Unit 1: Understand Multiplication and Area

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

ESSENTIAL QUESTIONS

Module 1:

What types of models can be used to solve multiplication problems?

What are the different types of multiplication strategies?

Module 2

What are the different ways to find the area of a shape?

How are area and multiplication related?

UNIT RATIONALE

This unit focuses on the concepts of area, distributive property, and multiplication. Learners build upon earlier work with arrays and repeated addition from the prior unit and grade to tile rectangular areas, relating to multiplication and addition. Learners use area models and properties of operations to reason about and to calculate products of whole numbers, using increasingly sophisticated strategies to solve multiplication word problems involving area. By the end of the unit, learners recognize area as additive and use the concept to determine areas of rectilinear figures. As learners apply strategies to solve multiplication and division problems, they continue working towards accurately and efficiently multiplying and dividing within 100 (fluency).

STANDARDS

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

PFL.9.1.5.CR.1	Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
TECH.9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).

NEW JERSEY STUDENT LEARNING STANDARDS: COMPUTER SCIENCE AND DESIGN THINKING

CS.3-5.8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.

NEW JERSEY STUDENT LEARNING STANDARDS: CONTENT AREA

MATH.3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.
MATH.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
MATH.3.OA.B.5	Apply properties of operations as strategies to multiply and divide.
MATH.3.OA.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations.
MATH.3.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.
MATH.3.M.B.3	Recognize area as an attribute of plane figures and understand concepts of area measurement.
MATH.3.M.B.3.a	A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
MATH.3.M.B.3.b	A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
MATH.3.M.B.4	Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).
MATH.3.M.B.5	Relate area to the operations of multiplication and addition.
MATH.3.M.B.5.a	Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.
MATH.3.M.B.5.b	Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
MATH.3.M.C.6	Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
MATH.3.G.A.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

PRE-ASSESSMENTS

Module 1 - Understand Multiplication "Are You Ready?" - page 4

Module 2 - Relate Multiplication to Area "Are You Ready?" - page 34

INSTRUCTIONAL PLAN

MODULE 1

LESSON 1.1

Student Learning Intentions (SLI) WALT: (We are learning to…)	Lesson 1.1- We are learning to use concrete and visual models to represent and solve problems when you know the number of equal groups and the number of objects in each group.
Student Learning Strategies	Students will: -Use two color counters, connecting cubes, and number Lines to find equal groups.
Success Criteria	I can count equal groups to find the total number of objects when the number of equal groups and the number of objects in each group is given.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pg. 5 & 6 **Check for Understanding** pg. 7 **On Your Own** pg. 8
Activities and Resources	**Warm Up** Activate Prior Knowledge, pg. 5B; Spark Your Learning, pg. 5D **Mini Lesson** Build Your Understanding, pgs. 6-7 **Guided Practice** Check Understanding, pg. 7 **Independent Practice** On Your Own, pg. 8; Exit Ticket Online

	Differentiated Instruction pg. 5c **Small Group Options** On Track pg. 5c Almost There pg. 5c Flipchart Lesson 1.1 Ready for More pg. 5 **Math Center Options** On Track - More practice for 1.1 - Interactive glossary - Reader; The Workshop Almost There -Reteach 1.1 - Interactive reteach 1.1 Ready for More - Challenge 1.1 - Interactive Challenge 1.1 **Resources** *IntoMath* Teacher Edition Module 1
Suggested Modifications	**English Language Learners Native language support:** Native language support: The teacher provides auditory or written content to students in their native language. Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly. Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand. Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also

very beneficial for the students

Special Education Students:

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

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Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a

	different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment. Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way t intervene as the need presents itself. Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs. Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself. Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portio of the test in the morning, another portion after lunch and the final part the next day. Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.

LESSON 1.2

Student Learning Intentions (SLI) WALT: (We are learning to…)	Lesson 1.2- We are learning to use concrete and visual models or drawings to write related addition and multiplication equations.

