade 4 Math / Week 1

Last Updated: Thursday, July 18, 2024 by Christine Mille

OCC 6- Geometry (20 Days)

Deus, Mike; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 6: 20 Days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

During the school year the fourth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

The curriculum is aligned to the NJSL for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.The curriculum is aligned to the NJSLS for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice.

In Grade 4, instruction focuses broadly on three critical areas:

1. developing understanding and accuracy and efficiency, with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;

2. developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;

3. understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

SL.PE.4.1. NJ: 2023 SLS: English Language Arts

SL.PE.4.1. NJ: Grade 4

SL.PE.4.1. Speaking and Listening Domain

SL.PE.4.1. Speaking and Listening

SL.PE.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.

NJ: 2020 SLS: Social Studies

NJ: End of Grade 12

6.1 U.S. History: America in the World: Era 5. The Development of the Industrial United States (1870–1900)

Technological developments and unregulated business practices revolutionized transportation, manufacturing, and consumption, and changed the daily lives of Americans. The Industrial Revolution and immigration had a powerful impact on labor relations, urbanization, the environment, cultural values, and created tensions between ethnic and social groups.
Social and political systems throughout time have promoted and denied civic virtues and democratic principles.

6.1.12.CivicsDP.5.a: Analyze the effectiveness of governmental policies and of actions by groups and individuals to address discrimination against new immigrants, Native Americans, and African Americans.

NJ: 2023 SLS: Mathematics

NJ: Grade 4

Operations and Algebraic Thinking

4.OA.A. Use the four operations with whole numbers to solve problems

4.OA.A.3. Solve multi-step 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.

Measurement

4.M.B. Geometric measurement: understand concepts of angle and measure angles

4.M.B.5. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

Geometry

4.G.A. Draw and identify lines and angles, and classify shapes by properties of their lines and angles

4.G.A.1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.A.2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles.

4.G.A.3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Computer Science & Design Thinking | Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.1.5.DA.4: Organize and present climate change data visually to highlight relationships or support a claim.

Many factors influence the accuracy of inferences and predictions.

8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

8.1 Computer Science: Algorithms & Programming

Different algorithms can achieve the same result. Some algorithms are more appropriate for a specific use than others.

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

9.1 Personal Financial Literacy: Civic Financial Responsibility

You can give back in areas that matter to you.

9.1.5.CR.1: Compare various ways to give back and relate them to your strengths, interests, and other personal factors.

9.1 Personal Financial Literacy: Economic and Government Influences

There is a broader economic system that influences your financial goals.

9.1.5. EG.4: Describe how an individual's financial decisions affect society and contribute to the overall economy.

9.1 Personal Financial Literacy: Financial Psychology

Spending choices and their intended and unintended consequences impact financial outcomes and personal well- being.

9.1.5.FP.3: Analyze how spending choices and decision-making can result in positive or negative consequences.

9.1.5.FP.4: Explain the role of spending money and how it affects well- being and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).

9.1 Personal Financial Literacy: Planning and Budgeting

Saving money can impact an individual's ability to address emergencies and accomplish their short-and long-term goals.

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).

Interdisciplinary Instruction

Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.)

NJ Mandates

NJ Mandates

All Grades

NJ Mandates

Mandates

Amistad Law: N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the

	curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.
Additional & Supplementary **Performance Tasks/Use of Technology:** • Conferencing/Individual Small group • Open Ended Questions • Observations • Google Slide • SMART Board activities • Google Forms quizzes • Kahoot games • Quizlet review • YouTube videos • Flipgrid activities • Speaker recording	ELA Companion Standards (6th-12th Only)

~KNOWLEDGE~

Enduring Understandings	Essential Questions
• Identify and draw perpendicular and parallel lines • Identify and classify triangles by sides and angles • Identify and classify quadrilaterals • Measure and draw angles of two-dimensional figures • Recognize lines of symmetry • Identity and draw lines of symmetry • Generate and identify shape patterns	• What is different about a set of parallel and perpendicular lines? How are they the same? • Does this figure contain parallel or perpendicular lines/lines of symmetry? • How can we compare and contrast these triangles? What makes them different or the same? • What does symmetrical mean? • How do we identify a line of symmetry in a symmetrical figure? • What makes something symmetrical? • How can we examine this pattern and determine the rule for the pattern?

