IM K-5 MATH™ by Kendall Hunt

Grade 4

UNIT 1

Virtual Manipulatives

Virtual Tiles and Grid Paper
Hundreds Chart
Counters

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.1.1	Materials to Gather Inch tiles Materials to Copy Centimeter Grid Paper - Standard	Activity 1: Each group of 2 needs at least 36 tiles. Activity 2: Each group of 2 needs at least 36 tiles from the previous activity.	Can You Build It? (3–5), Stage 2: Multiple Rectangles (Addressing) Can You Build It? (3–5), Stage 1: Rectangles (Supporting) Capture Squares (1–3), Stage 7: Multiply with 6–9 (Supporting)	BLM L1	MLR2	Which One Doesn't Belong?	Preparation Notes
4.1.2	Materials to Gather	Activity 1:	Can You Build It? (3–5), Stage 2: Multiple	BLM L2		Number Talk	Preparation Notes

	Glue or tape Inch tiles Scissors Tools for creating a visual display Materials to Copy Centimeter Grid Paper - Standard	Each of the 8 groups needs tools for creating a visual display.	Rectangles (Addressing) Can You Build It? (3–5), Stage 1: Rectangles (Supporting) Capture Squares (1–3), Stage 7: Multiply with 6–9 (Supporting)				
4.1.3	Materials to Gather Grid paper Inch tiles Materials to Copy Card Sort: Area	Activity 1: Create a set of cards from the blackline master for each group of 2.	Find the Number (4), Stage 1: Factors (Addressing) Five in a Row: Multiplication (3–5), Stage 1: Factors 1–5 and 10 (Supporting)	BLM L3	MLR8	Choral Count	Preparation Notes
4.1.4	Materials to Gather Centimeter cubes Materials to Copy Find the Number Stage 1 Directions and Gameboard Card Sort: Multiplication	Activity 1: Create a set of multiplication fluency cards from the blackline master for each group of 2.	Find the Number (4), Stage 1: Factors (Addressing) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Addressing) Secret Fraction (3), Stage 1: Building Non-Unit Fractions (Supporting)	BLM L4	MLR8	Number Talk	Preparation Notes

4.1.5			Can You Build It? (3–5), Stage 2: Multiple Rectangles (Addressing) Find the Number (4), Stage 2: Factors and Multiples (Addressing) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Addressing) Secret Fraction (3), Stage 1: Building Non-Unit Fractions (Supporting)		MLR2	Estimation Exploration	Preparation Notes
4.1.6	Materials to Gather Coins Index cards Paper Two-color counters		Find the Number (4), Stage 2: Factors and Multiples (Addressing) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Addressing) Secret Fraction (3), Stage 1: Building Non-Unit Fractions (Supporting)		MLR7	Choral Count	Preparation Notes

4.1.7	Materials to Gather Centimeter cubes Materials to Copy Find the Number Stage 2 Directions and Gameboard		Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Addressing) Secret Fraction (3), Stage 1: Building Non-Unit Fractions (Supporting)	BLM L7	MLR8	Number Talk	Preparation Notes
4.1.8	Materials to Gather Colored pencils, crayons, or markers Glue or tape Rulers or straightedges Sticky notes Materials to Copy Centimeter Grid Paper - Standard	Activity 1: Each student will need a black marker or crayon.	Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Addressing) Secret Fraction (3), Stage 1: Building Non-Unit Fractions (Supporting)	BLM L8	MLR8	Notice and Wonder	Preparation Notes

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Grade 4

UNIT 2

Virtual Manipulatives

Labeled Fraction Strips
Unlabeled Fraction Strips

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.2.1	Materials to Gather Straightedges Materials to Copy Fraction Strips	Activity 1: Each group of 2 needs 4 strips of equal-size paper (cut lengthwise from letter-size or larger paper or use the provided blackline master).	Get Your Numbers in Order (1–5), Stage 3: Denominators 2, 3, 4, or 6 (Addressing) Mystery Number (1–4), Stage 3: Fractions with Denominators 2, 3, 4, 6 (Supporting)	BLM L1		What Do You Know About ____?	Preparation Notes
4.2.2	Materials to Gather Materials from a previous lesson	Activity 2: Each student needs access to their	Get Your Numbers in Order (1–5), Stage 3: Denominators 2, 3, 4, or 6 (Addressing)		MLR2	Which One Doesn't Belong?	Preparation Notes

	Straightedges	fraction strips from a previous lesson.	Mystery Number (1–4), Stage 3: Fractions with Denominators 2, 3, 4, 6 (Supporting)				
4.2.3			Get Your Numbers in Order (1–5), Stage 3: Denominators 2, 3, 4, or 6 (Addressing) Mystery Number (1–4), Stage 3: Fractions with Denominators 2, 3, 4, 6 (Supporting)			Number Talk	Preparation Notes
4.2.4	Materials to Gather Straightedges		Get Your Numbers in Order (1–5), Stage 3: Denominators 2, 3, 4, or 6 (Addressing) Number Line Scoot (2–3), Stage 3: Halves, Thirds, Fourths, Sixths and Eighths (Supporting)			Notice and Wonder	Preparation Notes
4.2.5	Materials to Gather Straightedges		Get Your Numbers in Order (1–5), Stage 3: Denominators 2, 3, 4, or 6 (Addressing) Number Line Scoot (2–3), Stage 3: Halves,			Number Talk	Preparation Notes

