TOWNSHIP OF UNION PUBLIC SCHOOLS

Grade 3 Mathematics

Adopted: August 27, 2024

Mission Statement

The mission of the Township of Union Public Schools is to build on the foundations of honesty, excellence, integrity, strong family, and community partnerships. We promote a supportive learning environment where every student is challenged, inspired, empowered, and respected as diverse learners. Through cultivation of students' intellectual curiosity, skills and knowledge, our students can achieve academically and socially, and contribute as responsible and productive citizens of our global community.

Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is to formulate a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.

Unit 1 - 3rd Grade

Unit Title: Mathematics – Introductory Multiplication and Division Concepts – Unit 1 – Module A

Grade level: Grade 3

Timeframe: 1st marking period; 25 instructional days, 6 assessment days

Rationale

Grade 3 – Introductory Multiplication and Division Concepts – Unit 1

Unit 1 focuses on an introduction to multiplication and division concepts. Learners build upon their Grade 2 with work with arrays and repeated addition to work with equal groups and larger arrays. They explore this concept of multiplication together with the concept of division. By exploring the concepts together, learners learn to reason about the relationship between the two operations and come to understand division as an unknown-factor problem. Learners use increasingly sophisticated strategies to solve multiplication and division problems involving single digit numbers. As learners apply strategies to solve these problems, they begin working towards accuracy and efficiency (fluency) with these operations. By the end of the unit, learners use drawings and equations with a symbol for the unknown to represent simple two-step word problems using the four operations.

Note: Double asterisks (**) indicate that the example(s) included within the New Jersey Student Learning Standard may be especially informative when considering the Student Learning Objective.

Guiding Questions

- How can you use multiplication to find how many in all?
- What strategies can you use to multiply?
- How can you use division to find how many in each group or how many equal groups?
- What strategies can you use to divide?

Standards

Standards (Taught and Assessed):

- **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. For example, describe and/or represent a context in which a total number of objects can be expressed as 5 × 7.
- **3.OA.A.2** Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.
- **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. Climate Change Example: Students may solve multiplication and division word problems involving measurement quantities related to glacier retreat.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

- **Social-Emotional Learning Competencies**

Instructional Plan

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** ● Touch Math material ● A number line ● A multiplication Table ● Various manipulatives ● Less Questions ● Extended Time ● Read Aloud Directions and Instructions ● Reword for understanding of Context

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Lesson Alignment**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.OA.A.1 **WALT** interpret products of whole numbers in terms of the number of groups and objects**	Use manipulatives to model equal groups and arrays. Use drawings to connect to and explain equations. Remember each group as a single item to be counted --- **Vocabulary:** Equal groups, product, factor, repeated addition, multiply, array	Exit ticket Non verbal check ins Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**<u>Target Lessons:</u>** **Lesson 4**: Understand the Meaning of Multiplication	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

3.OA.A.3 **WALT** use multiplication and ~~division~~ within 100 to solve word problems in situations involving: equal groups, arrays and measurement quantities **3.OA.A.3** **WALT** use drawings and equations with a symbol for the unknown number to represent multiplication and ~~division~~ word problems within 100	Use CUBES to solve word problems Represent a multiplication word problem with models, drawings, and equations. Organize word problem information by labeling groups, and number in each group Solve word problems with multiplication that include concepts of climate change. --- **Vocabulary:** Equal groups, product, factor, repeated addition, multiply, array, unknown	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Target Lessons:** **Lesson 5**: Multiply with 0, 1, 2, 5, and 10 **Lesson 6**: Multiply with 3, 4, and 6 **Lesson 7**: Multiply with 7, 8, and 9 **Lesson 17**: Solve One-Step Word Problems Using Multiplication and Division	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

Activities and Resources	Ready Math Resources
Talk about repeated addition Use manipulatives or counters to represent equal groups Use manipulatives or counters to represent arrays Use a number line to model multiplication/repeated addition. Write multiplication equations using models Review text strategies to determine key components of the problem (CUBES) • Circle the important numbers • Underline the question • Box the words that are keywords • Eliminate extra information • Solve by showing work. Use skip counting to model multiplication and repeated addition Use equal groups, arrays, repeated addition or multiplication to solve the unknown factor in word problems	●**Lesson 4: Understand the Meaning of Multiplication** **iReady Interactive Tutorial** **-Prerequisite: Add Using Arrays (Grade 2)** -Understand Multiplication Part 1 -Understand Multiplication Part 2 **Fluency and Skills Practice 1** --- ● **Lesson 5: Multiply with 0, 1, 2, 5, and 10** 💻**Interactive Practice: Lesson 5** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** --- ● **Lesson 6: Multiply with 3, 4, and 6** 💻**Interactive Practice: Lesson 6** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Fluency and Skills Practice 3** ---

Use teacher modeling. Use drawings and physical models to show equal groups. Hands on activities and practice **Instructional Technology Resources (Where Applicable):** Khan Academy i-Ready Learn Zillion Nearpod Lessons IXL Brainpop Reflex Math	● **Lesson 7: Multiply with 7, 8, and 9** **iReady Interactive Tutorial** -Break Apart a Number to Multiply 💻**Interactive Practice: Lesson 7** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Fluency and Skills Practice 3** ● **Lesson 17: Solve One-Step Word Problems** **Using Multiplication** ~~and Division~~ **iReady Interactive Tutorials** -Multiplication Word Problems Part 1 -Multiplication Word Problems Part 2

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Lesson Alignment**	**Modifications**
3.OA.A.2 **WALT** interpret whole number quotients of whole numbers as the number of objects in each share (or groups) or as the number of shares (or groups) that result from partitioning a total number of objects**	Use division to determine the size of each group when the number of groups is known Use division to determine the number of groups when the size of each group is known. Represent division with models and drawings. Write an equation for a division situation. Use division to find how many in each group or how many equal groups Use strategies to divide	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)**	**Target Lessons:** **Lesson 10**: Understand the Meaning of Division	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

	Vocabulary: Equal groups, quotient, dividend, divisor, repeated subtraction, divide, array	**Comprehension Check Form B (iReady)**		
3.OA.A.3 **WALT** use ~~multiplication~~ and division within 100 to solve word problems in situations involving: equal groups, arrays and measurement quantities **WALT** use drawings and equations with a symbol for the unknown number to represent ~~multiplication~~ and division word problems within 100	Use CUBES to solve word problems Represent a multiplication word problem with models, drawings, and equations. Solve word problems with multiplication. --- **Vocabulary:** Equal groups, quotient, dividend, divisor, repeated subtraction, divide, array, unknown	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Target Lessons:** **Lesson 5**: Multiply with 0, 1, 2, 5, and 10 **Lesson 6**: Multiply with 3, 4, and 6 **Lesson 7**: Multiply with 7, 8, and 9 **Lesson 17**: Solve One-Step Word Problems Using Multiplication and Division	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

Activities and Resources	Ready Math Resources
Use division with equal groups. Use division with arrays. Use a number line to model division/repeated subtraction. Relate repeated subtraction to representations of division. Write an equation for a division problem. Review text strategies to determine key components of the word problem • What do I need to solve for a solution? • Do I know the total number? • Do I know the number of groups? • Do I know how many in each group? Use equal groups or arrays to model the problem. Use related facts to to solve the unknown factor in word problems	⚫**Lesson 10: Understand the Meaning of Division** **iReady Interactive Tutorial:** -Understand Division Part 1 -Understand Division Part 2 💻**Lesson 10 iReady Interactive Practice** **Fluency and Skills Practice 1** **Center Activity: "Party Bags"** --- ⚫ **Lesson 17: Solve One-Step Word Problems Using ~~Multiplication and~~ Division** **iReady Interactive Tutorials** -Division Word Problems Part 1 -Division Word Problems Part 2

Use teacher modeling. Use drawings and physical models to show equal groups. Hands on activities and practice Relate Division Facts to Multiplication Facts (Fact Families) **Instructional Technology Resources (Where Applicable):** Khan Academy i-Ready Learn Zillion Nearpod Lessons IXL Brainpop Reflex Math	**Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Fluency and Skills Practice 3** **Center Activities:** **3.5 "Solve Word Problems"** **3.6 "Writing Equations"** **Enrichment:** **"Race Training"**

Benchmark Assessment 1

Benchmark Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
Unit 1 Benchmark Assessment	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Benchmark Assessment 2

Benchmark Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
I-Ready	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Summative Assessments (add rows as needed)

Summative Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit 1 - Module B

Unit Title: Mathematics – Introductory Multiplication and Division Concepts – Unit 1 – Module B

Grade level: Grade 3

Timeframe: 1st Marking Period; 19 instructional days, 5 assessment days

Rationale

Grade 3 – Introductory Multiplication and Division Concepts – Unit 1

Unit 1 focuses on an introduction to multiplication and division concepts. Learners build upon their Grade 2 with work with arrays and repeated addition to work with equal groups and larger arrays. They explore this concept of multiplication together with the concept of division. By exploring the concepts together, learners learn to reason about the relationship between the two operations and come to understand division as an unknown-factor problem. Learners use increasingly sophisticated strategies to solve multiplication and division problems involving single digit numbers. As learners apply strategies to solve these problems, they begin working towards accuracy and efficiency (fluency) with these operations. By the end of the unit, learners use drawings and equations with a symbol for the unknown to represent simple two-step word problems using the four operations.