Content	Vocabulary	Skills/Performance Expectations
		Students will be able to..

		• Explain what is different about a set of parallel and perpendicular lines, and how they are the same. • Identify if a figure contains parallel or perpendicular lines/lines of symmetry. • Explain how we can compare and contrast triangles, and what makes them different or the same. • Explain what symmetrical means. • Identify a line of symmetry in a symmetrical figure. • Explain what makes something symmetrical. • Examine a pattern and determine the rule for the pattern.

Stage 2: Assessment Evidence

Assessments

4th Math- Assessments

Stage 3: Learning Plan

Resources

- *Additional Resources by Standard
- Illustrative Math Tasks- Grade 4
- Math Milestones - Grade 4 Tasks
- Math Milestones- Grade 4 Level Grids
- Math Is Visual videos & Tasks
- K-5 Math teaching resources
- FREE 4th Grade Geometry 16 Lessons Unit Guide with Worksheets ...

Suggested Learning Activities

- Manipulatives and collections of materials with geometric shapes/angles
- Tasks involving collaboration and problem-solving within geometric tasks
- Creating geometric shapes utilizing measurement tools and incorporating key math vocabulary
- Shape sort
- Hands on Activity:

Conduct a Shape hunt to identify, compare and contrast the attributes of different shapes *(ex: number of sides, types of angles, parallel and/or perpendicular sides, lines of symmetry)*. While conducting the shape hunt around the room, students will work together with their peers showing kindness by listening to their thoughts and accepting their opinions. Geometry Sorts: Classifying Shapes - The Teacher Studio

Multi-Language Learner Accommodations

4th Math- Suggestions for Differentiation

504 Accommodations

Special Ed Accommodations

At-risk Accommodations

4th Math- Suggestions for Differentiation

Gifted and Talented Accommodations

4th Math- Suggestions for Differentiation

Stage 4: Reflection

Teacher Reflections

BRIDGES IN MATHEMATICS

Grade 4 Scope & Sequence

Revised for 2020–21

KEY		
Bold standard, e.g., 4.OA.1	Critical standard for the grade level	Module that may be moved to the end of the year, if needed
Gray standard, e.g., 4.OA.4	Supporting or additional standard for the grade level	Module that may be deleted entirely from the sequence of instruction

NOTE: Unit 8 has been removed from this Scope & Sequence, but may still be taught if there is instructional time.