Student Learning Strategies	Students will: -Use of manipulatives to write related addition and multiplication equations.
Success Criteria	I can write an addition equation and a multiplication equation to find a total to solve problems about equal groups.
Formative Assessment (drives instructional decisions)	**Turn and Talk** page 9 & 10 **Check for Understanding** page 11 **On Your Own** page 12
Activities and Resources	**Warm Up**: Activate Prior Knowledge, pg. 9B & Spark Your Learning, pg. 9D **Mini Lesson:** Build Your Understanding, pgs. 9-11 **Guided Practice**: Check Understanding, pg. 11 **Independent Practice:** On Your Own, page 12 & Exit Ticket Online **Resources:** Into Math Teacher Edition Module 1 Plan for differentiated instruction-Pg. 9c **Small Group Options-** On Track: - pg. 9c activity Almost There: -pg. 9c activity Ready for more: -pg. 9c activity **Math Center Option-** On Track: - More practice for 1.2 - Interactive glossary - Reader; The Workshop Almost There: -Reteach 1.1 - Interactive reteach 1.1 -RtI Tier 2 Skills: Array Models Ready for More: - Challenge 1.2 - Interactive Challenge 1.2

Suggested Modifications	**English Language Learners Native language support:** Native language support: The teacher provides auditory or written content to students in their native language. Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly. Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand. Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students **Special Education Students:** Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them. Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them. Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts. Oral Reading: The teacher will read work orally to students Class work such as tests and literature circles may need to be read aloud to the student. Timers: The teacher will use timers as an instructional tool

The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans:

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Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

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ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near

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MA.3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.
MA.3.OA.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.

LESSON 1.3

Student Learning Intentions (SLI) WALT: (We are learning to…)	Lesson 1.3- We are learning to use an array model to represent a multiplication problem. We are learning to write a multiplication equation for an array.
Student Learning Strategies	Students will: -Use square tiles and two color counters to help write multiplication equations for arrays.
Success Criteria	I can use arrays to represent problems about equal groups and to write multiplication equations.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pg. 13-15 **Check for Understanding** pg. 15 **On Your Own** pg. 16
Activities and Resources	**Warm Up** Activate Prior Knowledge, pg. 13B; Spark Your Learning, pg. 13D **Mini Lesson** Build Your Understanding, pgs. 14-15 **Guided Practice** Check Understanding, pg. 15 **Independent Practice** On Your Own, pg. 16; Exit Ticket Online **Differentiated Instruction** pg. 13c **Small Group Options** On Track pg. 13c activity Almost There pg. 13c activity Ready for more pg. 13c activity

	Math Center Option On Track - More practice for 1.3 - Fluency Maintenance: Addition - Interactive Glossary -My Learning Summary Almost There -Reteach 1.3 - Interactive reteach 1.3 -RtI Tier 2 Skills: Array Models Ready for More - Challenge 1.3 - Interactive Challenge 1.3 - Poggles MX: Multiply with 5, Level 4 **Resources** Into Math Teacher Edition Module 1
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LESSON 1.4

Student Learning Intentions (SLI) WALT: (We are learning to…)	Lesson 1.4- We are learning to use the commutative property of multiplication to find products and to write related multiplication equations.
Student Learning Strategies	Students will: - Use of counters to help solve related multiplication equations.
Success Criteria	I can use the commutative property of multiplication to write related multiplication equations.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pg. 17 & 19 **Check for Understanding** pg. 19 **On Your Own** pg. 20

Activities and Resources	**Warm Up** Activate Prior Knowledge, pg. 17B; Spark Your Learning, pg. 17D **Mini Lesson** Build Your Understanding, pgs. 18-19 **Guided Practice** Check Understanding, pg. 19 **Independent Practice** On Your Own, pg. 20; Exit Ticket Online **Differentiated Instruction** pg. 17c **Small Group Options-** On Track pg. 17c activity Almost There pg. 17c activity Ready for More pg. 17c activity **Math Center Option** On Track - More practice for 1.4 - Interactive Glossary Almost There: -Reteach 1.4 - Interactive reteach 1.4 Ready for More: - Challenge 1.4 - Interactive Challenge 1.4 - Poggles MX: Multiply with 8, Level 7 **Resources** Into Math Teacher Edition Module 1
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MA.3.OA.B.5	Apply properties of operations as strategies to multiply and divide.