Note: Double asterisks (**) indicate that the example(s) included within the New Jersey Student Learning Standard may be especially informative when considering the Student Learning Objective.

Guiding Questions

- How can you use multiplication facts, place value, and properties to solve multiplication problems?
- What strategies can you use to multiply?
- What strategies can you use to divide?
- What are some ways you can describe a pattern in a table?
- How can you use an array or a multiplication table to find an unknown factor or product?
- How can you write a set of related multiplication and division facts?
- How can you round numbers?

Standards

Standards (Taught and Assessed):

3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine

the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?.

- **3.OA.B.5** Apply properties of operations as strategies to multiply and divide. Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property)
- **3.OA.C.7 With accuracy and efficiency**, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
- **3.OA.D.9** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.
- **3.OA.B.6** Understand division as an unknown-factor problem. For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.
- **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
- **3.OA.D.8** Solve two-step word problems**, including problems involving money,** using the four operations. 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. **(Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)**

Climate Change Example: Students may use the four operations to solve two-step word problems related to glacier retreat.

- **3.NBT.A.1** Use place value understanding to round whole numbers to the nearest 10 or 100

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan Unit 1 – Module B

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** ● Touch Math material ● A number line ● A multiplication Table ● Various manipulatives ● Less Questions ● Extended Time ● Read Aloud Directions and Instructions ● Reword for understanding of Context

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

<table>
<tr><th>SLO – WALT
We are learning to/that</th><th>Student Strategies</th><th>Formative Assessment(s)</th><th>Ready Lesson Alignment</th><th>Modifications
ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary.

G&T: Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments.

At Risk: Individualized as needed.

IEP/504: Modifications/Accommodations as stated in IEP.

See samples below:</th></tr>
<tr><td>3.OA.A.4
WALT determine the unknown whole number in a multiplication or division equation relating three whole numbers **</td><td>● Recall basic understanding of multiplication and division and how to create equal groups and arrays

Essential Vocabulary: equal, groups, array, each, rows</td><td rowspan="2">Exit ticket
Non verbal check ins
Ex: Thumbs up-thumbs down.
Self Reflection
Student conferences
Teacher created pretests
Observations checklists
Quick write/ Response card

Lesson Assessments (Ready Math)</td><td><u>Target Lessons:</u>
Lesson 12: Multiplication and Division Facts

<u>Additional Coverage:</u>
Lesson 17 & 18</td><td rowspan="2">Modifications per students’ IEP
Additional manipulatives
Read text
Clarify words
Less problems
Provide additional scaffolding
Extended time
Using prior knowledge

Enrichment Activities</td></tr>
<tr><td>3.OA.D.9

WALT identify arithmetic patterns, including patterns in the addition table or multiplication table, and explain them using properties of operations</td><td>● Recall even and odd numbers
● Identify patterns on the multiplication table.
● Explain patterns on the multiplication table.

Essential Vocabulary: pattern, even, odd</td><td><u>Target Lessons:</u>
Lesson 13: Understand Patterns</td></tr>
</table>

3.OA.B.5 **WALT** apply properties of operations (commutative property) and (distributive property) as strategies to multiply	• Model the Commutative & Distribute Property of Multiplication, and use it to find products • **Commutative property:** If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. • **Distributive property:** Knowing that $8\times5=40$ and $8\times2=16$, one can find 8×7 as $8\times(5 + 2) = (8\times5) + (8\times2) = 40 + 16 = 56$. **Essential Vocabulary:** Commutative Property of Multiplication	**Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Target Lessons:** **Lesson 5**: Multiply with 0, 1, 2, 5, and 10 **Lesson 6**: Multiply with 3, 4, and 6 **Lesson 7**: Multiply with 7, 8, and 9 **Lesson 8**: Use Order and Grouping to Multiply **Additional Coverage:** **Lesson 9, 10, 12 & 16**	

Activities and Resources	Ready Math Resources
Use counters or objects to model arrays and equal groups for both multiplication facts Give each child a copy of a multiplication table and highlight/color various patterns on the table. Use manipulatives or counters to represent arrays and equal groups to determine the unknown number Talk about Fact Families, Use Fact Family Triangles Talk about repeated addition Use skip counting to model multiplication and repeated addition Identify Even and Odd Numbers Use manipulatives or counters to represent equal groups Use manipulatives or counters to represent arrays Use a number line to model multiplication/repeated addition. Use equal groups, arrays, repeated addition or multiplication to solve the unknown factor in word problems Review text strategies to determine key components of the problem (CUBES) • Circle the important numbers • Underline the question	● **Lesson 5: Multiply with 0, 1, 2, 5, and 10'** **iReady Interactive Tutorial** "Understand Multiplication Part 1" 💻**Lesson 5 - iReady Interactive Practice** Fluency and Skills Practice 1 Fluency and Skills Practice 2 ● **Lesson 6: Multiply with 3, 4, and 6** **iReady Interactive Tutorial** "Understand Multiplication Part 2" 💻**Interactive Practice: Lesson 6** Fluency and Skills Practice 1 Fluency and Skills Practice 2 Fluency and Skills Practice 3 ● **Lesson 7: Multiply with 7, 8, and 9** **iReady Interactive Tutorial** "Break Apart a Number to Multiply" 💻**Interactive Practice: Lesson 7** Fluency and Skills Practice 1 Fluency and Skills Practice 2 Fluency and Skills Practice 3 ● **Lesson 8: Use Order and Grouping to Multiply** **iReady Interactive Tutorial** "Use Order and Grouping to Multiply" 💻**Lesson 8 - iReady Interactive Practice**

- Box the words that are keywords
- Eliminate extra information
- Solve by showing work.

Use teacher modeling. Use drawings and physical models to show equal groups.

Hands on activities and practice

Instructional Technology Resources (Where Applicable):

Printable Multiplication Chart Khan Academy i-Ready

Learn Zillion IXL Brainpop

Reflex Math Flocabulary Math Properties Video

Fluency and Skills Practice 1
Fluency and Skills Practice 2
Fluency and Skills Practice 3

● **Lesson 12: Multiplication and Division Facts**
iReady Interactive Tutorial "Understand Division Part 2"
💻 **Lesson 12 - iReady Interactive Practice**
Fluency and Skills Practice 1
Fluency and Skills Practice 2
Center Activity: 3.14 **"Complete a Fact Family"**

● **Lesson 13: Understand Patterns**
iReady Interactive Tutorial "Understand Patterns"
Prerequisite: Identify Even and Odd Numbers (Grade 2)
Fluency and Skills Practice 1

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Ready Lesson Alignment	Modifications
3.OA.B.6 **WALT** a related multiplication problem with an unknown factor can be used to solve a division problem	• Determine which operation is needed to find the unknown. • Multiply or divide, within 100, to find the unknown whole number in a multiplication or division equation. • Write division number sentences as unknown factor problems. • Solve multiplication and division of whole numbers by finding the unknown factor. • Use an array, equal groups, or a multiplication table to find an unknown factor. • Identify factors of fact families. • Write additional equations using the three factors of the equation. **Essential Vocabulary:** Equal groups, factor, multiply, product, multiple, inverse operations, related fact, fact family, quotient, dividend, divisor, repeated subtraction, divide, array	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)**	**Target Lessons:** **Lesson 11**: Understand how multiplication and division are related **Additional Coverage:** **Lessons 12 & 17**	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge Enrichment Activities

3.OA.C.7 **WALT With accuracy and efficiency**, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• Write a set of related multiplication and division facts • Identify factors in a fact family • Demonstrate proficiency in multiplying one and two-digit numbers within 100 **Essential Vocabulary:** related facts	**Comprehension Check Form B (iReady)**	**Target Lessons:** **Lesson 5**: Multiply with 0, 1, 2, 5, and 10 **Lesson 6**: Multiply with 3, 4, and 6 **Lesson 7**: Multiply with 7, 8, and 9 **Lesson 12**: Multiplication and Division Facts **Additional Coverage:** **Lessons 9, 17 & 18**	

