First Grade Harcourt Math Sequence

September:
Chapter 1 Addition Concepts
Chapter 2 Using Addition
Chapter 3 Subtraction Concepts

October:
Chapter 4 Using Subtraction
Chapter 5 Addition Strategies
Chapter 6 Addition Facts Practice
Chapter 7 Subtraction Strategies

November:
Chapter 8 Subtraction Facts Practice
Chapter 9 Graphs & Tables
Chapter 10 Place Value to 100

December:
Chapter 11 Comparing & Ordering Numbers
Chapter 12 Number Patterns
Chapter 13 Addition & Subtraction Facts to 12

January:
Chapter 14 Practice Addition & Subtraction
Chapter 15 Solid Figures & Plane Shapes
Chapter 16 Spatial Sense

February:
Chapter 17 Patterns
Chapter 18 Addition Facts & Strategies
Chapter 19 Subtraction Facts & Strategies

March:
Chapter 20 Addition & Subtraction Practice
Chapter 21 Fractions
Chapter 22 Counting Pennies, Nickels, and Dimes

April:
Chapter 23 Using Money
Chapter 24 Telling Time
Chapter 25 Time & Calendar

May & June:
Chapter 29 Adding & Subtracting 2-Digit Numbers
Chapter 30 Probability
Chapter 26 Length
Chapter 27 Weight
Chapter 28 Capacity

Topic: Telling Time

Essential Questions: How do you read a clock?

Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.M.8 1.PS.10	*What are the parts of an analog clock? *How do you write the time on a digital clock? *How can we estimate to solve problems? *Can you read a clock that shows time to the hour and half hour?	SWBAT: *Tell time to the hour using both digital and analog clocks *Explain to others how a problem was solved, giving strategies and justifications	Student clocks Analog clocks Digital clocks	Chapter Tests Unit Tests Teacher observation Student work

Connections to Text (Resources): Harcourt Math series **Time:** March

Connections to Technology: eHarcourt , Harcourt Mega Math, Compass Learning

Key Vocabulary: O'clock, minute hand, hour hand, minute, hour, half hour

Topic: Addition

Essential Questions: Why do I add? When do I add?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
1.N.10 1.N.15 1.N.17 1.N.18 1.N.19 1.N.24 1.N.25 1.N.27 1.N.28 1.A.1 1.PS.7 1.PS.8 1.PS.10	• How do you use pictures to show addition? • How do you make an addition sentence? • What symbols do we use to write an addition sentence? • What do we call the answer to an addition problem? • How do you write a horizontal addition sentence? • How do you write a vertical addition sentence? • Can you count on from a given number to find a sum? • How can we use a number line to count on to find a sum? • Can you write addition and subtraction sentences using the same three numbers? • Do you know your addition facts through 20? • What words tell us to add and subtract? *What happens when you add zero to a number? *How can you solve a problem by writing a number sentence? *What is the order property? *Can you identify combinations for sums through 10? *How can you solve a problem by making a model? *How can you use doubles and doubles plus one to find sums? *Can you use an addition rule to	SWBAT: • Count by 1's to 100 • Draw pictures or other informal symbols to represent a spoken number up to 20 • Develop and use strategies to solve addition and subtraction word problems • Represent addition and subtraction word problems and their solutions as number sentences • Use a variety of strategies to solve addition and subtraction problems with one- and two-digit numbers without regrouping • Demonstrate fluency and apply addition and subtraction facts to and including 10 • Understand that different parts can be added to get the same whole * Understand the commutative property of addition * Use a variety of strategies to compose and decompose one digit numbers * Develop an initial understanding of the base ten system * Explore and use place value * Explain to others how a problem was solved, giving strategies and justifications	Counting on Number line Manipulatives Drawing pictures Ten frame Math games: Around the World Addition Bingo Dice game	Chapter Tests Unit Tests Teacher observation Student work

	complete function tables through sums of 10? *How can you use different strategies to find the sum of three numbers? *Can you identify the missing number in a number sentence? *How do you choose the appropriate strategy to solve a problem? *How can a ten frame help us to find sums? *How can we use data from a table to help us solve problems? *Can you add tens in your head? *Can you add 1- and 2-digit numbers (without regrouping)? *When do you estimate to solve a problem?	* Determine and discuss patterns in arithmetic (what comes next in a repeating pattern, using numbers or objects) *Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking *Use manipulatives to model the action in problems		

Connections to Text (Resources): Harcourt Math series **Time:** Sept.-Nov./year-round
Connections to Technology: eHarcourt , Harcourt Mega Math, Compass Learning
Key Vocabulary: in all, plus, equals, sum, addition sentence, zero, count on, doubles, doubles plus one, number line, related facts, rule, order, fact family, tens, ones, about, estimate

Topic: Comparing and Ordering Numbers
Essential Questions: Why do we put numbers in order and how do we compare them?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
1.N.22 1.N.16 1.N.20 1.N.8 1.N.24	*What words do you use to compare two numbers (up to 100)? *How do you put numbers in order from lowest to highest? *How do you put numbers in order from highest to lowest? *How do you know what number(s) come(s) between two numbers? *What number comes before a given number? *What number comes after a given number? *How do you count forward by ones from a given number other than one? *How do you count backward by ones from a given number?	SWBAT: *use words higher, lower, greater, and less to compare two numbers *compare and order whole numbers up to 100 *name the number before and the number after a given number, and name the number(s) between 2 given numbers up to 100 (with and without the use of a number line or a hundreds chart) *verbally count from a number other than 1 by ones *develop and use strategies to solve addition and subtraction word problems	*Number lines *Hundreds chart *Base ten blocks *Connecting cubes	Chapter test Unit test Teacher observation Student work

Connections to Text (Resources): Harcourt Math series	**Time:** January
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: greater than >, less than <, equal to =, before, after, between, count forward, count backward, higher, lower	

Topic: Graphs and Tables
Essential Questions: How do you use graphs and tables to sort and classify information?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
1.S.5 1.S.4 1.S.3 1.S.2 1.S.6	*How do you sort and classify objects by kind or type? * How do you make a graph using real objects? *How do you make a graph from a tally chart? *How do you use information or data from a graph to solve problems?	SWBAT: *use Venn diagrams to sort and describe data *display data in bar graphs using concrete objects with intervals of one *display data in simple pictographs for quantities up to 20 with units of one *collect and record data related to a question *interpret data in terms of the words: most, least, greater than, less than, or equal to	Attribute links Manipulatives Student surveys	Chapter Test Unit Tests Teacher observation Student work

Connections to Text (Resources): Harcourt Math series	**Time:** December
Connections to Technology: Harcourt Mega Math, eHarcourt, Compass Learning	
Key Vocabulary: concrete graph, picture graph, sort, tally table, tally mark, bar graph, data, Venn diagrams	

Topic: Measurement				
Essential Questions: Why is measurement important in our world?				
Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.M.1 1.M.2 1.M.3 1.PS.10 1.M.11 1.PS.7	*How can we order objects by length? *Can you estimate and measure length using nonstandard units? *Can you estimate and measure length to the nearest inch using an inch ruler? *When would you use inches to measure? *Can you estimate how long something is? *When would you predict and test to solve a problem? *Can you estimate and measure capacity using nonstandard units? *Do you know which measuring tool to use to solve problems?	SWBAT: *Recognize length as an attribute that can be measured *Use nonstandard units (including finger lengths, paper clips, students, feet, paces) to measure both vertical and horizontal lengths *Informally explore the standard unit of measure, inch *Explain to others how a problem was solved, giving strategies and justifications *Select and use nonstandard units to estimate measurements *Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking	Rulers (inch & centimeters)	Chapter Tests Unit Tests Teacher observation Student work

Connections to Text (Resources): Harcourt Math series	**Time:** May
Connections to Technology: eHarcourt , Harcourt Mega Math, Compass Learning	
Key Vocabulary: measure, inch, ruler	

Topic: Money
Essential Question: How can counting coins help us to use money?

Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.M.4 1.M.5 1.M.6 1.PS.7 1.PS.9	*What is a penny and what is its value? *What is a nickel and what is its value? *What is a dime and what is its value? *What is a quarter and what is its value? *How do you count groups of coins? *How many pennies does each of the coins equal? *How can you make a list to solve problems? *How can you show the same amount by using different coin combinations? *How can you act it out to solve problems?	SWBAT: *Know vocabulary and recognize coins (penny, nickel, dime, quarter) *Use different combinations of coins to make money amounts up to 25¢ *Recognize the cent notation as ¢	Coins Cash register Classroom store Money Bingo	*Chapter test *Unit test *Teacher observation *Student work

Connections to Text (Resources): Harcourt Math series Chapter 22 & Chapter 23 (Lessons 1, 2, and 6)	**Time: March**
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: penny, nickel, dime, cent, amount, tens, ones, count on, quarter, trade, fewest	

Topic: Number Patterns
Essential Questions: What kind of patterns can you make?

Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.A.1 1.N.23	*How do you skip count by twos, fives, and tens verbally and using a hundreds chart? *What does it mean to be first, second, third, etc. to tenth? *What is an odd number? *What is an even number? *What is the given pattern? *What comes next in a repeating pattern?	SWBAT: *determine and discuss patterns in arithmetic (what comes next in a repeating pattern, using numbers or objects) *use and understand verbal ordinal terms, first to twentieth	*Hundreds chart *Number lines *Connecting cubes *Calendar	Chapter test Unit test Teacher observation Student work

Connections to Text (Resources): Harcourt Math series	**Time:** January
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: skip count, pattern, even, odd	

Topic: Patterns
Essential Questions: What patterns do we see in daily life and how does this help us?

Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.A.1	*How do you identify, describe, and extend patterns? *What is a pattern unit? *How do you copy a pattern? *How can you use the same shapes to make a different pattern? *How do you solve a problem by correcting a pattern? *Are you able to transfer patterns from one medium to another?	SWBAT: • Determine and discuss patterns in arithmetic (what comes next in a repeating pattern, using numbers or objects)	Plane shapes Pattern blocks	*Chapter test *Unit test *Teacher observation *Student work

Connections to Text (Resources): Harcourt Math series Chapter 17	**Time: March**
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: pattern, pattern unit	

Topic: Place Value to 100
Essential Questions: How does the placement of a numeral in a two or three digit number affect its value?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
1.N.17 1.N.2 1.N.15 1.PS.10	*How do you group numbers between 10 and 20? *How do you say and write numbers with tens and ones up to 100? *How can you make groups of 10 using connecting blocks? *How do you count by tens to 100? *How do you count groups of objects? *When can you estimate to solve a problem?	SWBAT: *develop an initial understanding of the base 10 system: 10 ones = 1 ten, 10 tens = 1 hundred *count out (produce) a collection of specified size (10-100 items) using groups of ten *explore and use place value *explain to others how a problem was solved, giving strategies and justifications	Base ten blocks Connecting cubes	*Chapter test *Unit test *Teacher observation *Student work

Connections to Text (Resources): Harcourt Math series	**Time:** December
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: ones, tens, hundred, estimate	

Topic: Probability				
Essential Questions: When is something likely to happen? When is something not likely to happen?				
Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.PS.7 1.S.8 1.S.2	*How do you know if an event is certain? *How do you know if an event is impossible? *How do you know if an event is more likely? *How do you know if an event is less likely? *How do you know if events are equally likely? *How can you make a prediction to solve problems?	SWBAT: *compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking *discuss conclusions and make predictions in terms of the words *likely* and *unlikely* *collect and record data related to a question	Spinners Counting cubes Number cubes (dice)	Chapter Tests Unit Tests Teacher observation Student work

Connections to Text (Resources): Harcourt Math series	**Time:** June
Connections to Technology: eHarcourt , Harcourt Mega Math, Compass Learning	
Key Vocabulary: certain, impossible, more likely, less likely, equally likely	

Topic: Solid Figures and Plane Shapes
Essential Questions: How are solid figures and plane shapes like real objects?

Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.G.2 1.G.1	*How do you identify, sort, and classify solid figures by properties (stack, roll, slide)? *How do you relate solid figures to everyday objects? *How do you sort and classify solid figures by the number of faces and vertices? *How do you identify plane shapes on solid figures? *How do you sort and identify plane shapes by the number of sides and vertices? *How do you solve a problem by using plane shapes to make a model?	SWBAT: * Recognize, name, describe, create, sort, and compare two-dimensional and three dimensional shapes * Match shapes and parts of shapes to justify congruency	Solid figures Plane shapes Attribute links	*Chapter test *Unit test *Teacher observation *Student work

Connections to Text (Resources): Harcourt Math series Chapter 15	**Time:** February
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: solid figure, plane shape, sphere, cone, cube, cylinder, rectangular prism, pyramid, face, vertex, vertices, rectangle, square, circle, triangle, side	

Topic: Spatial Sense
Essential Questions: How can maps and directions help us find places?

Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.G.2 1.PS.9 1.G.4 1.G.3	*What is an open figure? *What is a closed figure? *How can you use a picture to solve a problem? *How can you use position words (left, right, up, and down) to give and follow directions? *What is a line of symmetry? *What makes a shape symmetrical? *What is a slide? *What is a turn? *What is a flip?	SWBAT: * Recognize, name, describe, create, sort, and compare two-dimensional and three dimensional shapes * Use drawings/pictures to model the action in problems * Identify symmetry in two-dimensional shapes * Experiment with slides, flips, and turns of two-dimensional shapes	Make symmetrical shapes using construction paper Wikki stix Yarn Rectangle pattern blocks	*Chapter test *Unit test *Teacher observation *Student work

Connections to Text (Resources): Harcourt Math series Chapter 16	**Time:** February
Connections to Technology: eHarcourt, Harcourt Mega Math, Compass Learning	
Key Vocabulary: open figure, closed figure, above, below, close by, over, near, far, next to, beside, left, right, up, down, line of symmetry, slide, turn, flip	

Topic: Subtraction

Essential Questions: Why do I subtract? When do I subtract?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
1.N.4 1.N.9 1.N.10 1.N.24 1.N.25 1.N.27 1.N.28 1.N.29	• How do you use pictures to show subtraction? • How do you make a subtraction sentence? *How many are left when subtracting all or zero? *How can you break a number into two parts? • What symbols do we use to write a subtraction sentence? • What do we call the answer to a subtraction problem? • How do you write a horizontal subtraction sentence? • How do you write a vertical subtraction sentence? *Can you find the difference between two groups that are not the same? *Can you count back from 10? • How can we use a number line to count back? • Can you write addition and subtraction sentences using the same three numbers? • Do you know your subtraction facts through 20? • What words tell us to add and subtract?	SWBAT: • Count by 1's to 100 *Count backwards from 20 by 1's • Draw pictures or other informal symbols to represent a spoken number up to 20 • Develop and use strategies to solve addition and subtraction word problems • Represent addition and subtraction word problems and their solutions as number sentences • Use a variety of strategies to solve addition and subtraction problems with one- and two-digit numbers without regrouping • Demonstrate fluency and apply addition and subtraction facts to and including 10 • Understand that different parts can be added to get the same whole	Counting back Number line Manipulatives Drawing pictures Math games: Around the World Subtraction Bingo Dice game	Chapter Tests Unit Tests Teacher observation Student work

Connections to Text (Resources): Harcourt Math series **Time:** Sept.-Nov./year-round

Connections to Technology: eHarcourt , Harcourt Mega Math, Compass Learning

Key Vocabulary: How many are left, minus, equals, difference, subtraction sentence, zero, more, count back, number line, related facts, rule, fact family

Topic: Time & Calendar				
Essential Questions: How can we measure periods of time?				
Performance Indicators	**Guided Questions**	**Essential Knowledge & Skills**	**Classroom Ideas (Instructional Strategies)**	**Assessment Ideas (Evidence of Learning)**
1.M.9 1.M.7 1.S.2 1.PS.10 1.M.10	*What are the parts of a calendar? *How do you read and understand a calendar? *How do you show the order of daily events? *How can you make a graph to solve problems? *How do you use a schedule to get information and compare events? *When should you estimate to solve problems?	SWBAT: *Know the days of the week and months of the year in sequence *Recognize specific times (morning, noon, afternoon, evening) *Collect and record data related to a question *Explain to others how a problem was solved, giving strategies and justifications *Classify months and connect to seasons and other events	Use of calendars on a daily basis Birthday bulletin board Clock	Chapter Tests Unit Tests Teacher observation Student work

Connections to Text (Resources): Harcourt Math series	**Time:** April
Connections to Technology: eHarcourt , Harcourt Mega Math, Compass Learning	
Key Vocabulary: month, morning, afternoon, evening, chart, calendar, bar graph	