LESSON 1.5

Student Learning Intentions (SLI) WALT: (We are learning to…)	Lesson 1.5- We are learning to count equal groups on a number line to find how many.
Student Learning Strategies	Students will:

	-Use square tiles, inch rulers, and number lines to count equal groups.
Success Criteria	I can use number lines to represent problems about equal groups and to write multiplication equations.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pg. 21 & 22 **Check for Understanding** pg. 23 **On Your Own** pg. 24
Activities and Resources	**Warm Up** Activate Prior Knowledge, pg. 21B; Spark Your Learning, pg. 21D **Mini Lesson** Build Your Understanding, pgs. 22-23 **Guided Practice** Check Understanding, pg. 23 **Independent Practice** On Your Own, pg. 24; Exit Ticket Online **Differentiated Instruction** pg. 21c **Small Group Options** On Track pg. 21c activity Almost There pg. 21c activity Ready for More pg. 21c activity **Math Center Option** On Track - More practice for 1.5 Almost There -Reteach 1.5 - Interactive reteach 1.5 - RtI Tier 2 Skills 2: Array Models Ready for More - Challenge 1.5 - Interactive Challenge 1.5 - Poggles MX: Multiply with 5, 6, 7, and 8, Level 10 **Resources** Into Math Teacher Edition Module 1

Suggested Modifications	**English Language Learners Native language support:** Native language support: The teacher provides auditory or written content to students in their native language. Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly. Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand. Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students **Special Education Students:** Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them. Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them. Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts. Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student. Timers: The teacher will use timers as an instructional tool.

The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans:

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Gifted & Talented Strategies

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Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

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Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

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Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near

	the front.

MA.3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.
MA.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
MA.3.OA.B.5	Apply properties of operations as strategies to multiply and divide.
MA.3.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

LESSON 1.6

Student Learning Intentions (SLI) WALT: (We are learning to…)	Lesson 1.6- We are learning to use a bar model to represent an unknown in a multiplication problem.
Student Learning Strategies	Students will: -Use two color counters and connecting cubes to create bar models.
Success Criteria	I can use bar models to represent problems about equal groups and to write multiplication equations.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pg. 25-28 **Check for Understanding** pg. 28 **On Your Own** pg. 29-30
Activities and Resources	**Warm Up** - Activate Prior Knowledge, pg. 25B; - Spark Your Learning, pg. 25D **Mini Lesson** Build Your Understanding, pgs. 26-28 **Guided Practice** Check Understanding, pg. 28 **Independent Practice** -On Your Own, page 29-30; Exit Ticket Online **Differentiated Instruction** pg. 25c **Small Group Options** On Track:

	pg. 25c activity Almost There: pg. 25c activity Ready for more: pg. 25c activity **Math Center Option** On Track - More practice for 1.6 - Fluency Maintenance: Subtraction - My Learning Summary Almost There: -Reteach 1.6 - Interactive reteach 1.6 Ready for More: - Challenge 1.6 - Interactive Challenge 1.6 - Poggles MX: Multiply with 10, Level 11 **Resources** Into Math Teacher Edition Module 1
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MA.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
MA.3.OA.B.5	Apply properties of operations as strategies to multiply and divide.
MA.3.OA.D.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.

MODULE 2

LESSON 2.3

Lesson 2.3 Relate Area to Addition and Multiplication

Student Learning Intentions (SLI) WALT: (We are learning to…)	We are learning how to find area using addition equations and multiplication equations.
Student Learning Strategies	Students will Using repeated addition to find the area of a rectangle

Success Criteria	I can explain how to use repeated addition or multiplication to find the area of a rectangle.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pages 43, 44,45 **Check for Understanding** page 45 **Own Your Own** page 38
Activities and Resources	**Warm Up** Spark Your Learning page 43 **Mini Lesson** Build Understanding page 44 **Guided Practice** Step It Out page 45 **Independent Practice** Check Understanding page 45, On Your Own page 46 Exit Ticket Online Resources **Plan for differentiated instruction** page 43c **Small Group Options** On Track - page 43c 1 cm Grid Paper (Teacher Resource Masters), scissors, math boards Almost There - page 43c Tabletop Flipchart Lesson 2.3, Relate Area to Addition and Multiplication (Teacher Resource Masters) Ready for More - page 43c - Centimeter Ruler **Math Center Options** On Track • More Practice/Homework 2.3 • My Learning Summary • Standard Practice: Find the Area of Rectangle by Tilling It Almost There • Reteach 2.3 • Interactive Reteach 2.3 • RtI Tier 3 Skill 7, Explore Equal Groups Ready for More • Challenge 2.3 • Interactive Challenge 2.3 **Resources** *IntoMath* Teacher Edition Module 2
Suggested Modifications	**English Language Learners Native language support:** Native language support: The teacher provides auditory or written content to students in their native language.

