

Unit 1: Whole Numbers, Expressions, and Volume

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

ESSENTIAL QUESTIONS

How do mathematicians use place value to understand the relationship between digits in a whole number?

How do mathematicians use place value to multiply and divide whole numbers?

How do mathematicians find the volume of a 3 dimensional figure?

UNIT RATIONALE

This unit is designed to support student's understanding of whole numbers, expression, and volume. Using this knowledge, students will explore multiplying whole numbers of 10 by examining patterns with the number of zeros and the number of factors of 10. They learn to use the exponent form of powers of 10 to help them in understanding the patterns. Students multiply multi-digit whole numbers using the concepts of place value and regrouping. Students will use the relationship between multiplication and division to solve division problems, using their knowledge of area models and arrays to determine an unknown factor. During this unit, students will continue to practice dividing whole numbers by 2 digits whole numbers. This understanding will support students as they interpret the remainder and use bar models to represent division problems. Students will also focus on writing and evaluating numerical expressions to describe a situation. Finally, students will use their knowledge area to understand the concept of volume.

STANDARDS

NEW JERSEY STUDENT LEARNING STANDARDS: CONTENT AREA

MATH.5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
MATH.5.OA.A.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.
MATH.5.NBT	Number and Operations in Base Ten
MATH.5.NBT.A	Understand the place value system
MATH.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 $1/10$ of what it represents in the place to its left.
MATH.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.

MATH.5.NBT.B.5	With accuracy and efficiency, multiply multi-digit whole numbers using the standard algorithm.
MATH.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.
MATH.5.NF.B.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 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.
MATH.5.M.B.2.a	A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.
MATH.5.M.B.2.b	A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.
MATH.5.M.B.3	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.
MATH.5.M.B.4.a	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
MATH.5.M.B.4.b	Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
MATH.5.M.B.4.c	Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

NEW JERSEY STUDENT LEARNING STANDARDS: CAREER READINESS, LIFE LITERACIES AND KEY SKILLS

9.4.5.TL.4 Compare and Contrast artifacts produced individually to those produced collaboratively.

TECH.9.4.5.TL.4	Compare and contrast artifacts produced individually to those developed collaboratively (e.g., 1.5.5.CR3a).
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NEW JERSEY STUDENT LEARNING STANDARDS: COMPUTER SCIENCE AND DESIGN THINKING

8.2.5.ED.4 Explain factors that influence the development and functions of products and systems.

8.2.5.ED.5 Describe how specifications and limitations impact the engineering design process.

CS.3-5.8.2.5.ED.4	Explain factors that influence the development and function of products and systems (e.g., resources, criteria, desired features, constraints).
CS.3-5.8.2.5.ED.5	Describe how specifications and limitations impact the engineering design process.

PRE-ASSESSMENTS

Module 1: Whole Number Place Value and Multiplication "Are You Ready?" (p. 4)

Module 2: Understand Division of Whole Numbers "Are You Ready?" (p. 31)

Module 3: Practice Division of Whole Numbers "Are You Ready?" (p. 53)

Module 4: Expressions "Are You Ready?" (p. 73)

Module 5: Volume "Are You Ready?" (p. 93)

INSTRUCTIONAL PLAN

MODULE 1

MODULE 1: WHOLE NUMBER PLACE VALUE AND MULTIPLICATION

LESSON 1.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	1.1 We are learning to recognize the 10 to 1 relationship among place-value positions.
Student Learning Strategies	Compare the Numbers Relate Base Components
Success Criteria	I can describe place-value relationships in multi-digit whole numbers.
Formative Assessment (drives instructional decisions)	Turn and Talk Questions (p. 5 & 7) Check for Understanding (p. 7)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 5B) & Spark Your Learning (p. 5) Mini-lesson: Build Understanding (p. 6-7) Guided Practice: Check Understanding (p. 7) Independent Practice: On Your Own (p. 8) & Exit Ticket (TA

	p. 8) Teacher Resources: Into Math Teacher Edition Module 1 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 5C)

MA.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.

LESSON 1.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	1.2 We are learning to use powers of 10 and exponents.
Student Learning Strategies	Use Mental Math Use a Multiplication Algorithm
Success Criteria	I can rewrite expressions involving the product of a one-digit number and a power of 10 as a whole number.
Formative Assessment (drives instructional decisions)	Turn and Talk Questions (p. 9, 10, & 11) Check for Understanding (p. 11)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 9B) & Spark Your Learning (p. 9) Mini-lesson: Build Understanding (p. 10 & 11) Guided Practice: Check Understanding (p. 11) Independent Practice: On Your Own (p. 12) & Exit Ticket (TM p. 12) Teacher Resources: Into Math Teacher Edition Module 1 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 9C)

MA.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.