Activities and Resources	Ready Math Resources
3.OA.B.6 WALT a related multiplication problem with an unknown factor can be used to solve a division problem • Create Fact Family Triangles to demonstrate how multiplication and division are related and can be used to find unknown numbers • Read The Grapes of Math and create math riddles • Create fact cards for faster fluency. • Play fact games on the computer. • Work with a partner/group on center fact fluency games • Student Sharing Activity • Unknown Factor Video • Unknown Factor Tic Tac Toe • Multiplication/Division/Factor Game --- **3.OA.C.7 WALT** multiply and divide within 100 using strategies such as the relationship between multiplication and division, or properties of operations **(working towards accuracy and efficiency)** • Create fact cards for faster fluency.	●**Lesson 11: Understand How Multiplication & Division are related** **iReady Interactive Tutorial:** "Understand Division Part 2" 💻**Lesson 11 iReady Interactive Practice** **Resource:** Multiplication Triangles Fluency and Skills Practice 1 --- ● **Lesson 5: Multiply with 0, 1, 2, 5, and 10'** **iReady Interactive Tutorial** "Understand Multiplication Part 1" 💻**Lesson 5 - iReady Interactive Practice** Fluency and Skills Practice 1 Fluency and Skills Practice 2 --- ● **Lesson 6: Multiply with 3, 4, and 6** **iReady Interactive Tutorial** "Understand Multiplication Part 2" 💻**Interactive Practice: Lesson 6** Fluency and Skills Practice 1 Fluency and Skills Practice 2 Fluency and Skills Practice 3 --- ● **Lesson 7: Multiply with 7, 8, and 9**

• Play fact games on the computer. • Work with a partner/group on center fact fluency games: • Ice Cream Sundae Multiplication Game • Multiplication Concentration Game • Multiplication Facts Game • Alien Division Game **Instructional Technology Resources (Where Applicable):** Khan Academy i-Ready Learn Zillion IXL Brainpop Reflex Math	**iReady Interactive Tutorial** "Break Apart a Number to Multiply" **💻Interactive Practice: Lesson 7** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Fluency and Skills Practice 3** --- **● Lesson 12: Multiplication and Division Facts** **iReady Interactive Tutorial** "Understand Division Part 2" **💻Lesson 12 - iReady Interactive Practice** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Center Activity: 3.14 "Complete a Fact Family"**

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Ready Lesson Alignment	Modifications
3.OA.D.8 **WALT** sSolve two-step word problems**, including problems involving money,** using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. **WALT** Assess the reasonableness of answers using mental computation and estimation strategies including rounding	• Use CUBES to solve word problems • Use drawings and equations with a symbol or letter for the unknown number to represent multiplication and division word problems within 100 • Create and solve word problems with an unknown factor, including problems that involve climate change concepts. • **(Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)** • **Climate Change Example: Students may use the four operations to solve two-step word problems related to glacier retreat.**	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)**	**Target Lessons:** **Lesson 18: "Solve Two Step Word Problems Using the Four Operations"**	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge Enrichment Activities

3.NBT.A.1 **WALT** round whole numbers to the nearest 10 or 100, using place value understanding	• Recall place value: ones, tens, hundreds • Name the places in 2 and 3 digit number • Compare numbers using place value • Determine whether a number rounds up or down • Use a number line to round a whole number to the nearest 10 and 100 **Essential Vocabulary:** place value, ones, tens, hundreds, number line, digit, round	**Comprehension Check Form B (iReady)**	**Target Lessons:** **Lesson 1**: Use Place Value to Round Numbers **Additional Coverage:** **Lessons 2, 3 & 18**	

Activities and Resources	Ready Math Resources
3.OA.D.8 **WALT** solve simple two-step word problems using the four operations **WALT** represent two-step word problems using equations with a letter standing for the unknown quantity • Review text strategies to determine key components of the word problem (ex: CUBES) • Review keywords that signal the operation that needs to be used to complete the problem. • Use teacher modeling. Use drawings and physical models equations. • Hands on activities and practice. • Flocabulary Word Problems Video **3.NBT.A.1 - WALT** round whole numbers to the nearest 10 or 100, using place value understanding • Number Talk about place value. • Teach rounding songs/poems. Example:	⚫**Lesson 18: "Solve Two Step Word Problems Using the Four Operations"** **iReady Interactive Tutorial:** "Division Word Problems Part 2" **Teacher Toolbox** • **Center Activity 3.15** **"Solve 2 Step Word Problems"** • **Center Activity 3.16** **"Check Reasonableness"** • **Fluency & Skills Practice 18.1** • **Fluency & Skills Practice 18.2** • **Fluency & Skills Practice 18.3** • **Enrichment Activity: Purple Coins** ⚫**Lesson 1: Use Place Value to Round Numbers** **iReady Interactive Tutorials** "Understand Hundreds, Tens, and Ones" 💻**Lesson 1 iReady Interactive Practice** **Teacher Toolbox**

• "The underlined digit says • If I'm 5 or more raise the circled number score, • If I'm 4 or less let the circled number rest, • Now change the rest to zeros And you will all be math heroes." • Create rounding number line manipulatives • Flocabulary Rounding Video **Instructional Technology Resources (Where Applicable):** Khan Academy i-Ready Learn Zillion IXL Brainpop Reflex Math	• **Fluency and Skills Practice 1.1** • **Fluency and Skills Practice 1.2** • **Center Activity 3.19 "Vocabulary Match"** • **Center Activity 3.20 "Round Numbers"** • **Enrichment Activity: Mystery Number**

Benchmark Assessment 1

Benchmark Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
Unit 1 Benchmark Assessment	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Benchmark Assessment 2

Benchmark Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
I-Ready	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Summative Assessments (add rows as needed)

Summative Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections

Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit 2 Module A

Unit Title: Mathematics – Relating Area to Multiplication and Addition – Unit 2 – Module A

Grade level: Grade 3
Timeframe: 2nd marking period; 11 instructional days, 3 assessment days [14 days total]

Rationale

Grade 3 – Relating Area to Multiplication and Addition – Unit 2

This unit focuses on the concepts of area, the 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 area 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).

Guiding Questions

How can you solve problems involving area?
How can you use the Distributive Property to find the product?
Why can you multiply to find the area of a rectangle?
How can you find the area of a plane figure?
How can you break apart a figure to find the area?

Standards

Standards (Taught and Assessed):

3.M.B.3 Recognize area as an attribute of plane figures and understand concepts of area measurement.

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.
b. A plane figure which can be covered without gaps or overlaps by unit squares is said to have an area of square units.

3.M.B.4 · Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units).
Climate Change Example: Students may solve real world problems about glacier retreat that involve perimeters of polygons.

3.M.B.5 Relate area to the operations of multiplication and addition.

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.
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.
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths and is the sum of and . Use area models to represent the distributive property in mathematical reasoning.
d. 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.

3.OA.C.7 With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

c. 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 × b and a × c. Use area models to represent the distributive property in mathematical reasoning.

3.OA.B.5 Apply properties of operations as strategies to multiply and divide. Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16= 56. (Distributive property.)

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

[Social-Emotional Learning Competencies]

Instructional Plan - Unit 2 – Module A

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: Benchmark Assessment - Paper (Beginning of the Year) Standards Mastery Assessments - Form A Comprehension Checks - Form A iReady Diagnostic	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** ● Touch Math material ● A number line ● A multiplication Table ● Various manipulatives ● Less Questions ● Extended Time ● Read Aloud Directions and Instructions ● Reword for understanding of Context

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.M.B.3 – WALT Recognize area as an attribute of plane figures and understand concepts of area measurement. ● 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. ● A plane figure which can be covered without gaps or overlaps by unit squares is said to have an area of square units.	● Use drawings, models, and manipulatives to count unit squares to find the area. ● Count the unit squares in a shape to determine the area ● Recall the difference between centimeter, meter, inches, and feet ● Understand that unit squares may not overlap or have gaps ● Create an array that forms a rectangle using unit squares. Discuss how the formula of Length X Width = Area is similar to the number of tiles in each row.	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Target Lesson(s):** **Lesson 14**: Understand Area 💻**Interactive Tutorials:** ● Understand Area 💻**Interactive Practice Lesson 14** **Teacher Toolbox** ● Center 3.39 "Area" ● Center 3.40 "Square Units" ● Center 3.41 "Find Area" ● Center 3.42 "Area Game" Fluency and Skills Practice 1	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:** **Lesson 14:** Building Pens

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.M.B.4 · **WALT** Measure areas by counting unit squares (square cm, square m, square in, square ft, and non-standard units). Climate Change Example: Students may solve real world problems about glacier retreat that involve perimeters of polygons.	• Measure area of plane figures by counting squares that include concepts of climate change. • **Essential Vocabulary: unit square, square unit, area, length, width, array, multiply, square ft, square m, square cm, square in**		Flocabulary Area Lesson Cheez-it Area Activity	
3.M.B.5 WALT Relate area to the operations of multiplication and addition. 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. b. Multiply side lengths to find areas of rectangles	Use drawings, models, and manipulatives to count unit squares to find the side lengths and area Multiply 2 side lengths to find the area Tell the student that rectangles can be described by their dimensions. Explain that the	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card	**Target Lesson(s):** **Lesson 15**: "Multiply to Find Area" 💻**Interactive Tutorials:** • Add and Multiply to Find Areas 💻**Interactive Practice Lesson 15**	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
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. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths and is the sum of and . Use area models to represent the distributive property in mathematical reasoning. d. 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	dimensions of a rectangle are called the length and width. Discuss with students that the total number of tiles in the array is the area of the rectangle because the tiles cover the rectangle without gaps or overlaps Have the student use grid paper or inch tiles to make as many different rectangles Use CUBES to solve real world word problems **Essential Vocabulary: unit square, square unit, area, length, width, aray, multiply**	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Teacher Toolbox** • Center 3.43 “Area Problems” **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** Flocabulary Area Lesson Cheez-it Area Activity	Using prior knowledge **Enrichment:** **Lesson 15:** **Designing a Garden**

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
solve real world problems.				

