



# **Teacher Edition: Planning and Pacing Guide**

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Grade 4

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Build Understanding
Connect Concepts and Skills
Apply and Practice
INsuccess Lessons

# Pacing Guide

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 1 PLACE VALUE AND WHOLE-NUMBER OPERATIONS</b>		
<b>Module 1: Place Value of Whole Numbers</b>		
<b>Lesson 1.1</b> Understand Place Value Relationships	<b>4.NS.1</b> Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.	<b>2 days</b>
<b>Lesson 1.2</b> Read and Write Numbers	<b>4.NS.1</b> Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.	<b>1 day</b>
<b>Lesson 1.3</b> Regroup and Rename Numbers	<b>4.NS.1</b> Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.	<b>1 day</b>
<b>Lesson 1.4</b> Compare and Order Numbers	<b>4.NS.1</b> Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000. <b>4.NS.2</b> Compare two whole numbers up to 1,000,000 using $>$ , $=$ , and $<$ symbols.	<b>1 day</b>
<b>Lesson 1.5</b> Use Place Value Understanding to Round Numbers	<b>4.NS.9</b> Use place value understanding to round multi-digit whole numbers to any given place value.	<b>1 day</b>

**In addition to the core instructional pacing below, HMH recommends the following:**

- 3 days per year for the Growth Measure assessments
- 2 days per module for the Module Opener, Are You Ready?, Module Review, and Module Test
- 1 day per unit for the Performance Task

Using these recommendations, the total pacing for Grade 4 is 171 days.

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 2: Addition and Subtraction of Whole Numbers</b>		
<b>Lesson 2.1</b> Add Whole Numbers and Assess Reasonableness	<b>4.C.1</b> Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.	<b>1 day</b>
<b>Lesson 2.2</b> Subtract Whole Numbers and Assess Reasonableness	<b>4.C.1</b> Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.	<b>1 day</b>
<b>Lesson 2.3</b> Use Addition and Subtraction to Solve Comparison Problems	<b>4.C.1</b> Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.	<b>1 day</b>
<b>Lesson 2.4</b> Apply the Perimeter Formula for Rectangles	<b>4.M.4</b> Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 2 MULTIPLICATION AND DIVISION PROBLEMS</b>		
<b>Module 3: Interpret and Solve Problem Situations</b>		
<b>INsuccess Lesson</b> Relate Operations <i>Use before Lesson 3.1</i>	<b>4.C.4</b> Multiply fluently within 100. <b>4.AT.2</b> Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems.	<b>1 day</b>
<b>INsuccess Lesson</b> Model Equal Groups <i>Use before Lesson 3.1</i>	<b>4.C.4</b> Multiply fluently within 100.	<b>1 day</b>
<b>INsuccess Lesson</b> Model Arrays and Area Models <i>Use before Lesson 3.1</i>	<b>4.C.4</b> Multiply fluently within 100.	<b>1 day</b>
<b>INsuccess Lesson</b> Relate Multiplication and Division <i>Use before Lesson 3.1</i>	<b>4.C.4</b> Multiply fluently within 100. <b>4.AT.2</b> Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems.	<b>1 day</b>
<b>INsuccess Lesson</b> Use Multiplication and Division Strategies <i>Use before Lesson 3.1</i>	<b>4.C.4</b> Multiply fluently within 100. <b>4.C.7</b> Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Understand and use the distributive property.	<b>1 day</b>
<b>INsuccess Lesson</b> Multiplication Table Through 10 <i>Use before Lesson 3.1</i>	<b>4.C.4</b> Multiply fluently within 100.	<b>1 day</b>
<b>INsuccess Lesson</b> Multiplication Properties <i>Use before Lesson 3.1</i>	<b>4.C.7</b> Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Understand and use the distributive property.	<b>1 day</b>
<b>Lesson 3.1</b> Explore Multiplicative Comparisons	<b>4.AT.3</b> Interpret a multiplication equation as a comparison (e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7, and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations. <b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Lesson 3.2</b> Distinguish Between Multiplicative and Additive Comparisons	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>
<b>Lesson 3.3</b> Use Division to Solve Multiplicative Comparison Problems	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>
<b>Lesson 3.4</b> Use Comparisons to Solve Problem Situations	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>
<b>Lesson 3.5</b> Solve Multistep Problems with Multiplication and Division	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 4: Mental Math and Estimation Strategies</b>		
<b>Lesson 4.1</b> Explore Multiplication Patterns with Tens, Hundreds, and Thousands	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 4.2</b> Explore Division Patterns with Tens, Hundreds, and Thousands	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 4.3</b> Estimate Products by 1-Digit Numbers	<b>4.NS.9</b> Use place value understanding to round multi-digit whole numbers to any given place value. <b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 4.4</b> Estimate Quotients Using Compatible Numbers	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 4.5</b> Use Mental Math Strategies for Multiplication and Division	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning. <b>4.C.4</b> Multiply fluently within 100. <b>4.C.7</b> Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Understand and use the distributive property.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 5: Multiply by 1-Digit Numbers</b>		
<b>Lesson 5.1</b> Represent Multiplication	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 5.2</b> Use Area Models and the Distributive Property to Multiply	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning. <b>4.C.7</b> Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can be multiplied in any order. Understand and use the distributive property.	<b>1 day</b>
<b>Lesson 5.3</b> Multiply Using Expanded Form	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 5.4</b> Multiply Using Partial Products	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 5.5</b> Use Place Value to Multiply 2-Digit Numbers	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 5.6</b> Multiply 3-Digit and 4-Digit Numbers	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 5.7</b> Use Equations to Solve Multistep Problems	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 6: Understand Division by 1-Digit Numbers</b>		
<b>Lesson 6.1</b> Represent Division	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 6.2</b> Investigate Remainders	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 6.3</b> Interpret Remainders	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 6.4</b> Use Area Models and the Distributive Property to Divide	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 6.5</b> Divide Using Repeated Subtraction	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 6.6</b> Divide Using Partial Quotients	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>



Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 7: Divide by 1-Digit Numbers</b>		
<b>Lesson 7.1</b> Represent Division with Regrouping	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 7.2</b> Use Place Value to Divide	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>2 days</b>
<b>Lesson 7.3</b> Divide by 1-Digit Numbers	<b>4.C.3</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 7.4</b> Solve Multistep Multiplication and Division Problems	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 3 EXTEND AND APPLY MULTIPLICATION</b>		
<b>Module 8: Multiply by 2-Digit Numbers</b>		
<b>Lesson 8.1</b> Multiply with Tens	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 8.2</b> Estimate Products	<b>4.NS.9</b> Use place value understanding to round multi-digit whole numbers to any given place value.	<b>2 days</b>
<b>Lesson 8.3</b> Relate Area Models and Partial Products	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 8.4</b> Multiply Using Partial Products	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 8.5</b> Multiply with Regrouping	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 8.6</b> Choose a Multiplication Strategy	<b>4.C.2</b> Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning.	<b>1 day</b>
<b>Lesson 8.7</b> Solve Multistep Problems and Assess Reasonableness	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 9: Apply Multiplication to Area</b>		
<b>Lesson 9.1</b> Apply the Area Formula to Rectangles	<b>4.M.4</b> Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	<b>1 day</b>
<b>Lesson 9.2</b> Find the Area of Combined Rectangles	<b>4.M.4</b> Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	<b>1 day</b>
<b>Lesson 9.3</b> Find Unknown Measures	<b>4.M.4</b> Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	<b>1 day</b>
<b>Lesson 9.4</b> Solve Area Problems	<b>4.M.4</b> Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 4 FRACTIONS AND DECIMALS</b>		
<b>Module 10: Algebraic Thinking: Number Theory</b>		
<b>Lesson 10.1</b> Investigate Factors	<b>4.NS.8</b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.	<b>1 day</b>
<b>Lesson 10.2</b> Identify Factors	<b>4.NS.8</b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.	<b>2 days</b>
<b>Lesson 10.3</b> Generate Multiples Using Factors	<b>4.NS.8</b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.	<b>1 day</b>
<b>Lesson 10.4</b> Identify Prime and Composite Numbers	<b>4.NS.8</b> Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.	<b>1 day</b>
<b>Lesson 10.5</b> Generate and Analyze Number Patterns	<b>4.AT.6</b> Describe a relationship between two variables and use to find a second number when a first number is given. Generate a number pattern that follows a given rule.	<b>1 day</b>
<b>INsuccess Lesson</b> Describe Relationships <i>Use after Lesson 10.5</i>	<b>4.AT.6</b> Describe a relationship between two variables and use to find a second number when a first number is given. Generate a number pattern that follows a given rule.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 11: Addition and Subtraction Grouping Strategies</b>		
<b>INsuccess Lesson</b> Relate Fractions and Whole Numbers <i>Use before Lesson 11.1</i>	<b>4.NS.3</b> Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures.	<b>1 day</b>
<b>Lesson 11.1</b> Compare Fractions Using Visual Models	<b>4.NS.5</b> Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, $\frac{1}{2}$ , and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions (e.g., by using a visual fraction model).	<b>1 day</b>
<b>Lesson 11.2</b> Compare Fractions Using Benchmarks	<b>4.NS.5</b> Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, $\frac{1}{2}$ , and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions (e.g., by using a visual fraction model).	<b>1 day</b>
<b>INsuccess Lesson</b> Compare Fractions Using 0, $\frac{1}{2}$ , and 1 as Benchmarks <i>Use after Lesson 11.2</i>	<b>4.NS.5</b> Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, $\frac{1}{2}$ , and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions (e.g., by using a visual fraction model).	<b>1 day</b>
<b>Lesson 11.3</b> Explain Fraction Equivalence Using Visual Models	<b>4.NS.3</b> Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures.  <b>4.NS.4</b> Explain why a fraction, $\frac{a}{b}$ , is equivalent to a fraction, $\frac{(n \times a)}{(n \times b)}$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the principle to recognize and generate equivalent fractions.	<b>1 day</b>
<b>Lesson 11.4</b> Generate Equivalent Fractions	<b>4.NS.4</b> Explain why a fraction, $\frac{a}{b}$ , is equivalent to a fraction, $\frac{(n \times a)}{(n \times b)}$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the principle to recognize and generate equivalent fractions.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Lesson 11.5</b> Use Common Multiples to Write Equivalent Fractions	<b>4.NS.4</b> Explain why a fraction, $\frac{a}{b}$ , is equivalent to a fraction, $\frac{(n \times a)}{(n \times b)}$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the principle to recognize and generate equivalent fractions.	<b>1 day</b>
<b>Lesson 11.6</b> Compare Fractions Using Common Numerators and Denominators	<b>4.NS.5</b> Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, $\frac{1}{2}$ , and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions (e.g., by using a visual fraction model).	<b>1 day</b>
<b>Lesson 11.7</b> Use Comparisons to Order Fractions	<b>4.NS.5</b> Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, $\frac{1}{2}$ , and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions (e.g., by using a visual fraction model).	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 12: Relate Fractions and Decimals</b>		
<b>Lesson 12.1</b> Represent Tenths as Fractions and Decimals	<b>4.NS.6</b> Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., $\frac{1}{2} = 0.5 = 0.50$ , $\frac{7}{4} = 1\frac{3}{4} = 1.75$ ).	<b>1 day</b>
<b>Lesson 12.2</b> Represent Hundredths as Fractions and Decimals	<b>4.NS.6</b> Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., $\frac{1}{2} = 0.5 = 0.50$ , $\frac{7}{4} = 1\frac{3}{4} = 1.75$ ).	<b>1 day</b>
<b>INsuccess Lesson</b> Explore Decimal Place Value <i>Use after Lesson 12.2</i>	<b>4.NS.6</b> Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., $\frac{1}{2} = 0.5 = 0.50$ , $\frac{7}{4} = 1\frac{3}{4} = 1.75$ ).	<b>1 day</b>
<b>Lesson 12.3</b> Identify Equivalent Fractions and Decimals	<b>4.NS.6</b> Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., $\frac{1}{2} = 0.5 = 0.50$ , $\frac{7}{4} = 1\frac{3}{4} = 1.75$ ).	<b>1 day</b>
<b>Lesson 12.4</b> Compare Decimals	<b>4.NS.7</b> Compare two decimals to hundredths by reasoning about their size based on the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions (e.g., by using a visual model).	<b>1 day</b>
<b>Lesson 12.5</b> Relate Fractions, Decimals, and Money	<b>4.NS.6</b> Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., $\frac{1}{2} = 0.5 = 0.50$ , $\frac{7}{4} = 1\frac{3}{4} = 1.75$ ).	<b>1 day</b>
<b>Lesson 12.6</b> Solve Multistep Money Problems	<b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 13: Use Fractions to Understand Angles</b>		
<b>Lesson 13.1</b> Explore Lines, Rays, and Angles	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.	<b>1 day</b>
<b>Lesson 13.2</b> Explore Angles	<b>4.G.3</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. <b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.	<b>1 day</b>
<b>Lesson 13.3</b> Relate Angles to Fractional Parts of a Circle	<b>4.G.3</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. <b>4.M.5</b> Understand that an angle is measured with reference to a circle, with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle.  Understand an angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure other angles. Understand an angle that turns through $n$ one-degree angles is said to have an angle measure of $n$ degrees.	<b>1 day</b>
<b>Lesson 13.4</b> Relate Degrees to Fractional Parts of Circles	<b>4.G.3</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. <b>4.M.5</b> Understand that an angle is measured with reference to a circle, with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle.  Understand an angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure other angles. Understand an angle that turns through $n$ one-degree angles is said to have an angle measure of $n$ degrees. <b>4.M.6</b> Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.	<b>2 days</b>
<b>Lesson 13.5</b> Measure and Draw Angles Using a Protractor	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures. <b>4.M.6</b> Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.	<b>1 day</b>
<b>Lesson 13.6</b> Join and Separate Angles	<b>4.AT.1</b> Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	<b>1 day</b>
<b>Lesson 13.7</b> Find Unknown Angle Measures	<b>4.AT.1</b> Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	<b>1 day</b>



Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 5 OPERATIONS WITH FRACTIONS</b>		
<b>Module 14: Understand Addition and Subtraction of Fractions with Like Denominators</b>		
<b>Lesson 14.1</b> Decompose Fractions into Sums	<b>4.C.5</b> Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.	<b>1 day</b>
<b>Lesson 14.2</b> Join Parts of the Same Whole	<b>4.C.5</b> Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.	<b>1 day</b>
<b>Lesson 14.3</b> Represent Addition of Fractions	<b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction). <b>4.AT.5</b> Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem).	<b>1 day</b>
<b>Lesson 14.4</b> Separate Parts of the Same Whole	<b>4.C.5</b> Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.	<b>1 day</b>
<b>Lesson 14.5</b> Represent Subtraction of Fractions	<b>4.C.5</b> Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole. <b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	<b>1 day</b>
<b>Lesson 14.6</b> Add Fractional Parts of 10 and 100	<b>4.NS.4</b> Explain why a fraction, $\frac{a}{b}$ , is equivalent to a fraction, $\frac{(n \times a)}{(n \times b)}$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the principle to recognize and generate equivalent fractions.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 15: Add and Subtract Fractions and Mixed Numbers with Like Denominators</b>		
<b>INsuccess Lesson</b> Fractions Greater than 1 <i>Use before Lesson 15.1</i>	<b>4.NS.3</b> Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures.	<b>1 day</b>
<b>Lesson 15.1</b> Add and Subtract Fractions to Solve Problems	<b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction). <b>4.AT.5</b> Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem).	<b>1 day</b>
<b>Lesson 15.2</b> Rename Fractions and Mixed Numbers	<b>4.C.5</b> Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.	<b>1 day</b>
<b>Lesson 15.3</b> Add and Subtract Mixed Numbers to Solve Problems	<b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	<b>2 days</b>
<b>Lesson 15.4</b> Rename Mixed Numbers to Subtract	<b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	<b>1 day</b>
<b>Lesson 15.5</b> Apply Properties of Addition to Add Fractions and Mixed Numbers	<b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	<b>1 day</b>
<b>Lesson 15.6</b> Practice Solving Fraction Problems	<b>4.C.6</b> Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction). <b>4.AT.5</b> Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem).	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 16: Multiply Fractions by Whole Numbers</b>		
<b>Lesson 16.1</b> Understand Multiples of Unit Fractions	<b>4.NS.4</b> Explain why a fraction, $\frac{a}{b}$ , is equivalent to a fraction, $\frac{(n \times a)}{(n \times b)}$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the principle to recognize and generate equivalent fractions.	<b>1 day</b>
<b>Lesson 16.2</b> Find Multiples of Fractions	<b>4.NS.4</b> Explain why a fraction, $\frac{a}{b}$ , is equivalent to a fraction, $\frac{(n \times a)}{(n \times b)}$ , by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use the principle to recognize and generate equivalent fractions.	<b>1 day</b>
<b>Lesson 16.3</b> Represent Multiplication of a Fraction by a Whole Number	<b>4.AT.3</b> Interpret a multiplication equation as a comparison (e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7, and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations.	<b>2 days</b>
<b>Lesson 16.4</b> Solve Problems Using Multiplication of a Fraction or Mixed Number by a Whole Number	<b>4.AT.4</b> Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 6 TWO-DIMENSIONAL FIGURES AND SYMMETRY</b>		
<b>Module 17: Two-Dimensional Figures</b>		
<b>Lesson 17.1</b> Identify and Draw Perpendicular and Parallel Lines	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.	<b>1 day</b>
<b>Lesson 17.2</b> Identify and Classify Triangles by Angles	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures. <b>4.G.5</b> Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).	<b>1 day</b>
<b>Lesson 17.3</b> Identify and Classify Triangles by Sides	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures. <b>4.G.5</b> Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).	<b>1 day</b>
<b>Lesson 17.4</b> Identify and Classify Quadrilaterals	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures. <b>4.G.5</b> Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).	<b>1 day</b>
<b>Lesson 17.5</b> Measure and Draw Angles of Two-Dimensional Figures	<b>4.G.4</b> Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures. <b>4.M.6</b> Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.	<b>1 day</b>
<b>INsuccess Lesson</b> Draw Quadrilaterals <i>Use after Lesson 17.5</i>	<b>4.G.1</b> Identify, describe, and draw parallelograms, rhombuses, and trapezoids using appropriate tools (e.g., ruler, straightedge and technology).	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 18: Symmetry and Patterns</b>		
<b>Lesson 18.1</b> Recognize Lines of Symmetry	<b>4.G.2</b> Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have lines of symmetry.	<b>1 day</b>
<b>Lesson 18.2</b> Identify and Draw Lines of Symmetry	<b>4.G.2</b> Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have lines of symmetry.	<b>2 days</b>
<b>Lesson 18.3</b> Generate and Identify Shape Patterns	<b>4.AT.6</b> Describe a relationship between two variables and use to find a second number when a first number is given. Generate a number pattern that follows a given rule.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Unit 7 MEASUREMENT, DATA, AND TIME</b>		
<b>Module 19: Relative Sizes of Customary Measurement Units</b>		
<b>Lesson 19.1</b> Identify Customary Measurement Benchmarks	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 19.2</b> Compare Customary Units of Length	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>2 days</b>
<b>INsuccess Lesson</b> Length <i>Use after Lesson 19.2</i>	<b>4.M.1</b> Measure length to the nearest quarter-inch, eighth-inch, and millimeter.	<b>1 day</b>
<b>Lesson 19.3</b> Compare Customary Units of Weight	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 19.4</b> Compare Customary Units of Liquid Volume	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 19.5</b> Represent and Interpret Measurement Data in Line Plots	<b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.  <b>4.DA.2</b> Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using data displayed in line plots.	<b>1 day</b>
<b>INsuccess Lesson</b> Collect and Organize Data <i>Use after Lesson 19.5</i>	<b>4.DA.1</b> Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, and bar graphs.	<b>1 day</b>
<b>INsuccess Lesson</b> Bar Graphs <i>Use after Lesson 19.5</i>	<b>4.DA.1</b> Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, and bar graphs.	<b>1 day</b>
<b>INsuccess Lesson</b> Circle Graphs <i>Use after Lesson 19.5</i>	<b>4.DA.3</b> Interpret data displayed in a circle graph.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 20: Relative Sizes of Metric Measurement Units</b>		
<b>Lesson 20.1</b> Identify Metric Measurement Benchmarks	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 20.2</b> Compare Metric Units of Length	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 20.3</b> Compare Metric Units of Mass and Liquid Volume	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 20.4</b> Solve Problems Using Measurements	<b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	<b>1 day</b>

Lesson	Indiana Academic Standards: Mathematics (2020), Grade 4	Pacing
<b>Module 21: Solve Problems with Time and Measurement</b>		
<b>Lesson 21.1</b> Compare Units of Time	<b>4.M.2</b> Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two-column table.	<b>1 day</b>
<b>Lesson 21.2</b> Solve Problems Involving Elapsed Time	<b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	<b>1 day</b>
<b>Lesson 21.3</b> Solve Problems Involving Start Time and End Time	<b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	<b>1 day</b>
<b>Lesson 21.4</b> Practice with Mixed Measures	<b>4.M.3</b> Use the four operations to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	<b>1 day</b>