LESSON 1.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	1.4 We are learning to multiply by 1-digit number.
Student Learning Strategies	<ul style="list-style-type: none">• Regroup values correctly
Success Criteria	I can multiply multi-digit whole numbers by 1-digit numbers using regrouping and place value.
Formative Assessment (drives instructional decisions)	Turn and Talk Question (p. 17) Check for Understanding (p. 18)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 17B) & Step it Out (p. 17) Mini-lesson: Step it Out (p. 18) Guided Practice: Check Understanding (p. 18) Independent Practice: On Your Own (p. 19-20) & Exit Ticket (TM p. 20) Teacher Resources: Into Math Teacher Edition Module 1 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 17C)

MA.5.NBT.B.5

Fluently multiply multi-digit whole numbers using the standard algorithm.

LESSON 1.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	1.5 We are learning to multiply by multi-digit numbers.
Student Learning Strategies	Regroup values correctly Zero place holders for partial products
Success Criteria	I can multiply multi-digit whole numbers by 2-digit or 3-digit numbers.

Formative Assessment (drives instructional decisions)	Turn and Talk Question (p. 21 & 22) Check for Understanding (p. 22)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 21B) & Step it Out (p. 21) Mini-lesson: Step it Out (p. 22) Guided Practice: Check Understanding (p. 22) Independent Practice: On Your Own (p. 23-24) & Exit Ticket (TM p. 24) Teacher Resources: Into Math Teacher Edition Module 1 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 21C)

MA.5.NBT.B.5

Fluently multiply multi-digit whole numbers using the standard algorithm.

LESSON 1.6

Student Learning Intentions (SLI) WALT: (We are learning to...)	1.6 We are learning to develop multiplication fluency.
Student Learning Strategies	Apply order of operations Use operation signal words
Success Criteria	I can set up and solve multistep problems with at least 2 steps.
Formative Assessment (drives instructional decisions)	Turn and Talk Question (p. 25) Check for Understanding (p. 26)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 25B) & Step it Out (p. 25) Mini-lesson: Step it Out (p. 26) Guided Practice: Check Understanding (p. 26) Independent Practice: On Your Own (p. 27-28) & Exit Ticket (TM p. 28) Teacher Resources: Into Math Teacher Edition Module 1 &

	Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 25C)

MA.5.NBT.B.5

Fluently multiply multi-digit whole numbers using the standard algorithm.

MODULE 2

MODULE 2: UNDERSTAND DIVISION AND WHOLE NUMBERS

LESSON 2.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	2.1 We are learning to relate multiplication to division.
Student Learning Strategies	Use a visual model Use division
Success Criteria	I can use an array or an area model to solve a division problem.
Formative Assessment (drives instructional decisions)	Turn and Talk Questions (p. 33 & 34) Check for Understanding (p. 35)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 33B) & Spark Your Learning (p. 33) Mini-lesson: Build Understanding (p. 34-35) Guided Practice: Check Understanding (p. 35) Independent Practice: On Your Own (p. 36) & Exit Ticket (TM p. 36) Teacher Resources: Into Math Teacher Edition Modules 2-3 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 33C)

MA.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.

LESSON 2.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	2.2 We are learning to represent division with 2-digit divisors
Student Learning Strategies	Use a visual model Use division
Success Criteria	I can find the quotient of numbers up to four digits divided by 2-digit divisors using visual models.
Formative Assessment (drives instructional decisions)	Turn and Talk Questions (p. 37, 38, & 39) Check for Understanding (p. 40)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 37B) & Spark Your Learning (p. 37) Mini-lesson: Build Understanding (p. 38-40) Guided Practice: Check Understanding (p. 40) Independent Practice: On Your Own (p. 41-42) & Exit Ticket (TM p. 42) Teacher Resources: Into Math Teacher Edition Modules 2-3 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 37C)

MA.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.

LESSON 2.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	2.3 We are learning to estimate with 2-digit divisors.
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Student Learning Strategies	Use compatible numbers to estimate Use visual models to estimate
Success Criteria	I can estimate quotients of division problems using compatible numbers.
Formative Assessment (drives instructional decisions)	Turn and Talk Questions (p. 43 & 44) Check for Understanding (p. 45)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 43B) & Spark Your Learning (p. 43) Mini-lesson: Build Understanding (p. 44) and Step it Out (p. 45) Guided Practice: Check Understanding (p. 45) Independent Practice: On Your Own (p. 46) & Exit Ticket (TM p. 46) Teacher Resources: Into Math Teacher Edition Modules 2-3 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 43C)

MA.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.