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.OA.C.7 – WALT with accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• Write a set of related multiplication and division facts • Identify side lengths as factors to multiply • Demonstrate proficiency in multiplying one and two-digit numbers within 100 • If given a total area, understand that is a quotient to find an unknown side length	Exit ticket Non verbal check ins- . Self Reflection Observations/checklists **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Target Lessons:** **Lessons 5-7**: Multiply with 0 through 10 **Lesson 12**: Multiplication and Division Facts (SEE UNIT 1 Curriculum for more RESOURCES)	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Extended time Using prior knowledge **Enrichment**: **Lesson 5: Shopping Spree** **Lesson 6: How Many Creatures?** **Lesson 7: How Many Creatures?** **Lesson 8: Arranging Desks**
3.MD.C.7.c - WALT use tiling to show the area of a rectangle with whole-number side lengths, a and b + c, is composed of two additive areas, a × b and a × c	• Find the area of a non-rectangular shape. Provide the student with 1-inch grid paper. Tell the student to draw a non rectangular shape using the lines on the grid paper. • Tell the student to break apart the shape into rectangles and color each rectangle a different color.	Exit ticket Non verbal check ins- . Self Reflection Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)**	**Lesson 16**: Add Areas 💻**Interactive Practice Lesson 16** **Teacher Toolbox** Center 3.44 "Decompose to Find Area" **Fluency and Skills Practice 1**	

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
WALT use area models to represent and explain the distribution property by using mathematical reasoning	• Have the student find the area of the shape by adding the areas of the rectangles he or she shaded. **Essential Vocabulary:** related facts, length, width, multiply, side lengths	**Comprehension Check Form B (iReady)**	Fluency and Skills Practice 2	Lesson 12: Display of Cans Lesson 16: Tile Design
3.OA.B.5 – WALT apply properties of operations (distributive property) as strategies to multiply	• Use distributive property to find the area. • Model Distributive property.		**Target Lessons:** **Lessons 5-8** **Lessons 9-12, & 16**	

Benchmark Assessment 1

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Benchmark Assessment 2

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**

I-Ready	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Summative Assessments (add rows as needed)

Summative Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit 2 Module B

Unit Title: Mathematics – Relating Area to Multiplication and Addition – Unit 2 – Module B

Grade level: Grade 3

Timeframe: 2nd marking period; 22 instructional teaching days; 5 assessment days [27 days total]

Rationale

Grade 3 – Relating Area to Multiplication and Addition – Unit 2

This unit focuses on the concepts of area, the 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 area 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).

Guiding Questions

How can you solve problems involving area?

How can you use the strategy draw a diagram to multiply with multiples of 10

What strategies can you use to multiply with multiples of 10?

How can you model and record multiplying 1-digit whole numbers by multiples of 10?

Standards

Standards (Taught and Assessed):

■ **3.OA.B. 5** Apply properties of operations as strategies to multiply and divide. Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)

◎ **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.

■ **3.OA.C.7 With accuracy and efficiency**, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan - Unit 2 – Module B

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** ● Touch Math material ● A number line ● A multiplication Table ● Various manipulatives ● Less Questions ● Extended Time ● Read Aloud Directions and Instructions ● Reword for understanding of Context

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.OA.B.5 – WALT apply properties of operations (associative property) as strategies to multiply	• Use teacher modeling. Use drawings and physical models equations. • Hands on activities and practice. **Associative property:** $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or $5 \times 2 = 10$, then $3 \times 10 = 30$. **Essential Vocabulary: Parenthesis, Multiply, Product, Factors**	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card **Lesson Paper Assessments (Ready Math)**	**Target Lessons:** **Lessons 5-7**: Multiply with 0 through 10 **Lessons 8**: Use Order and grouping to Multiply (All above lessons covered in Unit 1)	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:**
3.NBT.A.3 – WALT multiply one-digit whole numbers by multiples of 10 in the range 10 to 90 using strategies based on place value and properties of operations	• Use skip counting, a number line, or a bar model to multiply with the multiples of 10. • Use base-ten blocks or place value to multiply with multiples of 10. • Hands on activities and practice. • Interactive notebook lesson		**Lesson 9**: "Use Place Value to Multiply " 💻 **Interactive Tutorials:** Multiply by Multiples of 10 Fluency and Skills 1 **Center 3.23** "Multiply Multiples of 10	

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
		Standards Mastery Check Form B (iReady) **Comprehension Check Form B (iReady)**	**Center 3.24** **"Match the Product"** **Target Lessons:** **Lessons 5-7**: Multiply with 0 through 10 **Lesson 12**: Multiplication and Division Facts	**Lesson 9: Party Bags**
3.OA.C.7 – WALT With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	• Write a set of related multiplication and division facts • Identify side lengths as factors to multiply • Demonstrate proficiency in multiplying one and two-digit numbers within 100 • If given a total area, understand that is a quotient to find an unknown side length			

Benchmark Assessment 1

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**

Teacher Created Assessment	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Benchmark Assessment 2

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
I-Ready	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Summative Assessments (add rows as needed)

Summative Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Relating Area to Multiplication and Addition – Unit 2 – Module C

Grade level: Grade 3

Timeframe: 2nd-3rd marking period; 17 instructional days; 1-4 assessment days [18-21 days total]

Rationale

Grade 3 – Relating Area to Multiplication and Addition – Unit 2

This unit focuses on the concepts of area, the 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 area 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).

Guiding Questions

How can you solve problems involving area?

Standards

Standards (Taught and Assessed):

3.M.B.5 Relate area to the operations of multiplication and addition.

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.
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.
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths and is the sum of and . Use area models to represent the distributive property in mathematical reasoning.
d. 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.

3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan Unit 2 – Module C

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **<u>Examples include:</u>** ● Touch Math material ● A number line ● A multiplication Table ● Various manipulatives ● Less Questions ● Extended Time ● Read Aloud Directions and Instructions ● Reword for understanding of Context

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.M.B.5 **WALT** Relate area to the operations of multiplication and addition. 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. 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. c. Use tiling to show in a concrete	**Tools for Instruction** ● Tell the student that rectangles can be described by their dimensions, called the length and width. ● Provide the student with grid paper. ● Model length x width and relate that to units. Example: Write 5 units by 4 units (5 units X 4 units) on the board and explain that this is read as "5 units by 4 units." Tell the student that a 5 X 4 rectangle has a length of 5 units and width of 4 units.	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card	**Target Lessons:** ● **Lesson 15**: Multiply to Find Area ● **Lesson 16**: Add Areas **Standards Mastery** Form A "Add Areas" **Teacher Toolbox** **Center Activity 3.44: "Decompose to Find Areas"** **Fluency & Skills Practice 15.1** **Fluency & Skills Practice 15.2**	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
case that the area of a rectangle with whole-number side lengths and is the sum of and . Use area models to represent the distributive property in mathematical reasoning. d. 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.	• Draw lines in rectangles to break them into smaller rectangles. • Draw lines in rectilinear non-rectangular shapes to break them into rectangles. • Tell how to find the area of a shape made from rectangles. **Essential Vocabulary**: area, product, square unit, length, with, units, rectangle	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check "Add Areas" Form B (iReady)** **Comprehension Check Form B (iReady)**	**Fluency & Skills Practice 16.1** **Fluency & Skills Practice 16.2** **Additional Coverage:** Lesson 32: Area and Perimeter of Shapes	Enrichment: **Tile Design**