	(August)/Sept./October	October/November	November/December	January/February	March	April	May/(June)
	Unit 1 Multiplicative Thinking	Unit 2 Multi-Digit Multiplication & Early Division	Unit 3 Fractions & Decimals	Unit 4 Addition, Subtraction & Measurement	Unit 5 Geometry & Measurement	Unit 6 Multiplication, Division, Data & Fractions	Unit 7 Reviewing & Extending Fractions, Decimals & Multi-Digit Multiplication
Mod. 1	**Models for Multiplication & Division** *Previous grade:* **3.OA.1, 3.OA.2, 3.OA.3, 3.OA.4, 3.OA.6, 3.OA.7** *Grade 4:* **4.OA.1, 4.OA.2**	**Building Multiplication Arrays** **4.NBT.1, 4.NBT.5,** 4.MD.1, 4.MD.3	**Equivalent Fractions** *Previous grade:* **3.NF.1, 3.NF.2a-b, 3.NF.3a-d,** 3.G.2 *Grade 4:* **4.NF.1, 4.NF.2, 4.NF.3**	**Place Value & the Standard Algorithm** **4.NBT.1, 4.NBT.2, 4.NBT.3, 4.NBT.4**	**Polygons & Symmetry** *Previous grade:* 3.G.1 *Grade 4:* 4.OA.5, 4.MD.5b, 4.MD.6, 4.G.1, 4.G.2, 4.G.3	**Multiplication & Division Strategies** **4.NBT.5, 4.NBT.6**	**Comparing Fractions & Writing Equivalent Fractions** **4.NF.1, 4.NF.2**
Mod. 2	**Primes & Composites** *Previous grade:* **3.OA.5, 3.OA.7** *Grade 4:* 4.OA.4	**Arrays & Ratio Tables** *Previous grade:* 3.NBT.3 *Grade 4:* **4.OA.3,** 4.OA.4, **4.NBT.1, 4.NBT.5**	**Comparing, Composing & Decomposing Fractions & Mixed Numbers** **4.NF.1, 4.NF.2, 4.NF.3a–d, 4.NF.4a–b**	**The Standard Subtraction Algorithm** **4.NBT.1, 4.NBT.2, 4.NBT.3, 4.NBT.4**	**Measuring Angles** 4.MD.5, 4.MD.6, 4.MD.7, 4.G.1, 4.G.2	**Revisiting Area & Perimeter** **4.NBT.5, 4.NBT.6,** 4.MD.1, 4.MD.2, 4.MD.3	**Decimals & Decimal Fractions** **4.NF.5, 4.NF.6, 4.NF.7**
Mod. 3	**Multiplicative Comparisons & Equations** *Previous grade:* **3.OA.4, 3.OA.7** *Grade 4:* **4.OA.1, 4.OA.2, 4.OA.3,** 4.OA.4	**Multiplication Stories & Strategies** *Previous grade:* **3.OA.8** *Grade 4:* **4.OA.3, 4.NBT.5,** 4.MD.2	**introducing Decimals** **4.NF.5, 4.NF.6, 4.NF.7**	**Measurement** *Previous grade:* **3.MD.1** *Grade 4:* 4.MD.1, 4.MD.2	**Area & Perimeter** *Previous grade:* 3.MD.8 *Grade 4:* **4.NBT.5,** 4.MD.3, 4.G.1, 4.G.2, 4.G.3	**Line Plots, Fractions & Division** **4.OA.3,** 4.OA.4, **4.NBT.6,** 4.NF.1, 4.MD.4	**Introducing the Standard Multiplication Algorithm** **4.OA.3, 4.NBT.5**
Mod. 4	**Measurement Experiences** *Area (previous grade):* **3.MD.5a-b, 3.MD.6, 3.MD.7a-d** *Removed (Grade 4):* **4.OA.2,** 4.MD.1, 4.MD.2	**Early Division with Remainders** **4.NBT.5, 4.NBT.6**	**Fractions & Decimals** **4.NF.2, 4.NF.5, 4.NF.6, 4.NF.7**	**Measurement & Data Displays** 4.MD.2, 4.MD.4	**Angles in Motion** 4.MD.5, 4.MD.6, 4.MD.7	**More Division** **4.OA.3,** 4.OA.4, **4.NBT.6**	**Extending the Standard Multiplication Algorithm** **4.NBT.5, 4.NBT.6**

Unit Planner: OCC 1- Operations and Algebraic Thinking (20 Days)
Math Grade 5

Tuesday, July 29, 2025, 5:58PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 5 / Mathematics / Math Grade 5 / Week 1

Last Updated: Monday, October 14, 2024 by Theresa Eagan

OCC 1- Operations and Algebraic Thinking (20 Days)

Deus, Mike; Eagan, Theresa; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 1: 20 days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

During the school year the fifth grade teachers will provide effective mathematics instruction with a balanced instructional program. The instruction will include the whole group, centers/stations, both independent and or teacher lead, as well as technology and student pairing of learned concepts. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving.