LESSON 2.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	2.4 We are learning to use partial quotients.
Student Learning Strategies	Use an area model Use repeated subtraction to divide
Success Criteria	I can use partial quotients to divide a multi-digit number by a 2-digit number.

Formative Assessment (drives instructional decisions)	Turn and Talk Questions (p. 47 & 48) Check for Understanding (p. 49)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM p. 47B) & Spark Your Learning (p. 47) Mini-lesson: Build Understanding (p. 49) and Step it Out (p. 49) Guided Practice: Check Understanding (p. 49) Independent Practice: On Your Own (p. 50) & Exit Ticket (TM p. 50) Teacher Resources: Into Math Teacher Edition Modules 2-3 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM p. 47C)

MA.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.

MODULE 3

MODULE 3: PRACTICE DIVISION OF WHOLE NUMBERS

LESSON 3.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	3.1 We are learning to divide by 2-digit divisors
Student Learning Strategies	<ul style="list-style-type: none"> • Interpret the remainders • Complete the division process
Success Criteria	I can use strategies based on place value to divide 3- and 4- digit dividends by 2 digit divisors.
Formative Assessment (drives instructional decisions)	Turn and Talk Questions (pg 55, 56)

decisions)	Check Your Understanding (pg 56) Exit Ticket (TM pg 58)
Activities and Resources	Warm up: Activate Prior Knowledge (TM pg 55B) Mini Lesson: Step it Out (pg 55& 56) Guided Practice: Check Understanding (pg 56) Independent Practice: On Your Own (pg 57 & 58) & Exit Ticket (TM pg 58) Teacher Resources Into Math Teacher Edition Module 2-3 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 59C)

MA.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.

LESSON 3.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	3.2 We are learning to interpret the remainder
Student Learning Strategies	<ul style="list-style-type: none"> • Ask myself questions about the remainder.
Success Criteria	I can solve a division problem. I can interpret the remainder in the context of the problem.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 59 & 60) Check Understanding (pg 60) Exit Ticket (TM pg 62)
Activities and Resources	Warm up: Activate Prior Knowledge (TM pg 59B) Mini Lesson: Step It Out (pg 59 & 60) Guided Practice: Check Understanding (pg 60) Independent Practice: On Your Own (pg 61 & 62) and Exit Ticket (TM pg 62) Teacher Resources Into Math Teacher Edition Module 2-3 & Online Resources

Suggested Modifications

Plan for Differentiated Instruction (TM pg 59C)

MA.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.

MA.5.NF.B.3

Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). 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.

LESSON 3.3**Student Learning Intentions (SLI) WALT: (We are learning to...)**

3.3 We are learning to adjust quotients.

Student Learning Strategies

- Ask myself questions about the remainder.
- Compare partial quotient to the dividend.

Success Criteria

I can adjust a digit in a whole number quotient based on whether an estimate is too low or too high.

Formative Assessment (drives instructional decisions)

Turn & Talk (pg 63)
 Check Understanding (pg 64)
 Exit Ticket (TM pg 66)

Activities and Resources

Warm Up: Activate Prior Knowledge (pg 63B)
Mini Lesson: Step It Out (pg 63 & 64)
Guided Practice: Check Understanding (pg 64)
Independent Practice: On Your Own (pg 65 & 66) and Exit Ticket (TM pg 66)

Teacher Resources Into Math Teacher Edition
 Module 2-3 & Online Resources

Suggested Modifications

Plan for Differentiated Instruction (TM pg 63C)

MA.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.

LESSON 3.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	3.4 We are learning to practice with division.
Student Learning Strategies	<ul style="list-style-type: none">• Bar Model• Use the relationship between multiplication and division to solve a division problem• Use the relationship between subtraction and division to solve a division problem
Success Criteria	I can solve a division problem by using a bar model or an equation.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 67) Check Understanding (pg 68) Exit Ticket (TM pg 70)
Activities and Resources	Warm Up: Activate Prior Knowledge (TM pg 67B) Mini Lesson: Step it Out (pg 67 & 68) Guided Practice: Check Understanding (pg 68) Independent Practice: On Your Own (pg 69 & 70) and Exit Ticket (TM pg 70) Teacher Resources Into Math Teacher Edition Module 2-3 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 67C)

MA.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.

