Grade 3 Unit 4 - Relating Multiplication to Division

Section A - Lessons 1-5

Unit Goal:

- Students learn about and use the relationship between multiplication and division, place value understanding, and the properties of operations to multiply and divide whole numbers within 100. They also represent and solve two-step word problems using the four operations.
- Grade 3 Unit 4 I Can Statements
- Grade 3 Unit 4 Centers

Section A Goals:

- Represent and solve "how many groups?" and "how many in each group?" problems.

**Lessons/resources denoted with an asterisk are Desmos activities*

IM Lesson	L1: How Many Groups?	L2: How Many in Each Group?	L3: Division Situation Drawings	L4: Interpret Division Expressions (PLC)	L5: Write Division Expressions
Ar Math Content Standards	3.OA.A.2, 3.OA.A.3	3.OA.A.2, 3.OA.A.3	3.OA.A.2, 3.NBT.A.2	3.OA.A.2, 3.NBT.A.2	3.OA.A.2, 3.OA.A.3, 3.NBT.A.2
Math Practices	**MP2**	**MP7**	**MP6, MP7**	**MP2, MP6**	**MP2**
Accessibility Supports	Representation, MLR8	Engagement, MLR7	Engagement, MLR1, MLR8	Representation, MLR2	Engagement, MLR8
Vocab		division		divisor	
Lesson Resources	L1 - Slide Deck L1 - Student Tasks* Connecting cubes or counters Tools for visual display	L2 - Slide Deck L2 - Student Tasks* Connecting cubes or counters Tools for visual display Posters from lesson 1	L3 - Slide Deck L3 - Student Tasks*	L4 - Slide Deck L4 - Student Tasks*	L5 - Slide Deck L5 - Student Tasks* Tools for visual display Card Sort: All About Bugs
Assessment	Cool Down* Pre-Unit Practice Problems	Cool Down*	Cool Down*	Cool Down*	Cool Down* Section A Practice Problems* Section A Checkpoint*
Suggested Centers/ Materials/ Resources	Rectangle Rumble (3–5), Stage 2: Factors 1–5 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)	Rectangle Rumble (3–5), Stage 2: Factors 1–5 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)	Rectangle Rumble (3–5), Stage 2: Factors 1–5 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)	Capture Squares (1–3), Stage 6: Multiply with 1–5 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)	Capture Squares (1–3), Stage 6: Multiply with 1–5 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)

Grade 3 Unit 4 - Relating Multiplication to Division

Section B - Lessons 6-11

Goals:

- Understand division as a missing factor problem.
- Use properties of operations to develop fluency with single-digit multiplication facts, and their related division facts.

**Lessons/resources denoted with an asterisk are Desmos activities*

IM Lesson	L6: Division as an Unknown Factor	L7: Relate Multiplication and Division (PLC)	L8: Relate Quotients to Familiar Products	L9: Patterns in the Multiplication Table	L10: Explore M Strategies witl
Ar Math Content Standards	3.OA.A.2, 3.OA.B.6	3.OA.A.2, 3.OA.A.3, 3.NBT.A.2, 3.OA.B.6	3.OA.B.6, 3.OA.C.7	3.OA.C.7, 3.OA.D.8	3.OA.C.7,
Math Practices	**MP2, MP3**	**MP3, MP7**	**MP7**	**MP7, MP8**	**MP1, MP2, M**
Accessibility Supports	Engagement, MLR7	Engagement, MLR8	Representation, MLR8	Action and Expression, MLR2	Engagement,
Vocabulary	quotient				
Lesson Resources	L6 - Slide Deck L6 - Student Tasks*	L7 - Slide Deck L7 - Student Tasks* Division Round Table	L8 - Slide Deck L8 - Student Tasks* Materials from a previous activity Card Sort: Multiplication Recording Sheet Card Sort: Multiplication	L9 - Slide Deck L9 - Student Tasks*	L10 - Slide De L10 - Student Colored pencils crayons
Assessment	Cool Down*	Cool Down*	Cool Down*	Cool Down*	Cool Down*
Suggested Centers/ Materials/ Resources	Capture Squares (1–3), Stage 6: Multiply with 1–5 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)	Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Addressing) Capture Squares (1–3), Stage 7: Multiply with 6–9 (Addressing)	Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Addressing) Capture Squares (1–3), Stage 7: Multiply with 6–9 (Addressing)	Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Addressing) Capture Squares (1–3), Stage 7: Multiply with 6–9 (Addressing)	Rectangle Rum Stage 3: Factor (Addressing) Capture Square 7: Multiply with (Addressing)

Grade 3 Unit 4 - Relating Multiplication to Division

Section C - Lessons 12-17

Goals:

- Use properties of operations and place value understanding to develop strategies to multiply within 100 and to multiply one-digit numbers by a multiple of 10.