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Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

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Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

	Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.C.7	Relate area to the operations of multiplication and addition.
MA.3.MD.C.7a	Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.

LESSON 2.2

Lesson 2.2 Measure Area by Counting Unit Squares

Student Learning Intentions (SLI) WALT: (We are learning to…)	We are learning how to understand that the area is covered by a number of squares and has an area of square units.
Student Learning Strategies	Students will Use scissors, colored paper, square tiles to find area
Success Criteria	I can explain how to measure the area of a figure using square units, and how gaps and overlaps of un squares would affect an area measurement.
Formative Assessment (drives instructional decisions)	**Turn and Talk** pages 39, 40, 41 **Check for Understanding** page 41 **Own Your Own** page 42
Activities and Resources	**Warm Up** Spark Your Learning pg.39 **Mini Lesson** Build Understanding page 40 **Guided Practice** Step It Out page 41 **Independent Practice** Check Understanding page 41, Exit Ticke Online Resource **Plan for differentiated instruction** page 39c **Small Group Options** On Track - page 39c 1 cm Grid Paper (Teacher Resource Masters) Transparent Paper, square tiles Almost There - page 39c Tabletop Flipchart Lesson 2.2

	1 inch Grid Paper, 1 cm Grid Paper (Teacher Resource Masters) Measure Area by Counting Unit Squares(Teacher Resource Masters) Ready for More - page 39c - 1 cm Grid Paper (Teacher Resource Masters) **Math Center Options** On Track • More Practice/Homework 2.2 • Fluency Builder Addition Standard Practice • Relate Area of a Figure • Measure Area by Counting Unit Square Almost There • Reteach 2.2 • Interactive Reteach 2.2 • RtI Tier 2 Skill 7 Multiplication Facts through 9 Ready for More • Challenge 2.2 • Interactive Challenge 2.2 **Resources** *IntoMath* Teacher Edition Module 2
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Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.C.5	Recognize area as an attribute of plane figures and understand concepts of area measurement.
MA.3.MD.C.5b	A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.

LESSON 2.1

Lesson 2.1 Understand Area by Counting Unit Squares

Student Learning Intentions (SLI) WALT: (We are learning to…)	We are learning how to recognize the area of a place figure and measure objects using knowledge of the area.
Student Learning Strategies	Students will Use of manipulatives - square tiles to cover shape and count to find area, two-color counters - model multiplication equations, geoboards - model shapes and count unit square to find the area
Success Criteria	I can describe situations when I need to find area. I can measure area by counting unit squares.
Formative Assessment (drives instructional decisions)	**Turn and Talk** page 35 & 37 **Check for Understanding** page 37 **Own Your Own** page 38
Activities and Resources	**Warm Up** Spark Your Learning pg.35 **Mini Lesson** Build Understanding page 36 - 37 **Guided Practice** Check Understanding page 37 **Independent Practice** On Your Own page 38, Exit Ticket Online Resources **Differentiated Instruction** page 35c **Small Group Options** On Track page 35c Almost There page 35c Tabletop Flipchart Lesson 2.1 Ready for More page 35c - Dot Paper **Math Center Options** On Track • More Practice/Homework 2.1 • Fluency Builder Multiplication 3 and 4 • Interactive Glossary • Standard Practice Almost There • Reteach 2.1 • Interactive Reteach 2.1 • RtI Tier 2 Skill, Array Model Ready for More • Challenge 2.1 • Interactive Challenge 2.1

	Resources *IntoMath* Teacher Edition Module 2
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Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may

	need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself. Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day. Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.C.5	Recognize area as an attribute of plane figures and understand concepts of area measurement.
MA.3.MD.C.5a	A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.