The curriculum is aligned to the NJSL for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice. The curriculum is aligned to the NJSLS for Mathematics. Activities outlined in this curriculum infuse the Standards for Mathematical Practice. In Grade 5, instruction focuses broadly on three critical areas:

(1) developing accuracy and efficiency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions);

(2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing accuracy and efficiency with whole number and decimal operations; and

(3) developing understanding of volume.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

SL.PE.5.1. NJ: 2023 SLS: English Language Arts

SL.PE.5.1. NJ: Grade 5

SL.PE.5.1. Speaking and Listening Domain

SL.PE.5.1. Speaking and Listening

SL.PE.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

NJ: 2020 SLS: Science

NJ: Grade 5

3-5 ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

NJ: 2023 SLS: Mathematics

NJ: Grade 5

Operations and Algebraic Thinking

5.OA.A. Write and interpret numerical expressions

5.OA.A.1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

5.OA.A.2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

5.OA.B. Analyze patterns and relationships

5.OA.B.3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.1 Computer Science: Algorithms & Programming

Different algorithms can achieve the same result. Some algorithms are more appropriate for a specific use than others.

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

9.1 Personal Financial Literacy: Planning and Budgeting

Saving money can impact an individual's ability to address emergencies and accomplish their short- and long-term goals.

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).

9.4 Life Literacies and Key Skills: Creativity and Innovation

Curiosity and a willingness to try new ideas (intellectual risk-taking) contributes to the development of creativity and innovation skills.

9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a).

8.1.5.AP.1: Compare and refine multiple algorithms for the same task and determine which is the most appropriate.

8.2 Design Thinking: Engineering Design

Engineering design is a systematic and creative process of communicating and collaborating to meet a design challenge. Often, several design solutions exist, each better in some way than the others.

8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.

8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

9.4 Life Literacies and Key Skills: Critical Thinking and Problem-solving

The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.

9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).

9.4 Life Literacies and Key Skills: Information and Media Literacy

Digital tools can be used to modify and display data in various ways that can be organized to communicate ideas.

9.4.5.IML.3: Represent the same data in multiple visual formats in order to tell a story about the data.

Interdisciplinary Instruction

Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.)

NJ Mandates

Additional & Supplementary

se of Technology:

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ya.com/

ELA Companion Standards (6th-12th Only)

Math Library List: http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf

~KNOWLEDGE~

Enduring Understandings

- Basic facts and place-value patterns can be used to find products when one factor is a multiple of 10 or a multiple of 100.
- Numbers can be represented using a base number and an exponent for powers of ten.
- Patterns can be used to mentally multiply and divide decimals by 10, 100, and 1,000.
- Any number, measure, numerical expression, algebraic expression, or equation can be represented in an infinite number of ways that have the same value.
- Numerical patterns can be generated based on given rule sets

Essential Questions

- Why do you use parentheses, brackets, or braces when evaluating numerical expressions?
- How would you use words and scenarios to write and interpret numerical expressions?
- How can you determine the "ten times" or "1/10th" relationships between multi-digit numbers?
- Why use the standard algorithm to multiply 3-digit whole numbers by 1-digit whole numbers?
- Why use various methods when dividing whole number quotients with four-digit dividends and 2-digit divisors?

Content

Vocabulary

Students will be able to..

- Evaluate numerical expressions with parentheses, brackets, and braces (including exp
- fractions and decimals)
- Use parentheses, brackets, or braces to group parts of a numerical expression
- Write simple numerical expressions from a description that record calculations with nu
- Interpret numerical expressions to compare their values without evaluating them
- Generate two numerical patterns using two given rules
- Identify and explain apparent relationships between corresponding terms
- Form ordered pairs consisting of corresponding terms based on two patterns and grap
- coordinate plane

Skills/Performance Expectations

Stage 2: Assessment Evidence

Assessments

5th- Math Assessments

Stage 3: Learning Plan

Resources

5.OA

le 5 Tasks

puts

Suggested Learning Activities

- District approved differentiated textbook resources
- IXL
- Manipulatives and collections of materials
- Tasks involving collaboration and problem-solving amongst the 4 operations
- Multiplication/Division fact practice tasks