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NBT.A.2 **WALT add** within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction (working towards accuracy and efficiency)	● Add/Subtract three-digit numbers using place-value reasoning and describe any necessary regroupings. ● Summarize word problems involving addition and subtraction ● Draw an open number line to find the difference of two numbers. ● Compare the different approaches to solving a word problem used by others and identify connections among the approaches. ● break apart three-digit numbers into hundreds, tens and ones in order to add or subtract	Exit ticket Non verbal check ins- Ex: Thumbs up-thumbs down. Self Reflection Student conferences Teacher created pretests Observations/checklists Quick write/Response card	**Target Lessons:** **Lessons 2 and 3: "Add and Subtract 3-digit Numbers"** 💻**Interactive Tutorials:** ● Add 3-Digit Numbers ● Subtract 3-Digit Numbers 💻**Interactive Practice:** **"Add 3-Digit Numbers"** **"Subtract 3-Digit Numbers"** Fluency & Skills Practice 2.1 Fluency & Skills Practice 2.2 Fluency & Skills Practice 3.1 Fluency & Skills Practice 3.2 Fluency & Skills Practice 3.3 **Teacher Toolbox** ● **Center 3.21** "Model Addition" ● **Center 3.22** "Add within 1000" ● **Center 3.56** "Model Subtraction"	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:**

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Ready Math Lesson Alignment** **Activities & Resources**	**Modifications ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NBT.A.2 **WALT subtract** within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction (working towards accuracy and efficiency)	**Essential Vocabulary:** partial sums, algorithm, sum, difference, regroup, estimate	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	• **Center 3.57** "Subtract within 1000" Hundreds Place Value Chart Flocabulary Subtraction with Regrouping Video Flocabulary Addition with Regrouping Video	**Lesson 2: Addition Grids** **Lesson 3: Planning a Trip**

Benchmark Assessment 1

Benchmark Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**

Teacher Created Assessment	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Benchmark Assessment 2

Benchmark Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
I-Ready	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Summative Assessments (add rows as needed)

Summative Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	Modifications per students' IEP, in addition to: Additional manipulatives, Read text, Clarify words, Less problems, Provide additional scaffolding , Extended time

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Introductory Fraction Concepts – Unit 3 – Module A

Grade level: Grade 3
Timeframe: 2nd parking period; 6 instructional days, 1-2 assessment days [7-8 days total]

Rationale

Unit 3 focuses on the foundational fraction concepts. It begins by building upon Grade 2 expectation that learners partition circles and rectangles into two, three, or four equal shares, and describe the shares using the words halves, thirds, or fourths. Learners also build upon their work with area in the previous unit to partition shapes into parts with equal areas. They come to understand unit fractions as quantities formed by partitioning a whole into equal parts. They use visual fraction models to represent simple fractions, to generate simple equivalent fractions, and to compare two fractions by reasoning about their size. Learners also come to understand fractions as numbers by placing them on the number line, and that all fractions are built from unit fractions.

This unit integrates (1) solving word problems involving telling and writing time to the nearest minute; (2) measuring length using rulers and representing the data on line plots; and (3) solving two-step word problems using the four operations; and working towards accurately and efficiently adding and subtracting within 1000.

Guiding Questions

How can you use fractions to describe how much or how many?

Standards

Standards (Taught and Assessed):

- **3.NF.A.1** Understand a fraction as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction as the quantity formed by a parts of size. **For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is 1/3 . Two of those parts would be 2/3 .**
- **3.G.A.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as ¼ of the area of the shape.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
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Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment and Reflection

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: Benchmark Assessment - Paper (Beginning of the Year) Standards Mastery Assessments - Form A Comprehension Checks - Form A iReady Diagnostic	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications and Reflections**
3.G.A.2 – WALT partition shapes into parts with equal areas **3.G.A.2 – WALT** express the area of each part as a unit fraction of the whole	• Use a fraction to name one part of a whole that is divided into equal parts. • Read, write, and model fractions that represent more than one part of a whole that is divided into equal parts. • Explore and identify equal parts of a whole.	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists	**Target Lesson(s)** **Lesson 33: "Partition Shapes into Parts with Equal Areas"** **Teacher Toolbox** • Center 3.49 "Equal Area" • Center 3.50 "Divide Shapes" • **Enrichment: Designing a New Home**	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding

ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary.

G&T: Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments.

At Risk: Individualized as needed.

IEP/504: Modifications/Accommodations as stated in IEP.

See samples below:

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NF.A.1 – WALT Understand a fraction as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction as the quantity formed by a part of size. **For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is 1/3 . Two of those parts would be ⅔.**	• Divide models to make equal shares. • Recall using a unit fraction to name one part of a whole, and one square unit of the total area of a figure. • Shade area models to represent a variety of fractions. Orally define and use the key mathematical terms denominator, fraction, numerator, and unit fraction	Quick write & Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Lesson 20:** **"Understand What a Fraction Is"** **💻Interactive Tutorials:** • Understand What a Fraction Is • Model Fractions **💻Interactive Practice** **Lesson 20** **Teacher Toolbox** • Center 3.25	Extended time Using prior knowledge

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NF.A.1 – WALT a fraction a/b as the quantity formed by a parts, where each part has a size of 1/b.	when describing reasoning to a partner. **Vocabulary:** **Equal, Unequal, Whole, Fraction, Unit Fraction, Halves, Thirds, Fourths, Sixths, Eighths, Numerator, Denominator**		"Write the Fraction" • Center 3.26 "Show Fractions" • **Enrichment: Colorful Quilts**	

Benchmark Assessment 1

Benchmark Assessment 1	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	**<u>Modifications per students' IEP, in addition to:</u>** ● Additional manipulatives ● Read text ● Clarify words ● Less problems ● Provide additional scaffolding ● Extended time ● Text to Speech
Benchmark Assessment 2	
I-Ready Diagnostics	
Summative Assessment	
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	

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Unit Title: Mathematics – Introductory Fraction Concepts – Unit 3 – Module B

Grade level: Grade 3

Timeframe: 3rd marking period; 5 instructional days, 1 assessment day [6 days total]

Rationale

Unit 3 Module B integrates (1) solving word problems involving telling and writing time to the nearest minute.

Guiding Questions

How can you tell time to the nearest minute?
How can you determine the difference between AM and PM?
How do you find elapsed time?

Standards

Standards (Taught and Assessed):

3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
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Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment and Reflection

Pre-Assessment	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
<u>iReady Pre-Assessments:</u> **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **<u>Examples include:</u>** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.MD.A.1 **WALT** Tell and write time to the nearest minute and measure time intervals in minutes.	• Read, write, and tell time on analog and digital clocks to the nearest minute. • Have students label each number on a clock face (1–11) with the corresponding 5-minute interval (5–55). Then ask the student to set the clock to various times containing 5-minute intervals. • Use a number line or an analog clock to measure time intervals in minutes.	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Target Lesson(s)** **Lesson 27: "Time"** **💻Interactive Tutorials:** • Tell and Write Time **💻Interactive Practice** **Lesson 27** **Teacher Toolbox** • **Center 3.31** "Time Match" • **Center 3.32** "Solve Time Word Problems" • **Enrichment:**	Modifications per students' IEPs Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.MD.A.1 **WALT** Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	• Solve problems involving time intervals in minutes by using addition and subtraction. • To support students in making sense of a problem, have them present the problem and clarify that the time given in the problem is either a start or end time . **Vocabulary:** **Minute, analog clock, digital clock, half hour, hour, quarter hour, elapsed time**		**Class Schedule** • **Tools For Instruction: Elapsed Time** • **Reproducible: Clock Face** • **Flocabulary** ○ Telling Time to the Hour and Half Hour ○ Telling Time to Five Minutes ○ Elapsed Time	

Benchmark Assessment 1

Benchmark Assessment 1	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	**<u>Modifications per students' IEP, in addition to:</u>** ● Additional manipulatives ● Read text ● Clarify words ● Less problems ● Provide additional scaffolding ● Extended time ● Text to Speech
Benchmark Assessment 2	
I-Ready Diagnostics	
Summative Assessment	
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Number Concepts and Counting to 10 – Unit 3 – Module C

Grade level: Grade 3

Timeframe: 3rd-4th marking periods; 21 instructional days; 1-5 assessment days [22-26 days total]

Rationale

Unit 3 focuses on the foundational fraction concepts. Students will use visual fraction models to represent simple fractions, to generate simple equivalent fractions, and to compare two fractions by reasoning about their size. Learners also come to understand fractions as numbers by placing them on the number line, and that all fractions are built from unit fractions. This unit's module integrates measuring length using rulers and representing the data on line plots.

Guiding Questions

How are fractions used in our daily lives?

How can you use measurement to describe the size of something?

How can you compare fractions?

How do we represent information on a line plot?

Standards

■ **3.NF.A.2** Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.
For example, partition the number line from 0 to 1 into 3 equal parts, represent on the number line and show that each part has a size.

b. Represent a fraction a/b on a number line diagram by marking off lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line..

■ **3.NF.A.3** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

a. Understand two fractions as equivalent (equal) if they are the same size. Understand two fractions as equivalent if they are located at the same point on a number line.

b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, by using a visual fraction model.

c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.
Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point on a number line diagram.

d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model.

□ **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.