LESSON 2.4

Lesson 2.4 Solve Problems with Area

Student Learning Intentions (SLI) WALT: (We are learning to…)	We are learning how to multiply side lengths to find the area of rectangles to solve real-world problems and represent the problems with the area.
Student Learning Strategies	Students will Use of manipulatives: square tiles to cover a shape or create a rectangle, 1-inch grid paper Use the unit squares to create an array to create a multiplication equation
Success Criteria	I can explain how multiplication is related to the arrangement of unit squares in a rectangle and I can find the areas of rectangles using unit squares or multiplication to solve problems.
Formative Assessment (drives instructional decisions)	**Turn and Talk** page 37 **Check for Understanding** page 49 **Own Your Own** page 50

Activities and Resources	**Warm Up** Spark Your Learning page 47 **Mini Lesson** Build Understanding page 48 **Guided Practice** Step It Out page 49 **Independent Practice** Check Understanding page 49, On Your Own page 50, Exit Ticket Online Resources **Plan for differentiated instruction** page 47c **Small Group Options** On Track - 1 cm Grid Paper (Teacher Resource Masters) page 47c Almost There - page 47c Tabletop Flipchart Lesson 2.4 Ready for More - page 47c - MathBoards **Math Center Options** On Track • More Practice/Homework 2.4 • Game: Find the Area! • Standard Practice: Multiply Side Lengths to Find Areas of Rectangles Almost There • Reteach 2.4 • Interactive Reteach 2.4 • RtI Tier 2 Skill 2, Array Model Ready for More • Challenge 2.4 • Interactive Challenge 2.4 • PogglesMX: Number Relationships, Grade 3 Level 8 **Resources** *IntoMath* Teacher Edition Module 2
Suggested Modifications	**English Language Learners Native language support:** Native language support: The teacher provides auditory or written content to students in their native language. Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly. Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand

and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students

Special Education Students:

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans:

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working

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Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two

to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

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Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

MA.3.MD.C.7b	Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

LESSON 2.5

Lesson 2.5 Find the Area of Combined Rectangles

Student Learning Intentions (SLI) WALT: (We are learning to…)	We are learning how to use area models to represent the distributive property
Student Learning Strategies	Students will Use 1-inch grid paper to find the area Find the area of combined rectangles using the distributive property
Success Criteria	I can explain how to break apart a figure made up of combined rectangles, and then multiply and add to find the area.
IFormative Assessment (drives instructional decisions)	**Turn and Talk** pages 51, 53 **Check for Understanding** page 53 **Own Your Own** page 54
Activities and Resources	**Warm Up** Spark Your Learning page 51 **Mini Lesson** Build Understanding page 52 **Guided Practice** Step It Out page 53 **Independent Practice** Check Understanding page 53, On Your Own page 54, Exit Ticket Online Resources **Plan for differentiated instruction** page 51c **Small Group Options** On Track - page 51c 1-inch Grid Paper (Teacher Resources Masters), scissors Almost There - page 51c Tabletop Flipchart Lesson 2.5, math boards Ready for More - page 51c - 1-inch Grid Paper (Teacher Resources Masters) **Math Center Options**

	On Track • More Practice/Homework 2.5 • Fluency Builder Multiplication 2 and 5 • My Learning Summary • Game: Find the Area! • Standards Practice Almost There • Reteach 2.5 • Interactive Reteach 2.5 • RtI Tier 2 Skill 10, Multiply with 2 and 4 Ready for More • Challenge 2.5 • Interactive Challenge 2.5 • PogglesMX: Number Relationships Grade 3, Level 12 **Resources** *IntoMath* Teacher Edition Module 2
Suggested Modifications	**English Language Learners Native language support:** Native language support: The teacher provides auditory or written content to students in their native language. Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly. Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand. Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students **Special Education Students:** Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working

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Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

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MA.3.MD.C.7	Relate area to the operations of multiplication and addition.
MA.3.MD.C.7c	Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
MA.3.MD.C.7d	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

REFLECTIONS

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

LA.K-12.NJSLSA.W4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
LA.RI.3.10	By the end of the year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
LA.K-12.NJSLSA.SL1	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
LA.SL.3.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.