Tasks urces Correlation to Bridges	**As appropriate:** • VB-Mapp • ABLLS
Multi-Language Learner Accommodations 5th Math- Options for Differentiation	504 Accommodations
Special Ed Accommodations	
At-risk Accommodations 5th Math- Options for Differentiation	Gifted and Talented Accommodations 5th Math- Options for Differentiation
Stage 4: Reflection	
Teacher Reflections	

Unit Planner: OCC 2- Number and Operations in Base Ten (50 Days)
Math Grade 5

Tuesday, July 29, 2025, 5:58PM

Dr. Gerald H. Woehr Elementary School / 2025-2026 / Grade 5 / Mathematics / Math Grade 5 / Week 1

Last Updated: Monday, October 14, 2024 by Theresa Eagan

OCC 2- Number and Operations in Base Ten (50 Days)

Deus, Mike; Eagan, Theresa; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

Description of Unit

Unit 2: 50 days

Effective mathematics education provides students with a balanced instructional program. In such a program, students become proficient in basic computational skills and procedures, develop conceptual understandings, and become skilled at problem solving. Standards-based mathematics instruction starts with basic material and increases in scope and content as the years progress. It is like an inverted pyramid, with the entire weight of the developing subject, including readiness for algebra, resting on the foundation built in the early grades.

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(2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing accuracy and efficiency with whole number and decimal operations; and

(3) developing understanding of volume.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

SL.PE.5.1. NJ: 2023 SLS: English Language Arts

SL.PE.5.1. NJ: Grade 5

SL.PE.5.1. Speaking and Listening Domain

SL.PE.5.1. Speaking and Listening

SL.PE.5.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

NJ: 2020 SLS: Science

NJ: Grade 5

3-5 ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

NJ: 2023 SLS: Mathematics

NJ: Grade 5

Number and Operations in Base Ten

5.NBT.A. Understand the place value system

5.NBT.A.1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

5.NBT.A.2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

5.NBT.A.3. Read, write, and compare decimals to thousandths.
a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (\frac{1}{10}) + 9 \times (\frac{1}{100}) + 2 \times (\frac{1}{1000})$.

b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

5.NBT.A.4. Use place value understanding to round decimals to any place.

5.NBT.B. Perform operations with multi-digit whole numbers & with decimals to hundredths

5.NBT.B.5. With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.

5.NBT.B.6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

5.NBT.B.7. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Computer Science & Design Thinking

Interdisciplinary Connection

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.2 Design Thinking: Engineering Design

Engineering design is a systematic and creative process of communicating and collaborating to meet a design challenge. Often, several design solutions exist, each better in some way than the others.

8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.

8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

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The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.

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Information and Media Literacy

Digital tools can be used to modify and display data in various ways that can be organized to communicate ideas.

9.4.5.IML.3: Represent the same data in multiple visual formats in order to tell a story about the data.

Interdisciplinary Instruction

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NJ Mandates

Additional & Supplementary

Performance Tasks/Use of Technology:

- Conferencing/Individual Small group
- Open Ended Questions
- Observations
- Google Slide
- SMART Board activities
- Google Forms quizzes
- Peardeck slides
- Webquests
- Hyperdoc activities
- Podcast creation
- Kahoot games
- Quizlet review
- YouTube videos
- Flipgrid activities
- Spreaker recording
- *www.aaamath.com*
- www.aplusmath.com
- https://illuminations.nctm.org/
- https://www.freckle.com/
- https://happynumbers.com/
- https://www.prodigygame.com/

http://www.abcya.com/

ELA Companion Standards (6th-12th Only)

~KNOWLEDGE~

Enduring Understandings

- Multiplication can be used to compare quantities. Visual models, such as area models, can be used to find the product of fractions. We can compare the size