Key: ■ Major Cluster □ Supporting Cluster ◎ Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications and Reflections**
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NF.A.2 WALT fractions are numbers and can be found or represented on the number line **a.** Represent a fraction on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.	Represent and locate fractions on a number line. Introduces the idea that fractions are also numbers, just the same as whole numbers are numbers. Help the student understand that one half marks the point halfway between 0-1 Give students several area models of halves, such as 3 halves and 4 halves. Have students identify the number shown, and connect it to the number line.	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card	**Target Lessons:** (Ready Math) **<u>Lesson 21</u>:** **"Understand Fractions on a Number Line"** **💻Interactive Tutorials:** • Fractions on a Number Line Part 1 • Fractions on a Number Line Part 2	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
For example, partition the number line from 0 to 1 into 3 equal parts, represent on the number line and show that each part has a size. **b.** Represent and recognize a fraction a/b on a number line diagram by marking off a lengths 1/b from 0 and that its endpoint locates the number a/b on the number line	Use models. Students should practice being able to identify a number line that shows a given fraction, or identify points on a number line as a fraction, not a whole number. **Vocabulary:** **Intervals, whole, Fractions greater than 1 whole, Equivalent, Equivalent fractions**	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	💻**Interactive Practice** **Lesson 21** **Teacher Toolbox** ● Center 3.27 "Use Fraction Vocab" ● Center 3.28 "Identify Fractions on a Number Line" ● Fluency & Skills Practice 21.1 ● Tools for Instruction	**Enrichment:** Number Lines

ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary.

G&T: Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments.

At Risk: Individualized as needed.

IEP/504: Modifications/Accommodations as stated in IEP.

See samples below:

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.MD.B.4 – WALT Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. **WALT** Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	**Measure length to the nearest half or fourth inch.** **Vocabulary:** **Inch**	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Lesson 26**: "Measure Length and Plot Data on Line Plots" 💻**Interactive Tutorials:** ● Prereq: Make Line Plots **Teacher Toolbox** ● Center 3.37 "Measure Objects"	***See Above Modifications*** **Enrichment:** **How Much Ribbon?**
3.NF.A.3 – WALT compare fractions by reasoning about their size	Compare fractions using models.	Exit ticket	**Lesson 22**: **"Understand Equivalent Fractions"** 💻**Interactive Tutorials:**	Modifications per students' IEP

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
3.NF.A.3a **WALT** Understand two fractions as equivalent (equal) if they are the same size. Understand two fractions as equivalent if they are located at the same point on a number line.	Model equivalent fractions by folding paper, using area models, and using number lines. Generate equivalent fractions by using models. Use a model to explain why two fractions are equivalent. Represent a whole number in fraction form. Recognize fractions that are equivalent to whole numbers.	Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card **Lesson Paper Assessments (Ready Math)**	• Understand Equivalent Fractions **💻Interactive Practice Lesson 22** **Teacher Toolbox** • Center 3.53 "Fraction Match" • Fluency and Skills Practice L22 • Tools for Instruction	Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:** Road Race

ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary.

G&T: Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments.

At Risk: Individualized as needed.

IEP/504: Modifications/Accommodations as stated in IEP.

See samples below:

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NF.A.3b **WALT** Recognize and generate simple equivalent fractions by reasoning about their size, (e.g., ½=2/4 and 4/6=2/3,). Explain why the fractions are equivalent with the support of a visual fraction model.	Compare fractions with the same denominator or numerator using models. Draw a Model Students draw models of same size whole strips, and name equivalent fractions represented as parts of a whole using an area model. Have students cut out one fourth and two eighths from paper models, and place each one on top of the other to prove they are congruent or equivalent.	**Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**		Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.NF.A.3c **WALT** express whole numbers as fractions **WALT** recognize fractions that are equivalent to whole numbers	Students should understand that as denominators change, so does the size of the fraction. Reinforce the idea that there are different ways to write a whole number as a fraction. Have students model and write three different fractions that are equivalent to 2, given different denominators.	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card	**Lesson 23**: **"Find Equivalent Fractions"** 💻**Interactive Practice Lesson 23** **Teacher Toolbox** ● Center 3.29: "Building Equivalent Fractions" ● Fluency & Skills Practice L23.1 ● Fluency & Skills Practice L23.2 ● Fluency & Skills Practice 23.3 ● Tools for Instruction - L23 --- **Lesson 24**: **"Understand Comparing Fractions"**	Using prior knowledge **Enrichment:** Making Flags

3.NF.A.3d **WALT** Compare two fractions with the same numerator or the same denominator by reasoning about their size. **WALT** Recognize that comparisons are valid only when the two fractions refer to the same whole. **WALT** Record the results of comparisons with the symbols >, =, or <, and justify the conclusions with the support of a visual fraction model.	Compare fractions that have the same denominator, but change the numerators. Show students that changing the numerator reflects a different number of parts or pieces, but the sizes stay the same. Compare fractions that have the same numerator, but change the denominators. Students should recognize that the sizes of the fractions change, but they count the same number of parts.	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	💻**Interactive Tutorials:** "Understand Comparing Fractions" 💻**Interactive Practice** Lesson 24 **Lesson 25**: **"Use Symbols to Compare Fractions "** 💻**Interactive Tutorials:** ● Compare Fractions With the Same Denominator ● Compare Fractions With the Same Numerator **Teacher Toolbox** ● Center 3.54: Fraction Comparison	

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications and Reflections
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
			● Center 3.30: Comparing Fractions ● **Fluency & Skills Practice L24** ● **Fluency & Skills Practice L25**	

Benchmark Assessments

Benchmark Assessment 1	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	**<u>Modifications per students' IEP, in addition to:</u>** ● Additional manipulatives ● Read text ● Clarify words ● Less problems ● Provide additional scaffolding ● Extended time ● Text to Speech
Benchmark Assessment 2	
I-Ready Diagnostics	
Summative Assessment	
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Relating Area to Multiplication and Addition – Unit 4 – Module A

Grade level: Grade 3

Timeframe: 10 instructional days, 2 assessment days [12 days total]

Rationale

Grade 3 – Spatial Reasoning and Fluency with Operations – Unit 4

This final unit centers on problem solving with geometry and measurement. Learners measure and estimate liquid volumes and masses. They solve one-step word problems involving masses or volumes using the four operations. Building upon previous geometry content from earlier grades, they categorize shapes based on shared attributes. Learners solve real world and mathematical problems involving perimeters of polygons. Learners represent data with scaled graphs, and solve one- and two-step word problems using information presented in scaled graphs. To conclude the year, learners revisit addition and subtraction within 1000, and multiplication and division within 100 to demonstrate accurate and efficient use of strategies (fluency).

Guiding Questions

How can you estimate and measure liquid volume in metric units?
How can you estimate and measure mass in metric units?
How can you use models to solve liquid volume and mass problems?

Standards

Standards (Taught and Assessed):

■ **3.M.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much"; See Glossary, Tables 2a–2d))

Key: ■ Major Cluster ▢ Supporting Cluster ◎ Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: Benchmark Assessment - Paper (Beginning of the Year) Standards Mastery Assessments - Form A Comprehension Checks - Form A iReady Diagnostic	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications and Reflections** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.M.A.2 WALT Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (Clarification: "Measure and estimate liquid volumes and masses" excludes compound units such as cm3 and finding the geometric volume of a container. "Multiplying to solve one-step word problems" excludes multiplicative comparison problems (problems involving "times as much";	Use models to help students recognize units of measurement. Recall estimation strategies in order to estimate volume and mass. Understand real life items that are similar to the mass of a standard unit, to act as a point of reference. **Essential Vocabulary: volume, mass, gram, kilogram, liter, balance scale**	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card	**Lesson 28:** **"Liquid Volume"** **💻Interactive Tutorials:** • Solve Problems About Liquid Volume **💻Interactive Practice** Fluency & Skills Practice 28.1 Fluency & Skills Practice 28.2 **Lesson 29:** **"Mass"** **💻Interactive Tutorials:** • Solve Problems About Mass **💻Interactive Practice** Fluency & Skills Practice 29.1 Fluency & Skills Practice 29.2	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:** Fill My Fish Tank Balancing Act

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications and Reflections** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
See Glossary, Tables 2a–2d))		**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**<u>Teacher Toolbox</u>** ● Center 3.55 (L28) "Word Problem Race" ● Center 3.33 (L29) "Use Measurement Vocabulary" ● Center 3.34 (L29) "Solve Measurement Problems"	

Benchmark Assessments

Benchmark Assessment 1	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	**<u>Modifications per students' IEP, in addition to:</u>** ● Additional manipulatives ● Read text ● Clarify words ● Less problems ● Provide additional scaffolding ● Extended time ● Text to Speech
Benchmark Assessment 2	
I-Ready Diagnostics	
Summative Assessment	
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Spatial Reasoning and Fluency with Operations – Unit 4 – Module B

Grade level: Grade 3

Timeframe: 12 instructional days, 3 assessment days [15 days total]

Rationale

Grade 3 – Spatial Reasoning and Fluency with Operations – Unit 4

This final unit centers on problem solving with geometry and measurement. Learners measure and estimate liquid volumes and masses. They solve one-step word problems involving masses or volumes using the four operations. Building upon previous geometry content from earlier grades, they categorize shapes based on shared attributes. Learners solve real world and mathematical problems involving perimeters of polygons. Learners represent data with scaled graphs, and solve one- and two-step word problems using information presented in scaled graphs. To conclude the year, learners revisit addition and subtraction within 1000, and multiplication and division within 100 to demonstrate accurate and efficient use of strategies (fluency).