**Lessons/resources denoted with an asterisk are Desmos activities*

IM Lesson	L12: Multiply Multiples of Ten	L13: Solve Problems With Equal Groups	L14: Ways to Represent Multiplication of Teen Numbers (PLC)	L15: Equal Groups, Larger Numbers	L16: Multiply N Larger than 20
Ar Math Content Standards	3.NBT.A.3	3.OA.A.3, 3.OA.B.5	3.OA.B.5	3.OA.A.3, 3.OA.B.5, 3.MD.C.7.c	3.OA
AR Math Practices	**MP7**	**MP2, MP5**	**MP2, MP7**	**MP2, MP3**	**MP7**
Accessibility Supports	Engagement, MLR8	Engagement, MLR7	Representation, MLR8	Engagement, MLR8	Engagement,
Vocabulary					
Lesson Resources	L12 - Slide Deck L12 - Student Tasks* Base-ten Blocks Centimeter Grid Paper - Standard	L13 - Slide Deck L13 - Student Tasks* Base-ten Blocks Connecting cubes or counters Tools for creating a visual display Centimeter Grid Paper - Standard	L14 - Slide Deck L14 - Student Tasks* Base-ten Blocks	L15 - Slide Deck L15 - Student Tasks* Base-ten Blocks Sticky notes Tools for creating a visual display Centimeter Grid Paper - Standard	L16 - Slide Dec L16 - Student T Base-ten Block Centimeter Grid Standard Number Cards
Assessment	Cool Down*	Cool Down*	Cool Down*	Cool Down*	Cool Down*
Suggested Centers/ Materials/ Resources	Compare (1–5), Stage 3: Multiply within 100 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Addressing)	Compare (1–5), Stage 2: Add and Subtract within 20 (Supporting) How Close? (1–5), Stage 4: Add to 1,000 (Supporting)	Compare (1–5), Stage 2: Add and Subtract within 20 (Supporting) How Close? (1–5), Stage 4: Add to 1,000 (Supporting)	Compare (1–5), Stage 3: Multiply within 100 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Addressing)	Compare (1–5), Multiply within 1 (Addressing) How Close? (1– Multiply to 100

Grade 3 Unit 4 - Relating Multiplication to Division

Section D - Lessons 18-22

Goals:

- Use properties of operations, place value understanding, and the relationship between multiplication and division to divide within 100.

**Lessons/resources denoted with an asterisk are Desmos activities*

IM Lesson	L18: Larger Numbers in Equal Groups	L19: Ways to Divide Larger Numbers	L20: Strategies for Dividing	L21: Solve Problems Using the Four Operations (PLC)	
Ar Math Content Standards	3.OA.A.2, 3.OA.A.3	3.NBT.A.3, 3.OA.A.2, 3.OA.B.5, 3.OA.C.7	3.OA.B.5, 3.OA.C.7	3.OA.D.8	

AR Math Practice Standards	**MP2, MP7**	**MP2**	**MP2, MP7**	**MP1**	
Accessibility Supports	Representation, MLR7	Representation, MLR8	Representation, MLR8	Action and Expression, MLR8	
Vocabulary Focus					
Lesson Resources	L18 - Slide Deck L18 - Student Tasks* Base-ten Blocks Connecting cubes or counters Centimeter Grid Paper - Standard	L19 - Slide Deck L19 - Student Tasks* Base-ten Blocks	L20 - Slide Deck L20 - Student Tasks* Base-ten Blocks Centimeter Grid Paper - Standard Compare Stage 4 Division Cards	L21 - Slide Deck L21 - Student Tasks*	
Assessment	Cool Down*	Cool Down*	Cool Down*	Cool Down* Section D Practice Problems* Section D Checkpoint*	
Suggested Centers/ Materials/ Resources	Compare (1–5), Stage 4: Divide within 100 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Addressing)	Compare (1–5), Stage 4: Divide within 100 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Addressing) Can You Draw It? (1–5), Stage 2: Grade 2 Shapes (Supporting)	Compare (1–5), Stage 4: Divide within 100 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Addressing) Can You Draw It? (1–5), Stage 2: Grade 2 Shapes (Supporting)		

Created by Jill Jones, and updated by Heather Morsman