Essential Questions

- Why is it important to understand the

of a product to the size of one of its factors without performing the multiplication by applying the rules learned through visual modeling. • Multiplication can result in a product that is greater than, less than, or equal to its factors. • Understand that multiplication does not always result in a product that is bigger than the factors. The size of the products depends upon the value of the factors in relation to 1. • Decimal place value is an extension of whole number place value. • Understand place value in both whole numbers and decimals when multiplying, dividing, and rounding.	relationship between a product and the magnitude of its factors? • What models and strategies do we use to add, subtract, multiply, and divide decimals to hundredths? • Why is it important to understand the place value of decimals to hundredths and whole numbers to billions? • How are whole numbers and decimals written, compared and ordered? • How can place value patterns help in multiplying and dividing decimals by a power of 10? • What are the different ways numbers can be read and written? • How can the place value system be useful in converting among different-sized metric units within a given measurement system?

Content	Vocabulary	Skills/Performance Expectations
		Students will be able to.. • Identify and explain that/ho

		w a digit in the ones place represe nts 10 times as much as it represe nts in the place to its right. • Explain patterns in the number of zeros of the product when multiplyi ng by powers of 10. • Explain patterns in the placem ent of the decimal point when a decimal is multiplie d or divided by a power of 10. • Denote powers of 10 by using whole-number expone nts. • Read decimal s to thousan dths using base-ten

		numerals, number names, and expanded form. • Write decimals to thousandths using base-ten numerals, number names, and expanded form. • Compare two decimals to thousandths based on place value understanding. • Record comparisons of two decimals to thousandths using >, < or =. • Multiply multi-digit whole numbers using the standard algorithm working towards accuracy and

		efficiency. • find whole-number quotients with up to four-digit dividends and two-digit divisors using strategies based on place value. • find whole-number quotients with up to four-digit dividends and two-digit divisors using strategies based on properties of operations or the relationship between multiplication and division. • illustrate and explain the division calculation by using

		equations, rectangular arrays, and/or area models. • Add and subtract decimals to hundredths using concrete models or drawings • Add and subtract decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Relate the strategy to the concrete model or drawing, and explain the

		reasoning used.

Stage 2: Assessment Evidence

Assessments

5th- Math Assessments

Stage 3: Learning Plan

Resources

ive Math Tasks 5.NBT

ilestones - Grade 5 Tasks

5 Student Handouts

Visual videos & Tasks

h teaching resources

Levels of Text:

Marilyn Burns Math Library List: http://teacher.scholastic.com/reading/bestpractices/pdfs/mbmath_TitleList.pdf

EPIC

orks

Feast for Ten, Cathryn FaldwMulti-Lingual Learner
Moja Means One, Muriel Feelings

Correlation to Bridges

Suggested Learning Activities

BrainPop - Numbers and Operations

- IXL
- Manipulatives and collections of materials
- Tasks involving collaboration and problem-solving amongst the 4 operations (and with decimals to hundredths)
- Place Value practice tasks (Guess the Number; Roll it, Make it, Expand it; Place Value Battleship, etc.)
- *** Additional Resources by Standard**

As appropriate:

- VB-Mapp
- ABLLS

Add an Attachment

Multi-Language Learner Accommodations

5th Math- Options for Differentiation

504 Accommodations

Special Ed Accommodations

At-risk Accommodations

5th Math- Options for Differentiation

Gifted and Talented Accommodations

	5th Math- Options for Differentiation

Stage 4: Reflection

Teacher Reflections

Unit Planner: OCC 3- Number and Operations - Fractions (50 Days)
Math Grade 5

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Deus, Mike; Eagan, Theresa; Meroney, Jamie; Mille, Christine

- Unit Planner
- Lesson Planner

Stage 1: Desired Results

Curriculum Checklist

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(3) developing understanding of volume.