Guiding Questions

How can you estimate and measure liquid volume in metric units?
How can you estimate and measure mass in metric units?
How can you use models to solve liquid volume and mass problems?

Standards

Standards (Taught and Assessed):

- **3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
- **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.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.G.A.1 – WALT shapes (quadrilaterals) in different categories may share attributes, and that the shared attributes can define a larger category **	**Help the student to make a table showing triangles, quadrilaterals, and pentagons.** • Draw three different examples of each shape. • Ask the student if any of the shapes she drew have special attributes, such as right angles or sides that are the same length. • Ask the student for any names she might know for these special shapes. **Ask questions to lead to understanding the attributes of various shapes, such as:** • What makes a shape a rhombus? -a rhombus is a four-sided polygon having all four sides of equal length.	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card	**<u>Lesson 30</u>:** **"Understand Categories of Shapes"** **💻Interactive Tutorials:** **Fluency & Skills Practice 30.1** **<u>Teacher Toolbox</u>** • Center 3.47 "Geometry Vocabulary Match"	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **<u>Enrichment</u>:** **Sorting Shapes**

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.G.A.1 – WALT recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories	• What other shape has that attribute? - a square • What makes a shape a rectangle? -a shape is a rectangle if it has four sides and four square corners. Lead the student to recognize that a square shares those attributes. • What makes a shape a parallelogram? - a parallelogram has two opposite sides that are parallel. • Identify shapes that are parallelograms.	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Lesson 31:** **"Classify and Compare Quadrilaterals"** **💻Interactive Tutorials:** **Fluency & Skills Practice 31.1** **Fluency & Skills Practice 31.2** **Teacher Toolbox** ● Center 3.48 "Quadrilaterals"	

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications
3.M.C.6 WALT 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.	**Write the word perimeter on the board. Explain that the perimeter of a figure is the distance around the figure.** • Use a finger to trace around the edge of a desk to show the meaning of perimeter. Then have the student trace the perimeter of his or her desk, being sure to start and stop at a single point. • Give the student a square tile. Demonstrate how to hold the edge of this tile against the outside edge of a figure and then move it in one direction to help count to find the perimeter. **Give students 24 square tiles, separated into two equal groups of 12 each.**	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card	**Lesson 32**: **"Area and Perimeter of Shapes"** **💻Interactive Practice "Area and Perimeter of Shapes"** **Fluency & Skills Practice 32.1** **Fluency & Skills Practice 32.2** **Fluency & Skills Practice 32.3** **Teacher Toolbox** • Center 3.45 "Use Perimeter and Area Vocabulary" • Center 3.46 "Work with Perimeter"	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:** **Designing an Animal Pen**

ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary.

G&T: Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments.

At Risk: Individualized as needed.

IEP/504: Modifications/Accommodations as stated in IEP.

See samples below:

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications
				ELL: Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
	• Have the student build a shape with one group of tiles and then build a different shape with the other group. Have students record the area and perimeter of each. • Are the areas of your two shapes the same or different? (same) What is the perimeter of each shape? (Three possible perimeter answers: 14 units, 16 units, 26 units) • Are the perimeters the same or different?	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**		

Benchmark Assessments

Benchmark Assessment 1	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	**<u>Modifications per students' IEP, in addition to:</u>** ● Additional manipulatives ● Read text ● Clarify words ● Less problems ● Provide additional scaffolding ● Extended time ● Text to Speech
Benchmark Assessment 2	
I-Ready Diagnostics	
Summative Assessment	
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	

Interdisciplinary Connections

Interdisciplinary Connections
• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Spatial Reasoning and Fluency with Operations – Unit 4 – Module C

Grade level: Grade 3

Timeframe: 5 instructional days, 1 assessment day [6 days total]

Rationale

Grade 3 – Spatial Reasoning and Fluency with Operations – Unit 4

This final unit centers on problem solving with geometry and measurement. Learners measure and estimate liquid volumes and masses. They solve one-step word problems involving masses or volumes using the four operations. Building upon previous geometry content from earlier grades, they categorize shapes based on shared attributes. Learners solve real world and mathematical problems involving perimeters of polygons. Learners represent data with scaled graphs, and solve one- and two-step word problems using information presented in scaled graphs. To conclude the year, learners revisit addition and subtraction within 1000, and multiplication and division within 100 to demonstrate accurate and efficient use of strategies (fluency).

Guiding Questions

How can we use scaled picture graphs and bar graphs to effectively represent data from our daily lives?

What steps do we need to follow to draw and interpret a scaled bar graph that represents different categories of data?

How can we use information from scaled bar graphs to solve real-world problems, such as determining "how many more" or "how many less" in a given context?

Standards

Standards (Taught and Assessed):

- **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.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. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.DL.A.1 Develop data-based questions and decide what data will answer the question. **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.	Consider the following questions: "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?" **Explaining the meaning of a "key" when graphing**. **Present the following question:** A picture graph that uses hands to show the # of students has this key: 🖐=4 students. What does it mean if a category in the graph has 3 hands beside it? Explain. (It means there are 12 students in that category because 3 x 4 = 12.)	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists	**Lesson 19**: **"Scaled Graphs"** **💻Interactive Tutorials:** • Draw Scaled Picture Graphs • Draw Scaled Bar Graphs • Solve Problems Using Scaled Picture Graphs • Solve Problems Using Scaled Bar Graphs **💻Interactive Practice: "Scaled Graphs"** Fluency & Skills Practice 19.1	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:**

SLO – WALT We are learning to/that	Student Strategies	Formative Assessment	Activities and Resources	Modifications **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.DL.B.3 WALT 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. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	**Model ways to count pictures on a scaled graph by skip counting, adding or multiplying.** Draw three circles, and write 4 inside each circle. Write an addition equation, a multiplication equation, and skip count by 4s to show that the result is the same with either operation or method. **Point out that the bar graphs do not have a key.** Discuss why it is not necessary. Say: Look at the number labels for the lines on the graphs. The difference between any two numbers is called the scale of the graph.	Quick write & Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	Fluency & Skills Practice 19.2 Fluency & Skills Practice 19.3 **Teacher Toolbox** • Center 3.35 "Use Data Vocabulary" • Center 3.36 "Make a Bar Graph"	Favorite Pet

Benchmark Assessments

Benchmark Assessment 1	**Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**
Teacher Created Assessment	**<u>Modifications per students' IEP, in addition to:</u>** ● Additional manipulatives ● Read text ● Clarify words ● Less problems ● Provide additional scaffolding ● Extended time ● Text to Speech
Benchmark Assessment 2	
I-Ready Diagnostics	
Summative Assessment	
Collaboratively Designed Assessment Standards Mastery (I-Ready) National Assessments (iReady) PARCC Assessments (iReady) SBAC Assessment (iReady)	

Interdisciplinary Connections

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• **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. • **SL.3.3.** Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. • **W.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A.** Introduce a topic and group related information together; include text features (e.g.: illustrations, diagrams, captions) when useful to support comprehension. • **RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Unit Title: Mathematics – Spatial Reasoning and Fluency with Operations – Unit 4 – Module D

Grade level: Grade 3

Timeframe: 9 instructional days, 2 assessment days [11 days total]

Rationale

Grade 3 – Spatial Reasoning and Fluency with Operations – Unit 4

This final unit centers on problem solving with geometry and measurement. Learners measure and estimate liquid volumes and masses. They solve one-step word problems involving masses or volumes using the four operations. Building upon previous geometry content from earlier grades, they categorize shapes based on shared attributes. Learners solve real world and mathematical problems involving perimeters of polygons. Learners represent data with scaled graphs, and solve one- and two-step word problems using information presented in scaled graphs. To conclude the year, learners revisit addition and subtraction within 1000, and multiplication and division within 100 to demonstrate accurate and efficient use of strategies (fluency).

Guiding Questions

How do you solve word problems that involve multiple steps?
What strategies can you use to determine the proper order to solve word problems?
How can you use rounding and estimation to determine if an answer is reasonable?

Standards

Standards (Taught and Assessed):

- **3.OA.D.8** Solve two-step word problems, including problems involving money, using the four operations. 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. (Clarification: This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)
- **3.NBT.A.1** Use place value understanding to round whole numbers to the nearest 10 or 100.
- **3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction
- **3.OA.C.7 With accuracy and efficiency**, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers..