			Thirds, Fourths, Sixths and Eighths (Supporting)				
4.2.6	Materials to Copy Where Do They Belong	Activity 2: Create a set of fraction cards from the blackline master for each group.	Get Your Numbers in Order (1–5), Stage 3: Denominators 2, 3, 4, or 6 (Addressing) Number Line Scoot (2–3), Stage 3: Halves, Thirds, Fourths, Sixths and Eighths (Supporting)	BLM L6	MLR8	Notice and Wonder	Preparation Notes
4.2.7	Materials to Gather Tools for creating a visual display		Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Addressing) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing)			True or False	Preparation Notes
4.2.8	Materials to Gather Tape (painter's or masking)	Activity 1: Consider creating a human number line by placing a strip of	Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Addressing)		MLR8	Estimation Exploration	Preparation Notes

		masking tape or painter's tape, at least 25 feet long, on the floor of the classroom or a hallway.	Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing)				
4.2.9	Materials to Gather Rulers or straightedges Sticky notes Materials to Copy How Do You Know	Activity 2: Each group needs 4 sticky notes.	Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Addressing) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing)	BLM L9	MLR8	Number Talk	Preparation Notes
4.2.10			Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Addressing) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing)		MLR2	Notice and Wonder	Preparation Notes

4.2.11	Materials to Copy Fractions Galore	Activity 3: Create a set of Fraction Galore cards from the blackline for each group of 3.	Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Addressing) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing)	BLM L11	MLR8	Which One Doesn't Belong?	Preparation Notes
4.2.12	Materials to Gather Colored pencils	Activity 2: Each group of 2 needs 3 colored pencils (3 different colors).	Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Estimation Exploration	Preparation Notes
4.2.13			Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR7	Notice and Wonder	Preparation Notes

4.2.14	Materials to Gather Tools for creating a visual display	Each group of 3–4 needs tools for creating a visual display during the lesson synthesis.	Compare (1–5), Stage 5: Fractions (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting) How Close? (1–5), Stage 6: Multiply to 3,000 (Supporting)		MLR8	Number Talk	Preparation Notes
4.2.15			Compare (1–5), Stage 5: Fractions (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting) How Close? (1–5), Stage 6: Multiply to 3,000 (Supporting)		MLR8	What Do You Know About ____?	Preparation Notes
4.2.16	Materials to Copy Fraction Cards Grade 4 Compare Stage 3-8 Directions	Activity 1: Create a set of cards from the blackline master for each group of 2–4 students.	Compare (1–5), Stage 5: Fractions (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting) How Close? (1–5), Stage 6: Multiply to 3,000 (Supporting)	BLM L16	MLR8	Number Talk	Preparation Notes

4.2.17	Materials to Gather Markers Paper Paper clips Tape (painter's or masking)	Activity 1: Each group of 2 needs 1-inch paper strips and 10–12 paper clips.	Compare (1–5), Stage 5: Fractions (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting) How Close? (1–5), Stage 6: Multiply to 3,000 (Supporting)		MLR2	Notice and Wonder	Preparation Notes

IM K-5 MATH™ by Kendall Hunt

Grade 4

UNIT 3

Virtual Manipulatives

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.3.1			Rolling for Fractions (3–5), Stage 1:		MLR8	How Many Do You See?	Preparation Notes

			Equivalent Fractions (Supporting) Compare (1–5), Stage 5: Fractions (Supporting)				
4.3.2	Materials to Copy Expressions and Diagrams	Activity 1: Create a set of cards from the blackline master for each group of 2.	Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting) Compare (1–5), Stage 5: Fractions (Supporting)	BLM L2	MLR8	Number Talk	Preparation Notes
4.3.4	Materials to Gather Paper		Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting) Compare (1–5), Stage 5: Fractions (Supporting)		MLR8	Choral Count	Preparation Notes
4.3.4			Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Rolling for Fractions (3–5), Stage 1:		MLR6	Notice and Wonder	Preparation Notes

			Equivalent Fractions (Supporting) Compare (1–5), Stage 5: Fractions (Supporting)				
4.3.5			Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Estimate and Measure (1–4), Stage 3: Quarter Inches (Supporting) Target Measurements (2–5), Stage 2: Quarter Inches (Supporting)		MLR8	How Many Do You See?	Preparation Notes
4.3.6	Materials to Gather Chart paper	Activity 2: Write the 5 expressions from the activity on separate posters and post them around the room: (See Preparation	Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Estimate and Measure (1–4), Stage 3: Quarter Inches (Supporting) Target Measurements (2–5),		MLR7	True or False	Preparation Notes

