

Rantoul City Schools District #137 Unit Plan

Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	1) Factors, Multiples, and Arrays	4

Targeted Illinois Learning Standards Expectation: Practice

Operations and Algebraic Thinking (4.OA)

- 4.OA.1a: I can interpret multiplication equations using the commutative property ($35=7 \times 5$, $35=5 \times 7$) (Major)
- 4.OA.1b: I can verbally explain a multiplication equation using commutative property (Major)
- 4.OA.2a: I can divide to solve word problems using multiplicative comparisons (Major)
- 4.OA.2b: I can examine and analyze drawing to compare the relationship between multiplication and repeated addition and determine which skill was applied (Major)
- 4.OA.2c: I can multiply to solve word problems involving multiplicative comparisons (Major)
- 4.OA.2d: I can solve for the unknown using multiplicative comparisons (Major)
- 4.OA.3a: I can apply the four basic operations (addition, subtraction, multiplication, division) to solve multi-step word problems (Major)
- 4.OA.3b: I can interpret and analyze remainders in multi-step word problems (Major)
- 4.OA.4a: I can list all factor pairs for whole numbers 1-100 (ex. 25-1, 5, 25) (Supporting)
- 4.OA.4b: I can state and show that a whole number is a multiple of its factors (ex. Skip counting by 5s-5, 10, 15, 20) (Supporting)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	2) Describing the Shape of the Data	2

Targeted Illinois Learning Standards Expectation: Practice

Measurement and Data (4.MD)

- 4.MD.2a: I can represent measurement quantities using diagrams that feature a measurement scale. (Supporting)
- 4.MD.2b: I can solve word problems involving measurement of liquid volumes that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.2c: I can solve word problems involving measurements of masses of objects that include whole numbers, fractions, and decimals. (Supporting)

Number and Operations in Base 10 (4.NBT)

- **4.NBT.4: I can fluently add and subtract multi-digit whole numbers using a standard algorithm (form) (Major)**

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	3) Multiple Towers and Division Stories	4

Targeted Illinois Learning Standards Expectation: Practice

Number and Operations in Base 10 (4.NBT)

- 4.NBT.5a: I can illustrate my calculations by using a written equation, rectangular array, and/or area model (Major)
- 4.NBT.5b: I can multiply a whole number up to four digits by a one digit whole number (Major)
- 4.NBT.5c: I can multiply two 2 digit numbers using properties of operations (zero property, identity property, distributive property, associative property, commutative property) (Major)
- 4.NBT.6a: I can divide four digit dividends by one digit divisors. (Major)
- 4.NBT.6b: I can find quotations and remainders in a given division problem. (Major)
- 4.NBT.6c: I can illustrate my calculations by using a written equation, rectangular array, and/or area models. (Major)

Operations and Algebraic Thinking (4.OA)

- 4.OA.3a: I can apply the four basic operations (addition, subtraction, multiplication, division) to solve multi-step word problems (Major)
- 4.OA.3b: I can interpret and analyze remainders in multi-step word problems (Major)

Targeted Illinois Learning Standards Expectation: Mastery

Operations and Algebraic Thinking (4.OA)

- 4.OA.1a: I can interpret multiplication equations using the commutative property ($35=7 \times 5$, $35=5 \times 7$) (Major)
- 4.OA.1b: I can verbally explain a multiplication equation using commutative property (Major)
- 4.OA.2a: I can divide to solve work problems using multiplicative comparisons (Major)
- 4.OA.2b: I can examine and analyze drawing to compare the relationship between multiplication and repeated addition and determine which skill was applied (Major)
- 4.OA.2c: I can multiply to solve word problems involving multiplicative comparisons (Major)
- 4.OA.2d: I can solve for the unknown using multiplicative comparisons (Major)
- 4.OA.4a: I can list all factor pairs for whole numbers 1-100 (ex. 25-1, 5, 25) (Supporting)
- 4.OA.4b: I can state and show that a whole number is a multiple of its factors (ex. Skip counting by 5s-5, 10, 15, 20) (Supporting)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	4) Size, Shape, and Symmetry	2