Key: Major Cluster Supporting Cluster Additional Cluster

Highlighted Career Ready Practices and 21st Century Themes/Skills

- 9.1.4.A.1 Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.
- 9.1.4.A.2 Evaluate available resources that can assist in solving problems.
- 9.1.4.A.5 Apply critical thinking and problem-solving skills in classroom and family settings.
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Social-Emotional Learning Competencies

Instructional Plan

Pre-Assessment	Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections
iReady Pre-Assessments: **Benchmark Assessment - Paper (Beginning of the Year)** **Standards Mastery Assessments - Form A** **Comprehension Checks - Form A** **iReady Diagnostic**	**ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. Utilize "Extend" and "Enrichment" Activities from Ready Math. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. **Examples include:** Touch Math material, number line, fraction strips, Less Questions Extended Time, Read Aloud Directions and Instructions

Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.OA.D.8 – WALT solve two-step word problems using the four operations **3.OA.D.8 – WALT** represent two-step word problems using equations with a letter standing for the unknown quantity	• **Ask questions to ensure that students understands what the problem is about, such as:** "What do each of the numbers in the problem stand for?" • **Guide students to draw a model** to visualize and construct meaning from the word problem. -Have students describe their model, explaining what each part in the model stands for and what is still unknown in the model. -Help students label the known and unknown quantities. • **Present the student with a two-step problem:** Linda is saving money to buy a pair of ice skates that costs $279. For the past 7 weeks, she has	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card **Lesson Paper Assessments (Ready Math)**	**Lesson 18**: **"Solve Two Step Word Problems Using the Four Operations"** **iReady Interactive Tutorial:** "Solve Two Step Word Problems" **Teacher Toolbox** **Center Activity 3.15** **"Solve 2 Step Word Problems"** **Center Activity 3.16** **"Check Reasonableness"** **Fluency & Skills Practice 18.1**	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment**

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
3.OA.D.8 – WALT assess the reasonableness of answers in two-step word problems using mental computation and estimation strategies including rounding	saved $8 each week. How much money, **d**, does Linda still need to save? -Have the student draw a model and write equations, using **d** as the unknown amount, to solve the problem. **Possible answer:** (7x8)+**d**=279 56+**d**=279; 279-56=**d;** **d**=223 Linda needs to save $223.	**Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	Fluency & Skills Practice 18.2 Fluency & Skills Practice 18.3	**Lesson 18:** Purple Coins
3.NBT.A.1 – WALT round whole numbers to the nearest 10 or 100, using place value understanding	**Tools for Instruction:** Rounding to the Nearest Ten or Hundred Three Digit Addition Three Digit Subtraction Recall place value: ones, tens, hundreds	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences	**Lesson 1** REVIEW: **"Use Place Value to Round Numbers"** 💻**Interactive Practice:** **"Use Place Value to Round Numbers"** Fluency & Skills Practice 1.1 Fluency & Skills Practice 1.2 **Teacher Toolbox** ● **Center 3.20** "Round Numbers"	Modifications per students' IEP Additional manipulatives Read text Clarify words

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3.NBT.A.2 – WALT add within 1000 with accuracy and efficiency by using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction **3.NBT.A.2 – WALT** subtract within 1000 with accuracy and efficiency by using strategies and algorithms based on place value, properties	Name the places in 2 and 3 digit number Compare numbers using place value Determine whether a number rounds up or down Use a number line to round a whole number to the nearest 10 and 100 Round 2- and 3-digit numbers to the nearest ten or hundred. Recall using place value to add within 1,000. Recall using properties of operations to add within 1,000. Recall using place value to subtract within 1,000 Recall using properties of operations to subtract within 1,000	Teacher created pretests & post-tests Observations & checklists Quick write & Response card **Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	**Lessons 2 & 3** REVIEW: **"Add and Subtract 3-digit Numbers"** 💻**Interactive Tutorials:** • Add 3-Digit Numbers • Subtract 3-Digit Numbers 💻**Interactive Practice:** **Lesson 2: Add 3-Digit Numbers** **Lesson 3: Subtract 3-Digit Numbers** Fluency & Skills Practice 2.1 Fluency & Skills Practice 2.2 Fluency & Skills Practice 3.1 Fluency & Skills Practice 3.2 Fluency & Skills Practice 3.3 **Teacher Toolbox** • **Center 3.21** "Model Addition" • **Center 3.22** "Add within 1000" • **Center 3.56**	Less problems Provide additional scaffolding Extended time Using prior knowledge **Enrichment:** Lesson 1: Mystery Number Lesson 2: Addition Grids Lesson 3: Planning a Trip

SLO – WALT **We are learning to/that**	**Student Strategies**	**Formative Assessment**	**Activities and Resources**	**Modifications** **ELL:** Model and provide example; Establish a non-verbal cue to redirect students when not on task. Students may use a bilingual dictionary. **G&T:** Provide enrichment activities to expand upon the curriculum. Use higher level questioning techniques in class and on assessments. **At Risk:** Individualized as needed. **IEP/504:** Modifications/Accommodations as stated in IEP. See samples below:
of operations, and/or the relationship between addition and subtraction			"Model Subtraction" • **Center 3.57** "Subtract within 1000"	
3.OA.C.7 – WALT multiply and divide within 100 using strategies such as: relationship between multiplication and division or properties of operations with accuracy and efficiency	**Tools for Instruction:** **Multiplication Facts with 0, 1, 2, and 5** **Multiplication Facts with 3, 4, and 6** **Multiplication Facts with 7, 8, and 9** **Multiplication and Division Facts** Recall how to write a set of related multiplication and division facts Recall how to identify factors in a fact family	Exit ticket Non verbal check ins- Example: Thumbs up-thumbs down. Self Reflections Student conferences Teacher created pretests & post-tests Observations & checklists Quick write & Response card	**Target Lessons: (REVIEW)** **Lesson 5**: Multiply with 0, 1, 2, 5, and 10 **Lesson 6**: Multiply with 3, 4, and 6 **Lesson 7**: Multiply with 7, 8, and 9 **Lesson 12**: Multiplication and Division Facts **Teacher Toolbox** • **Center 3.51** "Multiplication Ract"	Modifications per students' IEP Additional manipulatives Read text Clarify words Less problems Provide additional scaffolding Extended time Using prior knowledge

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3.OA.C.7 – WALT know from memory all products of two one-digit numbers	Demonstrate proficiency in multiplying one and two-digit numbers within 100	**Lesson Paper Assessments (Ready Math)** **Standards Mastery Check Form B (iReady)** **Comprehension Check Form B (iReady)**	• **Center 3.10** "Break Apart a Factor" • **Center 3.13** "Toss and Multiply" • **Center 3.52** "Multiplication Race 2" • **Center 3.7** "Place Missing Numbers" • **Center 3.14** "Complete a Fact Family" **(SEE ADDITIONAL RESOURCES BELOW)**	**Enrichment:** **Lesson 5: Shopping Spree** **Lesson 6: How Many Creatures?** **Lesson 7: How Many Creatures?** **Lesson 12: Display of Cans**

Activities and Resources	Ready Math Resources
Talk about repeated addition Use manipulatives or counters to represent equal groups Use manipulatives or counters to represent arrays Use a number line to model multiplication/repeated addition. Write multiplication equations using models Review text strategies to determine key components of the problem (CUBES) ● Circle the important numbers ● Underline the question ● Box the words that are keywords ● Eliminate extra information ● Solve by showing work. Use skip counting to model multiplication and repeated addition Use equal groups, arrays, repeated addition or multiplication to solve the unknown factor in word problems Use teacher modeling. Use drawings and physical models to show equal groups. Hands on activities and practice **Instructional Technology Resources (Where Applicable):** Khan Academy i-Ready Learn Zillion Nearpod Lessons IXL Brainpop Reflex Math	● **Lesson 5: Multiply with 0, 1, 2, 5, and 10'** **iReady Interactive Tutorial** "Understand Multiplication Part 1" 💻**Lesson 5 - iReady Interactive Practice** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** ● **Lesson 6: Multiply with 3, 4, and 6** **iReady Interactive Tutorial** "Understand Multiplication Part 2" 💻**Interactive Practice: Lesson 6** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Fluency and Skills Practice 3** ● **Lesson 7: Multiply with 7, 8, and 9** **iReady Interactive Tutorial** "Break Apart a Number to Multiply" 💻**Interactive Practice: Lesson 7** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Fluency and Skills Practice 3** ● **Lesson 12: Multiplication and Division Facts** **iReady Interactive Tutorial** "Understand Division Part 2" 💻**Lesson 12 - iReady Interactive Practice** **Fluency and Skills Practice 1** **Fluency and Skills Practice 2** **Center Activity: 3.14 "Complete a Fact Family"**

Benchmark Assessments

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