~STANDARDS~

Major, Focus and Interdisciplinary

Interdisciplinary Connection

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SL.PE.5.1. NJ: Grade 5

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NJ: 2020 SLS: Science

NJ: Grade 5

3-5 ETS1 Engineering Design

Students who demonstrate understanding can:

3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

NJ: 2023 SLS: Mathematics

NJ: Grade 5

Number and Operations — Fractions

5.NF.A. Use equivalent fractions as a strategy to add and subtract fractions

5.NF.A.1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

5.NF.A.2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

5.NF.B. Apply and extend previous understandings of multiplication and division to multiply and divide fractions

5.NF.B.3. Interpret a fraction as division of the numerator by the denominator (i.e., $\frac{a}{b} = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
a. Interpret the product $(\frac{a}{b}) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.
b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

5.NF.B.5. Interpret multiplication as scaling (resizing), by:
a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $\frac{a}{b} = \frac{(n \times a)}{(n \times b)}$ to the effect of multiplying $\frac{a}{b}$ by 1.

5.NF.B.6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.B.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.
b. Interpret division of a whole number by a unit fraction, and compute such quotients.
c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.

Computer Science & Design Thinking

NJ: 2020 SLS: Computer Science & Design Thinking

NJ: End of Grade 5

8.1 Computer Science: Data & Analysis

Data can be organized, displayed, and presented to highlight relationships.

8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

8.1.5.DA.3: Organize and present collected data visually to communicate insights gained from different views of the data.

8.2 Design Thinking: Engineering Design

Engineering design is a systematic and creative process of communicating and collaborating to meet a design challenge. Often, several design solutions exist, each better in some way than the others.

8.2.5.ED.2: Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.

8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies, Key Skills

NJ: 2020 SLS: Career Readiness, Life Literacies, and Key Skills

NJ: End of Grade 5

9.1 Personal Financial Literacy: Planning and Budgeting

Saving money can impact an individual's ability to address emergencies and accomplish their short- and long-term goals.

9.1.5.PB.2: Describe choices consumers have with money (e.g., save, spend, donate).

9.4 Life Literacies and Key Skills: Creativity and Innovation

Curiosity and a willingness to try new ideas (intellectual risk-taking) contributes to the development of creativity and innovation skills.

9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a).

9.4 Life Literacies and Key Skills: Critical Thinking and Problem-solving

The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.

9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).

9.4 Life Literacies and Key Skills: Information and Media Literacy

Digital tools can be used to modify and display data in various ways that can be organized to communicate ideas.

9.4.5.IML.3: Represent the same data in multiple visual formats in order to tell a story about the data.

Interdisciplinary Instruction

Interdisciplinary details can be added below, but be sure to also tie it to any relevant standards above and flag it as "interdisciplinary." (Click on the I circle to the right of the standards checkbox.)

NJ Mandates

NJ Mandates

All Grades

NJ Mandates

Mandates

Amistad Law: N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

Climate Change: The NJSLS-CLKS includes the skills, knowledge and practices necessary for success in an increasingly complex world and changing natural environment. Climate change is

	included in these standards. Collaborating to solve a problem, approaching a solution with innovation, and determining the validity of a source of information are all essential skills required in the standards and necessary for students to possess to maintain awareness of and successfully address climate change.
Additional & Supplementary **Performance Tasks/Use of Technology:** • Conferencing/Individual Small group • Open Ended Questions • Observations • Google Slide • SMART Board activities • Google Forms quizzes • Peardeck slides • Webquests • Hyperdoc activities • Podcast creation • Kahoot games • Quizlet review • YouTube videos • Flipgrid activities • Spreaker recording • *www.aaamath.com* • www.aplusmath.com • https://illuminations.nctm.org/ • https://www.freckle.com/ • https://happynumbers.com/ • https://www.prodigygame.com/ http://www.abcya.com/	ELA Companion Standards (6th-12th Only)
~KNOWLEDGE~	
Enduring Understandings • Models can be used to show different ways of adding and subtracting fractions. • The same fractional amount can be represented by an infinite set of different but equivalent fractions. • Equivalent fractions are found by multiplying or dividing the numerator and denominator by the same nonzero number. • A fraction in simplest form is when 1 is the only common factor of the numerator and denominator. • Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	Essential Questions • What does it mean to add and subtract fractions with unlike denominators? • What is a standard procedure for adding subtracting