Targeted Illinois Learning Standards Expectation: Practice

Geometry (4.G)

- 4.G.2a: I can classify two-dimensional figures by identifying parallel or perpendicular lines and angles. (Additional)
- 4.G.2b: I can identify right triangles and recognize a right triangle as a category. (Additional)
- 4.G.3a: I can define a line of symmetry for a two-dimensional as a line across the figure such that the figure can be folded along the line into matching parts. (Additional)
- 4.G.3b: I can draw lines of symmetry. (Additional)
- 4.G.3c: I can identify line symmetric figures. (Additional)

Measurement and Data (4.MD)

- 4.MD.1a: I can recognize and use measurement units within the metric system or English system. (Supporting)
- 4.MD.1b: Within a single measurement system, I can express measurement in a larger unit in terms of the smaller unit (1ft is 12 times as long as 1 in). (Supporting)
- 4.MD.2a: I can represent measurement quantities using diagrams that feature a measurement scale. (Supporting)
- 4.MD.2b: I can solve word problems involving measurement of liquid volumes that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.2c: I can solve word problems involving measurements of masses of objects that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.3a: I can apply the formula for area of a rectangle to solve real world and mathematical problems using an unknown factor (variable). (Supporting)
- 4.MD.3b: I can apply the formula for perimeter of a rectangle to solve real world and mathematical problems using an unknown factor (variable). (Supporting)
- 4.MD.5a: I can recognize, define, and display an angle in terms of two rays that share a common endpoint. (Additional)
- 4.MD.5b: I can identify the measure of an angle in terms of degrees and I can use a 1 degree angle to measure other angles. (Additional)
- 4.MD.5c: I can recognize a circle as 360 degrees and an angle as a fraction of a 360° circle. (Additional)
- 4.MD.6a: I can measure angles in whole number degrees using a protractor (Additional)
- 4.MD.6b: I can sketch angles as a specified measure using a protractor (Additional)
- 4.MD.7a: I can add the sum of the parts to equal the whole ($90^\circ+90^\circ=180^\circ$) (Additional)
- 4.MD.7b: I can subtract the sum of the parts to equal the whole ($180^\circ-90^\circ=90^\circ$) (Additional)

Number and Operations in Base 10 (4.NBT)

- 4.NBT.4: I can fluently add and subtract multi-digit whole numbers using a standard algorithm (form) (Major)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	5) Landmarks and Large Numbers	5

Targeted Illinois Learning Standards Expectation: Practice

Measurement and Data (4.MD)

- 4.MD.2a: I can represent measurement quantities using diagrams that feature a measurement scale. (Supporting)
- 4.MD.2b: I can solve word problems involving measurement of liquid volumes that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.2c: I can solve word problems involving measurements of masses of objects that include whole numbers, fractions, and decimals. (Supporting)

Number and Operations in Base 10 (4.NBT)

- 4.NBT.1: I can recognize through division that a multi-digit whole number in a given place is 10 times the value of the place to the right (4 thousand = ___ tens, $4,000 \div 40=10$) (Major)
- 4.NBT.2a: I can read and write a multi-digit whole number in standard form, word form, and expanded form. (Major)

Targeted Illinois Learning Standards Expectation: Mastery

Number and Operations in Base 10 (4.NBT)

- 4.NBT.3: I can calculate by rounding a multi-digit whole number to any place (Major)
- 4.NBT.4: I can fluently add and subtract multi-digit whole numbers using a standard algorithm (form) (Major)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	6) Fraction Cards and Decimal Squares	8

Targeted Illinois Learning Standards Expectation: Practice

Measurement and Data (4.MD)

- 4.MD.2a: I can represent measurement quantities using diagrams that feature a measurement scale. (Supporting)
- 4.MD.2b: I can solve word problems involving measurement of liquid volumes that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.2c: I can solve word problems involving measurements of masses of objects that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.4a: I can create a line plot to display data set of measurements and fractions of a unit. (Supporting)

Number and Operations in Base 10 (4.NBT)

- 4.NBT.2a: I can read and write a multi-digit whole number in standard form, word form, and expanded form. (Major)

Number and Operations- Fractions (4.NF)

- 4.NF.4a: I can explain the multiples of fractions by using visual models. (Major)
- 4.NF.4b: I can relate a whole number as a fraction with 1 being the denominator (ex. $2 \times \frac{1}{3} = \frac{2}{1} \times \frac{1}{3} = \frac{2}{3}$). (Major)
- 4.NF.4c: I can solve word problems involving multiplication of fractions involving a whole number. (Major)
- 4.NF.4d: I can solve word problems using equations to represent the topics. (Major)
- 4.NF.4e: I can solve word problems using visual fraction models. (Major)

Targeted Illinois Learning Standards Expectation: Mastery

Number and Operations in Base 10 (4.NBT)

- 4.NBT.1: I can recognize through division that a multi-digit whole number in a given place is 10 times the value of the place to the right (4 thousand = ___ tens, $4,000 \div 40=10$) (Major)

Number and Operations- Fractions (4.NF)

- 4.NF.1: I can explain why two fractions are equivalent using visual models. (Major)
- 4.NF.2a: I can compare and then justify my comparisons of two fractions which are parts of the same whole using symbols (>, <, or =). (Major)
- 4.NF.2b: I can compare two given fractions by comparing them to benchmark fractions ($\frac{1}{2}$, $\frac{3}{4}$, $\frac{2}{3}$, $\frac{1}{4}$). (Major)
- 4.NF.2c: I can compare two given fractions by reasoning about its location on a number line. (Major)
- 4.NF.2d: I can find common denominators to compare two fractions with unlike numerators and denominators. (Major)
- 4.NF.3a: I can add and subtract fractions with same denominators (part of the same whole). (Major)
- 4.NF.3b: I can add and subtract mixed numbers with like denominators by replacing each mixed number with an equivalent fraction (ex, Improper fractions and/or simplest form). (Major)
- 4.NF.3c: I can decompose (break-apart) a fraction into a sum of fractions with the same denominators. (Major)
- 4.NF.3d: I can decompose a fraction and record as a fraction. (Major)
- 4.NF.3e: I can justify my decomposition by using a fraction model. (Major)
- 4.NF.3f: I can solve word problems involving addition and subtraction of fractions with like denominators using properties of operations through visual fraction models and/or equations. (Major)
- 4.NF.5a: I can show that fractions with a denominator of 10 are equivalent to fractions with a denominator of 100 by multiplying the denominator of 10 by 10 (base ten concepts). (Major)
- 4.NF.5b: I can solve by adding two fractions with denominators of 10 and 100. (Major)
- 4.NF.6: I can convert a fraction with a denominator of 10 and 100 to a decimal. (Major)
- 4.NF.7a: I can compare two decimals to hundredths by reasoning about their size using a visual model. (Major)
- 4.NF.7b: I can compare two decimals using >, <, or =. (Major)
- 4.NF.7c: I can determine that the comparisons is true when the two decimals refer to the same whole. (Major)
- 4.NF.7d: I can justify the comparison/conclusion using visual models (ex. Charts, base-ten blocks, etc.). (Major)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	7) Moving Between Solids and Silhouettes	1

Targeted Illinois Learning Standards Expectation: Practice

Measurement and Data (4.MD)

- 4.MD.1a: I can recognize and use measurement units within the metric system or English system. (Supporting)
- 4.MD.1b: Within a single measurement system, I can express measurement in a larger unit in terms of the smaller unit (1ft is 12 times as long as 1 in). (Supporting)
- 4.MD.2a: I can represent measurement quantities using diagrams that feature a measurement scale. (Supporting)
- 4.MD.2b: I can solve word problems involving measurement of liquid volumes that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.2c: I can solve word problems involving measurements of masses of objects that include whole numbers, fractions, and decimals. (Supporting)

Targeted Illinois Learning Standards Expectation: Mastery

Number and Operations in Base 10 (4.NBT)

- 4.NBT.2a: I can read and write a multi-digit whole number in standard form, word form, and expanded form. (Major)

Number and Operations- Fractions (4.NF)

- 4.NF.4a: I can explain the multiples of fractions by using visual models. (Major)
- 4.NF.4b: I can relate a whole number as a fraction with 1 being the denominator (ex. $2 \times \frac{1}{3} = \frac{2}{1} \times \frac{1}{3} = \frac{2}{3}$). (Major)
- 4.NF.4c: I can solve word problems involving multiplication of fractions involving a whole number. (Major)
- 4.NF.4d: I can solve word problems using equations to represent the topics. (Major)
- 4.NF.4e: I can solve word problems using visual fraction models. (Major)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	8) How Many Packages? How Many Groups?	4

Targeted Illinois Learning Standards Expectation: Practice

Measurement and Data (4.MD)

- 4.MD.2a: I can represent measurement quantities using diagrams that feature a measurement scale. (Supporting)
- 4.MD.2b: I can solve word problems involving measurement of liquid volumes that include whole numbers, fractions, and decimals. (Supporting)
- 4.MD.2c: I can solve word problems involving measurements of masses of objects that include whole numbers, fractions, and decimals. (Supporting)

Number and Operations in Base 10 (4.NBT)

- 4.NBT.5a: I can illustrate my calculations by using a written equation, rectangular array, and/or area model (Major)
- 4.NBT.5b: I can multiply a whole number up to four digits by a one digit whole number (Major)
- 4.NBT.5c: I can multiply two 2 digit numbers using properties of operations (zero property, identity property, distributive property, associative property, commutative property) (Major)
- 4.NBT.6a: I can divide four digit dividends by one digit divisors. (Major)
- 4.NBT.6b: I can find quotations and remainders in a given division problem. (Major)
- 4.NBT.6c: I can illustrate my calculations by using a written equation, rectangular array, and/or area models. (Major)

Operations and Algebraic Thinking (4.OA)

- 4.OA.5a: I can create a number or shape pattern which follows a given rule (Additional)
- 4.OA.5b: I can identify and explain other patterns that go beyond the given rule. (Additional)

Targeted Illinois Learning Standards Expectation: Mastery

Operations and Algebraic Thinking (4.OA)

- 4.OA.3a: I can apply the four basic operations (addition, subtraction, multiplication, division) to solve multi-step word problems (Major)
- 4.OA.3b: I can interpret and analyze remainders in multi-step word problems (Major)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	9) Penny Jars and Plant Growth	3

Targeted Illinois Learning Standards Expectation: Practice

Measurement and Data (4.MD)

- 4.MD.1a: I can recognize and use measurement units within the metric system or English system. (Supporting)
- 4.MD.1b: Within a single measurement system, I can express measurement in a larger unit in terms of the smaller unit (1ft is 12 times as long as 1 in). (Supporting)
- 4.MD.4a: I can create a line plot to display data set of measurements and fractions of a unit. (Supporting)

Targeted Illinois Learning Standards Expectation: Mastery

Number and Operations in Base 10 (4.NBT)

- 4.NBT.5a: I can illustrate my calculations by using a written equation, rectangular array, and/or area model (Major)
- 4.NBT.5b: I can multiply a whole number up to four digits by a one digit whole number (Major)
- 4.NBT.5c: I can multiply two 2 digit numbers using properties of operations (zero property, identity property, distributive property, associative property, commutative property) (Major)
- 4.NBT.6a: I can divide four digit dividends by one digit divisors. (Major)
- 4.NBT.6b: I can find quotations and remainders in a given division problem. (Major)
- 4.NBT.6c: I can illustrate my calculations by using a written equation, rectangular array, and/or area models. (Major)

Operations and Algebraic Thinking (4.OA)

- 4.OA.5a: I can create a number or shape pattern which follows a given rule (Additional)
- 4.OA.5b: I can identify and explain other patterns that go beyond the given rule. (Additional)

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	11) #Quarter 1	9

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	12) #Quarter 2	9

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	13) #Quarter 3	10

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Subject	Unit Plan Name	Unit	Length (Weeks)
Grade 4	Math Investigations Gr 4	14) #Quarter 4	8