		Notes link for image)	Stage 2: Quarter Inches (Supporting)				
4.3.7	Materials to Gather Measuring cups	Activity 1: Gather 1/4-cup and 3/4-cup measuring cups, if available.	Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Estimate and Measure (1–4), Stage 3: Quarter Inches (Supporting) Target Measurements (2–5), Stage 2: Quarter Inches (Supporting)		MLR7	Choral Count	Preparation Notes
4.3.8	Materials to Copy Make Two Jumps	Activity 3: Create a set of cards from the blackline master for each group of 2.	Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Estimate and Measure (1–4), Stage 3: Quarter Inches (Supporting) Target Measurements (2–5), Stage 2: Quarter Inches (Supporting)	BLM L8	MLR8	Notice and Wonder	Preparation Notes

4.3.9	Materials to Copy Make a Jump, Subtraction Edition	Activity 3: Create a set of cards from the blackline master for each group of 2.	Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Estimate and Measure (1–4), Stage 3: Quarter Inches (Supporting) Target Measurements (2–5), Stage 2: Quarter Inches (Supporting)	BLM L9	MLR8	True or False	Preparation Notes
4.3.10	Materials to Copy Card Sort: Twelfths	Activity 2: Create a set of cards for each group of 2.	Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Creating Line Plots), Stage 2: Quarter Inches (Supporting)	BLM L10		Number Talk	Preparation Notes
4.3.11	Materials to Gather Tools for creating a visual display	Each group of 4 needs tools for creating a visual display during the lesson synthesis.	Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply			Which One Doesn't Belong?	Preparation Notes

			a Fraction by a Whole Number (Addressing) Creating Line Plots (2–5), Stage 2: Quarter Inches (Supporting)				
4.3.12			Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Creating Line Plots (2–5), Stage 2: Quarter Inches (Supporting)		MLR8	Number Talk	Preparation Notes
4.3.13	Materials to Gather Colored pencils	Activity 1: Each student needs a used colored pencil.	Estimate and Measure (1–4), Stage 4: Eighth Inches (Addressing) Target Measurements (2–5), Stage 3: Eighth Inches (Addressing) Creating Line Plots (2–5), Stage 2: Quarter Inches (Supporting)		MLR7	Notice and Wonder	Preparation Notes

4.3.14			Creating Line Plots (2–5), Stage 3: Eighth Inches, Add and Subtract (Addressing) Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing)		MLR8	Notice and Wonder	Preparation Notes
4.3.15			Jump the Line (2–5), Stage 2: Add and Subtract Tenths and Hundredths (Addressing) Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing)		MLR1	Which One Doesn't Belong?	Preparation Notes
4.3.16			Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR1	Notice and Wonder	Preparation Notes

4.3.17	Materials to Gather Sticky notes Materials to Copy Fraction Action: Tenths, Hundredths Card Sort: Less Than, Equal to, or Greater Than 1	Activity 1: Create a set of cards from the blackline master for each group of 2-4 students. Activity 3: Create a set of cards from the blackline master for each group of 2.	Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)	BLM L17	MLR8	Which One Doesn't Belong?	Preparation Notes
4.3.18	Materials to Gather Chart paper Coins Materials to Copy More Than Two Fractions	Activity 1: Gather a few coins of different thicknesses for display. Activity 2: Create six posters with an addition expression from	Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)	BLM L18	MLR8	Number Talk	Preparation Notes

		the activity on each one.					
4.3.19	Materials to Gather Rulers (inches) Sticky notes Tools for creating a visual display Materials to Copy Find a Match	Activity 1: Each group needs 12 small sticky notes measuring 1 $\frac{7}{8}$ by 1 $\frac{3}{8}$ inches. Activity 3: Create one set of Match Cards for each group of 24 students.	Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)	BLM L19		Notice and Wonder	Preparation Notes
4.3.20	Materials to Gather Blank paper Sticky notes	Activity 1: Gather rectangular sticky notes with fractional lengths. If this is not possible then cut rectangles from card stock with fractional lengths.	Compare (1–5), Stage 6: Add and Subtract Fractions (Addressing) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Which One Doesn't Belong?	Preparation Notes

IM K-5 MATH™ by Kendall Hunt

Grade 4

UNIT 4

Virtual Manipulatives

Base-ten Blocks

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.4.1	Materials to Gather Colored pencils		Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting) Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Supporting)		MLR2	Notice and Wonder	Preparation Notes
4.4.2	Materials to Copy Card Sort: Diagrams of Fractions & Decimals	Activity 1: Create a set of cards from the blackline master	Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting)	BLM L2		True or False	Preparation Notes

		for each group of 2–4.	Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Supporting)				
4.4.3			Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting) Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Supporting)		MLR8	Which One Doesn't Belong?	Preparation Notes
4.4.4			Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting) Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Supporting)			Estimation Exploration	Preparation Notes
4.4.5	Materials to Copy Order Once, Order Twice	Activity 1: Create a set of cards from the	Rolling for Fractions (3–5), Stage 1: Equivalent Fractions (Supporting)	BLM L5	MLR8	Number Talk	Preparation Notes

		blackline master for each group of 2–4.	Get Your Numbers in Order (1–5), Stage 4: Denominators 2, 3, 4, 5, 6, 8, 10, 12, or 100 (Supporting)				
4.4.6	Materials to Gather Base-ten blocks Materials to Copy 10-by-10 Square Grids Build Numbers (1-5 Digit Cards)	Activity 1: Create a set of cards from the blackline master for each group of 4. Remove the cards showing 1. These cards will be redistributed during the activity. Each group of 4 needs a small collection of base-ten blocks (for instance: 2 thousands, 5 hundreds, 10 tens, and 20 ones).	Greatest of Them All (1–5), Stage 2: Three-digit Numbers (Supporting) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Supporting)	BLM L6	MLR8	What Do You Know About _____?	Preparation Notes
4.4.7			Greatest of Them All (1–5), Stage 2: Three-digit Numbers (Supporting)		MLR8	Choral Count	Preparation Notes

			Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Supporting)				
4.4.8	Materials to Gather Base-ten blocks		Greatest of Them All (1–5), Stage 2: Three-digit Numbers (Supporting) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Supporting)			How Many Do You See?	Preparation Notes
4.4.9	Materials to Copy Card Sort: Large Numbers (4 to 6 digits)	Activity 1: Create a set of cards from the blackline master for each group of 2 students.	Greatest of Them All (1–5), Stage 3: Multi-digit Numbers (Addressing) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Supporting)	BLM L9	MLR2	True or False	Preparation Notes
4.4.10			Greatest of Them All (1–5), Stage 3: Multi-			Number Talk	Preparation Notes

			digit Numbers (Addressing) Mystery Number (1–4), Stage 4: Fractions with Denominators 5, 8, 10, 12, 100 (Supporting)				
4.4.11			Greatest of Them All (1–5), Stage 3: Multi-digit Numbers (Addressing) Tic Tac Round (3–5), Stage 1: Nearest Ten or Hundred (Supporting)		MLR8	Estimation Exploration	Preparation Notes
4.4.12	Materials to Gather Materials from a previous activity Number cards 0–10	Activity 3: Each group of 2 needs a set of cards from the previous activity.	Greatest of Them All (1–5), Stage 3: Multi-digit Numbers (Addressing) Tic Tac Round (3–5), Stage 1: Nearest Ten or Hundred (Supporting)		MLR2	Which One Doesn't Belong?	Preparation Notes
4.4.13			Greatest of Them All (1–5), Stage 3: Multi-digit Numbers (Addressing)			True or False	Preparation Notes

			Tic Tac Round (3–5), Stage 1: Nearest Ten or Hundred (Supporting)				
4.4.14	Materials to Gather Stickers Sticky notes Materials to Copy On Which Line Do They Belong? (0-700,000 number line)	Activity 1: Create number lines from the blackline master and post them around the room before the activity.	Greatest of Them All (1–5), Stage 3: Multi-digit Numbers (Addressing) Tic Tac Round (3–5), Stage 1: Nearest Ten or Hundred (Supporting)	BLM L14	MLR8	Choral Count	Preparation Notes
4.4.15			Greatest of Them All (1–5), Stage 3: Multi-digit Numbers (Addressing) Tic Tac Round (3–5), Stage 1: Nearest Ten or Hundred (Supporting)		MLR8	Estimation Exploration	Preparation Notes
4.4.16			Mystery Number (1–4), Stage 5: Six-digit Numbers (Addressing) Tic Tac Round (3–5), Stage 1: Nearest Ten		MLR8	Number Talk	Preparation Notes

			or Hundred (Supporting)				
4.4.17			Mystery Number (1–4), Stage 5: Six-digit Numbers (Addressing) Tic Tac Round (3–5), Stage 1: Nearest Ten or Hundred (Supporting)		MLR7	Notice and Wonder	Preparation Notes
4.4.18	Materials to Gather Grid paper		Tic Tac Round (3–5), Stage 2: Any Place (Addressing) Number Puzzles: Addition and Subtraction (1–4), Stage 6: Beyond 1,000 (Addressing)		MLR2	Estimation Exploration	Preparation Notes
4.4.19	Materials to Gather Grid paper		Tic Tac Round (3–5), Stage 2: Any Place (Addressing) Number Puzzles: Addition and Subtraction (1–4), Stage 6: Beyond 1,000 (Addressing)			Number Talk	Preparation Notes

4.4.20	Materials to Gather Grid paper		Tic Tac Round (3–5), Stage 2: Any Place (Addressing) Number Puzzles: Addition and Subtraction (1–4), Stage 6: Beyond 1,000 (Addressing)		MLR8	Notice and Wonder	Preparation Notes
4.4.21	Materials to Gather Grid paper				MLR8	Which One Doesn't Belong?	Preparation Notes
4.4.22	Materials to Gather Grid paper Materials to Copy 0-9 Digit Cards			BLM L22		True or False	Preparation Notes
4.4.23					MLR5	Estimation Exploration	Preparation Notes

IM K-5 MATH™ by Kendall Hunt

Grade 4

UNIT 5

Virtual Manipulatives

Dot Cube
Connecting Cubes

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.5.1	Materials to Gather Connecting cubes Number cubes Materials to Copy Times as Many Recording Mat	Activity 3: Each group of 2 needs 40 connecting cubes.	How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)	BLM L1	MLR8	Notice and Wonder	Preparation Notes