MODULE 4

MODULE 4: EXPRESSIONS

LESSON 4.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	4.1 We are learning to write numerical expressions.
Student Learning Strategies	<ul style="list-style-type: none">• Make a visual model• Use a grid• Rereading the problem
Success Criteria	I can write a numerical expression to model a read-world situation, I can interpret a numerical expression.
Formative Assessment (drives instructional decisions)	Turn & Talk (pg 75 & 76) Check Understanding (pg 77) Exit Ticket (TM pg 78)
Activities and Resources	Warm Up: Activate Prior Knowledge (TM pg 75B) Mini Lesson: Spark Your Learning (Pg 75) and Build Understanding (pg 76) Guided Practice: Check Understanding (pg 77) Independent Practice: On Your Own (pg 78) and Exit Ticket (TM pg 78) Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 75C)

MA.5.OA.A.1

Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

MA.5.OA.A.2

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

LESSON 4.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	4.2 We are learning to interpret numerical Expressions.
Student Learning Strategies	<ul style="list-style-type: none">• Use a visual model

	<ul style="list-style-type: none"> • Make a visual model
Success Criteria	I can compare numerical expression which are written with one expression in terms of the other.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 79 & 80) Check Understanding (pg 81) Exit Ticket (TM pg 82)
Activities and Resources	<p>Warm up: Activate Prior Knowledge (TM pg 79B)</p> <p>Mini Lesson: Spark Your Learning (pg 79) and Build Understanding (pg 80 & 81)</p> <p>Guided Practice: Check Understanding (pg 81)</p> <p>Independent Practice: On Your Own (pg 82) and Exit Ticket (TM pg 82)</p> <p>Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources</p>
Suggested Modifications	Plan for Differentiated Instruction (TM pg 78C)

MA.5.OA.A.2

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

LESSON 4.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	4.3 We are learning to evaluate numerical expressions.
Student Learning Strategies	<ul style="list-style-type: none"> • Use a visual model • Draw a visual model
Success Criteria	I can evaluate a numerical expression using the order of operations.
Formative Assessment (drives instructional decisions)	Turn & Talk (pg 83 & 84) Check Understanding (pg 85) Exit Ticket (TM pg 86)
Activities and Resources	<p>Warm-up: Activate Prior Knowledge (TM pg 83B)</p> <p>Mini Lesson: Spark Your Learning (pg 83), Build</p>

	Understanding (pg 84), Step it Out (pg 85) Guided Practice: Check Understanding (pg 85) Independent Practice: On Your Own (pg 86) Exit Ticket (TM 86) Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 83C)

MA.5.OA.A.1

Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

LESSON 4.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	4.4 We are learning to use grouping symbols
Student Learning Strategies	<ul style="list-style-type: none"> • Parentheses Placement • Understand the Problem
Success Criteria	I can describe how to use grouping symbols in a numerical expression and place parentheses so an expression has a given value.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 87 & pg 88) Check Understanding (pg 88) Exit Ticket (TM pg 90)
Activities and Resources	Warm-Up: Activate Prior Knowledge (TM pg 87B) Mini-Lesson: Step it Out (pg 87 & 88) Guided Practice: Check Understanding (pg 88) Independent Practice: On Your Own (pg 89 & 90) and Exit Ticket (TM pg 90)
Suggested Modifications	Plan for Differentiated Instruction (TM pg 87C)

MA.5.OA.A.1

Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

MODULE 5

MODULE 5: VOLUME

LESSON 5.4

Student Learning Intentions (SLI) WALT: (We are learning to...)	5.4 We are learning to find volume of right rectangular prisms.
Student Learning Strategies	<ul style="list-style-type: none">• Use and Interpret a Concrete Model• Build a Concrete Model
Success Criteria	I can find the volume of a right rectangular prism using the area of the base and the height.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 107, 108, 109, 110) Check Understanding (pg 110) Exit Ticket (pg 112)
Activities and Resources	<p>Warm-up: Activate Prior Knowledge (TM pg 107B) Mini-Lesson: Spark Your Learning (pg 107), Build Understanding (pg 108), Step it Out (pg 109 & 110) Guided Practice: Check Understanding (pg 110) Independent Practice: Own Your Own (pg 111 & 112) and Exit Ticket (TM pg 112)</p> <p>Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources</p>
Suggested Modifications	Plan for Differentiated Instruction (TM pg 107C)

MA.5.MD.C.5a

Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

MA.5.MD.C.5b

Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.