4.5.2	Materials to Gather Connecting cubes		How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) How Close? (1–5), Stage 5: Multiply to 100 (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR8	How Many Do You See?	Preparation Notes
4.5.3	Materials to Gather Connecting cubes		How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR7	Number Talk	Preparation Notes
4.5.4			How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR8	Notice and Wonder	Preparation Notes
4.5.5			How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing)			Which One Doesn't Belong?	Preparation Notes

			Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)				
4.5.6			How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Choral Count	Preparation Notes
4.5.7	Materials to Gather Scissors Tape Materials to Copy Centimeter Grid Paper - Standard		How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)	BLM L7	MLR8	Notice and Wonder	Preparation Notes
4.5.8	Materials to Gather Scissors Materials to Copy		How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)	BLM L8	MLR7	Number Talk	Preparation Notes

	How Long is One Kilometer?						
4.5.9	Materials to Gather Containers of different sizes Paper clips	Activity 1: Gather one or more boxes of 100 metal paper clips, if available. Activity 2: If possible, gather a 1-milliliter medicine dropper, a 20-milliliter medicine dosage cup, a 100-milliliter measuring cup or cylinder, and an empty 1-liter bottle with a line at the 1-liter mark. Obtain 1.5 liters of water or access to a water source.	How Close? (1–5), Stage 6: Multiply to 3,000 (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR2	Which One Doesn't Belong?	Preparation Notes
4.5.10			Would You Rather? (2–5), Stage 2: Compare		MLR7	Notice and Wonder	Preparation Notes

			to Smaller Units (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)				
4.5.11	Materials to Copy Pounds and Ounces	Activity 1: Create a set of cards from the blackline master for each group of 4. If possible, gather examples of packaged food items—one that is labeled "1 ounce" and another labeled "1 pound".	Would You Rather? (2–5), Stage 2: Compare to Smaller Units (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)	BLM L11	MLR8	Notice and Wonder	Preparation Notes
4.5.12			Would You Rather? (2–5), Stage 2: Compare to Smaller Units (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	What Do You Know About ____?	Preparation Notes
4.5.13	Materials to Copy	Activity 2:	Would You Rather? (2–5), Stage 2: Compare	BLM L13	MLR8	True or False	Preparation Notes

	Info Gap: Noah's School Day (Part 2)	Create a set of cards from the blackline master for each group of 2.	to Smaller Units (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)				
4.5.14	Materials to Gather Containers of different sizes	Activity 1: Gather a one-gallon jug (with or without milk), a one-quart container, and a one-cup container for display during the launch. On chart paper, create the table in the activity with an extra column for showing the amounts of lassi in cups, to be displayed during synthesis.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Supporting)		MLR8	Number Talk	Preparation Notes
4.5.15	Materials to Gather Rulers Yardsticks		Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)		MLR7	Which One Doesn't Belong?	Preparation Notes

			Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Supporting)				
4.5.16	Materials to Gather Pipe cleaners Rulers (inches) Rulers or straightedges Tape Materials to Copy Centimeter Grid Paper - Standard	Activity 2: Each group of 2 needs a 12-inch pipe cleaner, an inch ruler, and tape.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Supporting)	BLM L16	MLR8	Number Talk	Preparation Notes
4.5.17	Materials to Copy Missing Measurements - Large Missing Measurements - Small	Activity 2: If the activity is done as a gallery walk, print and cut 1–2 copies of the blackline master with the larger images and post them around the classroom.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Supporting)	BLM L17	MLR7	True or False	Preparation Notes

		Otherwise, print and cut 1 copy of the blackline master with the smaller images for each group of 3–4 students.					
4.5.18	Materials to Gather Index cards Sticky notes Tape Materials to Copy Facts About Animals	Activity 1: If students are performing their own research, provide access to books about animals or Internet-enabled devices.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Rectangle Rumble (3–5), Stage 3: Factors 1–10 (Supporting)	BLM L18	MLR2	Notice and Wonder	Preparation Notes

IM K-5 MATH™ by Kendall Hunt

Grade 4

UNIT 6

Virtual Manipulatives

Pattern Blocks
Base-ten Blocks
Virtual Tiles and Grid Paper

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.6.1	Materials to Gather Pattern blocks	Activity 2: Consider preparing a set of pattern blocks for building the first two or three steps of the giraffe pattern. The set should include 6 hexagons, 6 triangles, 3 trapezoids, and 24 squares.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR2	Notice and Wonder	Preparation Notes
4.6.2			Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR8	How Many Do You See?	Preparation Notes

4.6.3	Materials to Gather Graph paper		Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR2	Number Talk	Preparation Notes
4.6.4			Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR8	Which One Doesn't Belong?	Preparation Notes
4.6.5	Materials to Gather Tools for creating a visual display	Activity 2: Create 4 posters showing the 4 representations shown in the activity narrative.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Five in a Row: Multiplication (3–5), Stage 2: Factors 1–9 (Supporting)		MLR2	Number Talk	Preparation Notes
4.6.6			Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting) Five in a Row: Multiplication (3–5),		MLR1	Notice and Wonder	Preparation Notes

			Stage 2: Factors 1–9 (Supporting)				
4.6.7			Number Puzzles: Multiplication and Division (4–5), Stage 1: Two-digit Factors (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR2	Estimation Exploration	Preparation Notes
4.6.8			Number Puzzles: Multiplication and Division (4–5), Stage 1: Two-digit Factors (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Number Talk	Preparation Notes
4.6.9			Number Puzzles: Multiplication and Division (4–5), Stage 1: Two-digit Factors (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Which One Doesn't Belong?	Preparation Notes

4.6.10			Five in a Row: Multiplication (3–5), Stage 3: Two-digit Factors (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Number Talk	Preparation Notes
4.6.11			Five in a Row: Multiplication (3–5), Stage 3: Two-digit Factors (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)		MLR8	Number Talk	Preparation Notes
4.6.12	Materials to Gather Tools for creating a visual display		Five in a Row: Multiplication (3–5), Stage 3: Two-digit Factors (Addressing) Compare (1–5), Stage 3: Multiply within 100 (Supporting)			What Do You Know About ____?	Preparation Notes
4.6.13			Five in a Row: Multiplication (3–5), Stage 3: Two-digit Factors (Addressing)		MLR2	Estimation Exploration	Preparation Notes

			Compare (1–5), Stage 4: Divide within 100 (Supporting)				
4.6.14			Compare (1–5), Stage 4: Divide within 100 (Supporting) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting)		MLR8	Number Talk	Preparation Notes
4.6.15	Materials to Gather Grid paper Sticky notes	Activity 2: If doing a gallery walk, create 3–4 posters to display during the activity that show or describe different strategies students are likely to use to solve the problem.	Compare (1–5), Stage 4: Divide within 100 (Supporting) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting)		MLR7	Estimation Exploration	Preparation Notes
4.6.16	Materials to Gather Base-ten blocks Tools for creating a visual display	Activity 1: Each group of 3–4 students needs a set of base-ten blocks that includes 4 hundreds blocks,	Compare (1–5), Stage 4: Divide within 100 (Supporting) Rolling for Fractions (3–5), Stage 2: Multiply			What Do You Know About ____?	Preparation Notes

		10 ten blocks, and 25 ones blocks.	a Fraction by a Whole Number (Supporting)				
4.6.17	Materials to Gather Base-ten blocks		Compare (1–5), Stage 4: Divide within 100 (Supporting) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting)		MLR8	Which One Doesn't Belong?	Preparation Notes
4.6.18	Materials to Gather Base-ten blocks		Compare (1–5), Stage 4: Divide within 100 (Supporting) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting)		MLR8	Number Talk	Preparation Notes
4.6.19			Compare (1–5), Stage 4: Divide within 100 (Supporting) Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting)		MLR2	Notice and Wonder	Preparation Notes
4.6.20			Watch Your Remainder (4–5), Stage 1: One-digit Divisors (Addressing)		MLR8	Choral Count	Preparation Notes

			Compare (1–5), Stage 4: Divide within 100 (Supporting)				
4.6.21	Materials to Copy Going on a Field Trip		Compare (1–5), Stage 7: Multi-digit Operations (Addressing) Watch Your Remainder (4–5), Stage 1: One-digit Divisors (Addressing)	BLM L21	MLR7	Which One Doesn't Belong?	Preparation Notes
4.6.22	Materials to Gather Grid paper Inch tiles		Compare (1–5), Stage 7: Multi-digit Operations (Addressing) Watch Your Remainder (4–5), Stage 1: One-digit Divisors (Addressing)		MLR8	How Many Do You See?	Preparation Notes
4.6.23	Materials to Gather Grid paper		Compare (1–5), Stage 7: Multi-digit Operations (Addressing) Watch Your Remainder (4–5),		MLR8	True or False	Preparation Notes

			Stage 1: One-digit Divisors (Addressing)				
4.6.24	Materials to Gather Grid paper		Compare (1–5), Stage 7: Multi-digit Operations (Addressing) Watch Your Remainder (4–5), Stage 1: One-digit Divisors (Addressing)		MLR8	Notice and Wonder	Preparation Notes
4.6.25		Activity 1: Gather rubber bands or pipe cleaners and 60 sheets of tissue paper that measure 18 inches by 24 inches. Cut the tissue paper in the following ways (measurements do not need to be exact): 20 sheets cut into strips that are 4 inches by 9 inches	Compare (1–5), Stage 7: Multi-digit Operations (Addressing) Watch Your Remainder (4–5), Stage 1: One-digit Divisors (Addressing)		MLR7	How Many Do You See?	Preparation Notes

		40 sheets cut into strips that are 6 inches by 12 inches (length should be about 2 times the width)					

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Grade 4

UNIT 7

Virtual Manipulatives

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.7.1	Materials to Gather Chart paper Index cards	Activity 1: Create a set of 4 cards from the blackline master	Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting)	BLM L1		Notice and Wonder	Preparation Notes

	Rulers or straightedges Materials to Copy Do You See What I See?	for each group of 2. Create a poster with the two images shown in activity synthesis.	Compare (1–5), Stage 7: Multi-digit Operations (Supporting)				
4.7.2	Materials to Gather Rulers or straightedges Materials to Copy Card Sort: Who Am I?	Activity 1: Create a set of cards from the blackline master for each group of 2–4 students.	Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)	BLM L2	MLR8	Number Talk	Preparation Notes
4.7.3	Materials to Gather Rulers or straightedges Materials to Copy Illustrated Word Wall		Rolling for Fractions (3–5), Stage 2: Multiply a Fraction by a Whole Number (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)	BLM L3	MLR2	How Many Do You See?	Preparation Notes
4.7.4	Materials to Gather	Activity 1:	Rolling for Fractions (3–5), Stage 2: Multiply		MLR8	Which One Doesn't Belong?	Preparation Notes

	Materials from a previous lesson Rulers or straightedges	Gather Collect and Display charts from previous lessons. Each student will need access to their personal word walls created in previous lessons.	a Fraction by a Whole Number (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)				
4.7.5	Materials to Gather Rulers or straightedges Materials to Copy Tricky Figures	Activity 1: Create a set of cards (4 cards total) for each group of 2 from the blackline master. Each group of 2 needs 2 cards (sets 1 and 2). Additional cards (sets 3A and 3B) can be used for extension	Target Measurements (2–5), Stage 4: Degrees (Addressing) Compare (1–5), Stage 5: Fractions (Supporting)	BLM L5		Notice and Wonder	Preparation Notes
4.7.6	Materials to Gather	Activity 1:	Compare (1–5), Stage 5: Fractions (Supporting)	BLM L6		Which One Doesn't Belong?	Preparation Notes

	Materials from a previous activity Patty paper Materials to Copy Card Sort: Angles	Create one set of cards from the blackline master for each group of 2 students.	Target Measurements (2–5), Stage 4: Degrees (Addressing)				
4.7.7	Materials to Gather Patty paper Rulers or straightedges		Compare (1–5), Stage 5: Fractions (Supporting) Target Measurements (2–5), Stage 4: Degrees (Addressing)			Notice and Wonder	Preparation Notes
4.7.8	Materials to Gather Paper Rulers or straightedges Materials to Copy Making a Measuring Tool	Activity 2: Create a paper half-circle from the blackline master for each student.	Compare (1–5), Stage 5: Fractions (Supporting) Target Measurements (2–5), Stage 4: Degrees (Addressing)	BLM L8		What Do You Know About ____?	Preparation Notes
4.7.9	Materials to Gather Protractors		Target Measurements (2–5),		MLR2	True or False	Preparation Notes

			Stage 4: Degrees (Addressing) Compare (1–5), Stage 5: Fractions (Supporting)				
4.7.10	Materials to Gather Colored pencils Paper Protractors Rulers or straightedges	Activity 2: Prepare at least 2 pieces of paper (or sticky notes) for each student.	Target Measurements (2–5), Stage 4: Degrees (Addressing) Compare (1–5), Stage 5: Fractions (Supporting)		MLR8	Number Talk	Preparation Notes
4.7.11	Materials to Gather Index cards Protractors Rulers or straightedges		Target Measurements (2–5), Stage 4: Degrees (Addressing) Compare (1–5), Stage 5: Fractions (Supporting)		MLR8	Estimation Exploration	Preparation Notes
4.7.12	Materials to Gather Materials from a previous lesson Pattern blocks Protractors	Activity 1: Students need their angle cards from the previous lesson.	Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting) Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)			Number Talk	Preparation Notes
4.7.13	Materials to Gather	Activity 1:	Target Measurements (2–5),	BLM L13		Notice and Wonder	Preparation Notes

	Origami paper Patty paper Materials to Copy How Big Are These Angles?	Create 4 copies of each angle (p, q, r, and s) from the blackline master for each group of 2–4 students. Cut out the angles in advance, or prepare scissors and extra time for students to cut out the angles. If using patty paper instead of cutouts of the angles, each student needs 1–2 sheets of patty paper.	Stage 4: Degrees (Addressing) Compare (1–5), Stage 5: Fractions (Supporting)				
4.7.14	Materials to Gather Protractors Rulers or straightedges		Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting) Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)		MLR8	Which One Doesn't Belong?	Preparation Notes
4.7.15	Materials to Copy	Activity 2:	Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting)	BLM L15	MLR8	How Many Do You See?	Preparation Notes

	Info Gap: Whole Bunch of Angles	Create a set of cards from the blackline master for each group of 2.	Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)				
4.7.16	Materials to Gather Rulers or straightedges Materials to Copy Make a Change	Activity 1: Create a set of cards from the blackline master for each group of 2 students.	Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting) Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)	BLM L16	MLR2	Notice and Wonder	Preparation Notes

IM K-5 MATH™ by Kendall Hunt

Grade 4

UNIT 8

Virtual Manipulatives

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides
4.8.1	Materials to Gather Protractors Rulers Sticky notes Materials to Copy Shape Cards Grade 4	Activity 1: Create a set of cards from the blackline master for each group of 2–4.	Picture Books (K–5), Stage 3: Find Shapes (Supporting)	BLM L1		Which One Doesn't Belong?	Preparation Notes
4.8.2	Materials to Gather Index cards Materials from a previous lesson Patty paper Protractors Rulers	Activity 1: Each group needs a set of shape cards from the previous lesson. If time permits, separate the triangle cards from each set in advance. Gather the Collect and Display chart from the previous	Picture Books (K–5), Stage 3: Find Shapes (Supporting)		MLR8	Number Talk	Preparation Notes

		lesson for display in the activity synthesis.					
4.8.3	Materials to Gather Materials from a previous activity Materials from a previous lesson Patty paper Protractors Rulers Tools for creating a visual display	Activity 1: Each group needs a set of shape cards from the previous lesson. If time permits, separate the quadrilateral cards from each set in advance. Activity 2: Each group needs a set of shape cards from the previous activity.	Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting) Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)		MLR8	How Many Do You See?	Preparation Notes
4.8.4	Materials to Gather Materials from a previous lesson Patty paper Protractors Rulers	Activity 1: Make copies of the set of figures in the second question available for cutting and for demonstration	Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting) Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)	BLM L4	MLR8	Notice and Wonder	Preparation Notes

	Rulers or straightedges Scissors Materials to Copy Perfect Matches Shape Cards Grade 4	during the lesson synthesis. Activity 2: Sort the shape cards from the previous lessons into three groups of 12 cards (A–L, M–X, and Y–JJ).					
4.8.5	Materials to Gather Paper Patty paper Protractors Rulers or straightedges Scissors Materials to Copy Two Symmetrical Figures	Activity 3: Create a set of triangle cutouts from the blackline master for each group of 2.	Symmetrical Designs (4), Stage 1: Lines of Symmetry (Addressing) Which One? (K–5), Stage 4: Grade 3 Shapes (Supporting) Can You Draw It? (1–5), Stage 4: Area and Perimeter (Supporting)	BLM L5	MLR8	Number Talk	Preparation Notes
4.8.6	Materials to Gather Straightedges		Symmetrical Designs (4), Stage 1: Lines of Symmetry (Addressing)		MLR2	How Many Do You See?	Preparation Notes

			Compare (1–5), Stage 5: Fractions (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)				
4.8.7	Materials to Gather Patty paper		Which One? (K–5), Stage 5: Grade 4 Shapes (Addressing) Can You Draw It? (1–5), Stage 5: Grade 4 Shapes (Addressing) Compare (1–5), Stage 5: Fractions (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)		MLR8	Number Talk	Preparation Notes
4.8.8	Materials to Gather Patty paper Rulers or straightedges		Which One? (K–5), Stage 5: Grade 4 Shapes (Addressing) Can You Draw It? (1–5), Stage 5: Grade 4 Shapes (Addressing)		MLR8	True or False	Preparation Notes

			Compare (1–5), Stage 5: Fractions (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)				
4.8.9	Materials to Gather Paper Patty paper Protractors Rulers or straightedges Scissors Materials to Copy Before and After		Which One? (K–5), Stage 5: Grade 4 Shapes (Addressing) How Are They the Same? (1–5), Stage 4: Grade 4 Shapes (Addressing) Compare (1–5), Stage 5: Fractions (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)	BLM L9	MLR8	Which One Doesn't Belong?	Preparation Notes
4.8.10	Materials to Gather Paper Patty paper Protractors Rulers		Which One? (K–5), Stage 5: Grade 4 Shapes (Addressing) How Are They the Same? (1–5), Stage 4:		MLR8	How Many Do You See?	Preparation Notes

	Scissors		Grade 4 Shapes (Addressing) Compare (1–5), Stage 5: Fractions (Supporting) Compare (1–5), Stage 7: Multi-digit Operations (Supporting)				

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UNIT 9

Virtual Manipulatives

Lesson	Required Materials	Required Preparation	Suggested Centers	Blackline Masters	MLRs	Instructional Routines	Link to Preparation Notes with Presentation Slides

4.9.1					MLR8	Number Talk	Preparation Notes
4.9.2					MLR8	Number Talk	Preparation Notes
4.9.3					MLR8	Number Talk	Preparation Notes
4.9.4	Materials to Gather Grid paper				MLR7	Number Talk	Preparation Notes
4.9.5	Materials to Gather Grid paper				MLR8	Estimation Exploration	Preparation Notes
4.9.6					MLR2	Number Talk	Preparation Notes
4.9.7					MLR8	Notice and Wonder	Preparation Notes
4.9.8					MLR8	Number Talk	Preparation Notes
4.9.9					MLR8	Number Talk	Preparation Notes
4.9.10	Materials to Gather Tools for creating a visual display	Activity 2: Gather two magazines or other sources of images for each group of 3–4 students.			MLR8	Estimation Exploration	Preparation Notes

4.9.11					MLR8	Which One Doesn't Belong?	Preparation Notes
4.9.12					MLR7	Number Talk	Preparation Notes