LESSON 5.3

Student Learning Intentions (SLI) WALT: (We are learning to...)	5.3 We are learning to measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
Student Learning Strategies	<ul style="list-style-type: none"> • Build Layers Using Improvised Units • Measure Using Improvised Length Units
Success Criteria	I can use an everyday object to estimate the volume of a right rectangular prism.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 103,104. 105) Check Understanding (pg 105) Exit Ticket (TM pg 106)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM pg 103B) Mini-Lesson: Spark Your Learning (pg 103), Build Your Understanding (pg 104 & 105) Guided Practice: Check Understanding Independent Practice: On Your Own (pg 106) Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 103C)

MA.5.MD.C.4

Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.

LESSON 5.2

Student Learning Intentions (SLI) WALT: (We are learning to...)	5.2 We are learning to understand volume.
Student Learning Strategies	<ul style="list-style-type: none"> • Use an Organized List • Use Unit Cubes to Make Visual Models
Success Criteria	I can use unit cubes to find the volume of a right rectangular prism.

Formative Assessment (drives instructional decisions)	Turn and Talk (pg 99 & 100) Check Understanding (pg 101) Exit Ticket (TM pg 102)
Activities and Resources	Warm-up: Activate Prior Knowledge (pg 99B) Mini-Lesson: Spark Your Learning (pg 99), Build Understanding (pg 100) Guided Practice: Check Understanding (pg 101) Independent Practice: On Your Own (pg 102) Exit Ticket (TM pg 102) Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 99C)

MA.5.MD.C.3a	A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.
MA.5.MD.C.3b	A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.
MA.5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.

LESSON 5.1

Student Learning Intentions (SLI) WALT: (We are learning to...)	5.1 We are learning to use unit cubes to build solid figures.
Student Learning Strategies	<ul style="list-style-type: none"> • Use Unit Cubes • Use Verbal Descriptions
Success Criteria	I can build solid figures using unit cubes.
Formative Assessment (drives instructional decisions)	Turn & Talk (pg 95 & 96) Check Understanding (pg 97) Exit Ticket (TM 98)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM pg 95B) Mini-Lesson: Spark Your Learning (pg 95) and Build Understanding (pg 96)

	Guided Practice: Check Understanding (pg 97) Independent Practice: On Your Own (Pg 98) Exit Ticket (TM pg 98)
Suggested Modifications	Plan for Differentiated Instruction (TM pg 95C)

MA.5.MD.C.3a

A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.

LESSON 5.5

Student Learning Intentions (SLI) WALT: (We are learning to...)	5.5 We are learning to apply volume formulas.
Student Learning Strategies	<ul style="list-style-type: none"> • Check Calculation Accuracy
Success Criteria	I can use a formula to find the volume of a right rectangular prism.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 113) Check Understanding (pg 114)
Activities and Resources	<p>Warm-up: Activate Prior Knowledge (TM pg 113B)</p> <p>Mini-Lesson: Step it Out (pg 113 & 114)</p> <p>Guided Practice: Check Understanding (pg 114)</p> <p>Independent Practice: On Your Own (pg 115 & 116) and Exit Ticket (TM pg 116)</p> <p>Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources</p>
Suggested Modifications	Plan for Differentiated Instruction (TM pg 113C)

MA.5.MD.C.5a

Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

MA.5.MD.C.5b

Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.

LESSON 5.6

Student Learning Intentions (SLI) WALT: (We are learning to...)	5.6 We are learning to find the volume of composed figures.
Student Learning Strategies	<ul style="list-style-type: none"> • Break Apart Figures • Find an Unknown Dimension
Success Criteria	I can find the volume of a figure composed of right rectangular prisms.
Formative Assessment (drives instructional decisions)	Turn and Talk (pg 117, 118, 119) Check Understanding (pg 119) Exit Ticket (TM pg 122)
Activities and Resources	Warm-up: Activate Prior Knowledge (TM pg 117) Mini-Lesson: Step It Out (pg 117 - 119) Guided Practice: Check for Understanding (pg 119) Independent Practice: On Your Own (pg 120-122) and Exit Ticket (TM pg 122) Teacher Resources Into Math Teacher Edition Module 4-5 & Online Resources
Suggested Modifications	Plan for Differentiated Instruction (TM pg 117C)

MA.5.MD.C.5

Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

BENCHMARK ASSESSMENTS

Into Math Benchmark BOY, MOY, and EOY growth measure.

REFLECTIONS

INTERDISCIPLINARY CONNECTIONS: NEW JERSEY STUDENT LEARNING STANDARDS FOR ELA, SOCIAL STUDIES, SCIENCE AND/OR MATHEMATICS

LA.RI.5.7

Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

LA.L.5.6

Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition).