

LAS VEGAS CITY SCHOOLS

ELEMENTARY MATH CURRICULUM

Grade 1 Math Curriculum

Grade 1 Math Curriculum Alignment with State Standards

NM Statute 22-13-1.6.A. Each school district shall align its curricula to meet the state standards for each grade level and subject area so that students who transfer between public schools within the school district receive the same educational opportunity within the same grade or subject area.

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: NUMBER AND OPERATIONS	Standard: Students will understand numerical concepts and mathematical operations.	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.N.1.1 Demonstrate an understanding of the place-value structure of the base-ten number system: a. read, write, model, and sequence whole numbers up to 100 (including filling in missing numbers in a sequence) b. count with understanding and recognize “how many” in sets of objects up to 50 c. count orally by 2s to 20 and by 5s and 10s to 100 d. count orally backward from 100 e. compare and order numbers up to 100 f. decompose and recombine numbers using manipulatives (e.g., by breaking numbers apart and recombining) to create and construct equivalent representations for the same number (e.g., $10 = 3 + 7$ or $1 + 2 + 7$ or $3 + 2 + 5$) g. group objects by 10s and 1s to explore place value (e.g., 24 equals two tens and four ones) h. use ordinal numbers (e.g., what position?) and cardinal numbers (e.g., how many?) appropriately i. connect number words and numbers to the quantities they represent	157-158, 159-160, 161-162, 163-164, 165-166, 172, 181-182, 183-184, 185-186, 193-194, 195-196, 197-198, 201-202, 248	Lego blocks, - Manipulatives - Math box, number chart	Sept-Oct-Nov
	157-158, 159-160, 161-162, 163-164, 165-166, 167-168, 172, 185-186, 193-194	Manipulatives	Sept-Oct.
	157-158, 159-160, 161-162, 163-164, 165-166, 167-168, 172, 185-186, 193-194	Oral	Nov- Dec-Jan
	193-194, 195-196, 197-198, 201-202, 208	Board – math books – number chart Number chart Manipulatives – math books	Oct-Nov Oct-Feb
	183-184 175-186, 190 157-158, 159-160, 161-162, 163-164, 165-166, 375-376 17-18, 19-20, 21-22, 23-24, 89-90, 165-166, 348 157-158, 159-160, 161-162, 163-164, 161-165, 165-166,	Boardwork, - math book	January-Feb
	172, 301-302, 303-304, 305-306, 489-490, 495-496	Manipulatives – math book	Oct-Nov
	157-158, 159-160, 161-162, 163-164, 165-166, 203-204	Students – manipulatives	Aug-May (daily)
	157-158, 159-160, 161-162, 163-164, 165-166, 172	Mathbooks – flashcards – oral – board work	Sept

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.3: Compute fluently and make reasonable estimates.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.N.3.1 Use strategies for whole-number computation, with a focus on addition and subtraction (e.g., counting on or counting back, doubles, sums that make 10, direct modeling with pictures or objects, numerical reasoning based on number combinations and relationships).	3-4, 5-6, 7-8, 9-10, 17-18, 19-20, 21-22, 23-24, 25-26, 33-34, 35-36, 37-38, 39-40, 41-42, 49-50, 51-52, 53-54, 55-56, 57-58, 62, 63, 64, 68, 71-72, 73-74, 75-76, 77-78, 85-86, 87-88, 89-90, 93-84, 101-102, 103-104, 105-106, 107-109, 115-116, 117-118, 121-122, 123-124, 128, 130, 211-212, 213-214, 215-216, 219-220, 221-222, 229-230, 231-232, 233-234, 235-236, 237-238, 242-299-300, 301-302, 303-304, 305-306, 317-318, 319-320, 321-322, 331-332, 333-334, 335-336, 337-338, 344	Manipulatives – board – flash cards – math book – drawing – calendar	September – December
1.N.3.2 Demonstrate a variety of methods to compute (e.g., objects, mental computation, paper and pencil, and estimation).	3-10, 17-18, 19-26, 33-42, 49-50, 51-52, 53-54, 55-56, 57-58, 62, 63, 64, 71-72, 73-74, 75-76, 77-78, 82, 85-86, 93-94, 101-102, 103-104, 105-106, 107-108, 115-116, 123-124, 128, 129, 134, 211-212, 213-214, 217-218, 219-220, 221-222, 229-230, 231-232, 233-234, 235-236, 237-238, 299-300, 301-302, 303-304, 305-306, 317-318, 319-320, 321-322, 323-324, 331-332, 337-338, 487-488, 489-490, 493-494, 495-496, 499-500	Board – math book – art work Estimation games – cubes	August – May
1.N.3.3 Perform addition and subtraction with whole number combinations.	3-26, 30, 33-42, 46, 49-50, 51-52, 53-54, 55-56, 57-58, 62, 63, 64, 68, 71-72, 73-74, 75-76, 77-78, 82, 85-86, 87-88, 89-90, 91-92, 93-94, 98, 101-102, 103-104, 105-106, 107-108, 112, 115-116, 117-119, 119—120, 121-122, 123-124, 128, 129, 130, 134, 211-212, 213-214, 215-216, 217-218, 219-220, 221-222, 226, 229-230, 231-232, 233-234, 235-236, 237-238, 242-299-300, 301-302, 303-304, 305-306, 309-310, 314, 317-318, 319-320, 321-322, 323-324, 328, 331-332, 333-*334, 335-336, 337-338, 342, 344, 348, 487-488, 489-4-490, 491-492, 493-494, 495-496, 497-498, 499-500, 504	Work book – board – manipulatives – drawings – flash cards – groups – touch math	September – May
1.N.3.4 Use and explain estimation strategies to determine the reasonableness of answers involving addition and subtraction.	167-168, 323-324, 499-500	Work book - board	Jan - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.1: Understand patterns, relations, and functions.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.1.1 Recognize, reproduce, describe, extend, and create repeating patterns (e.g., color, shape, size, sound, movement, simple numbers) and translate from one representation to another (e.g., red, red, blue, blue to step, step, clap, clap).	193-194, 199-200, 201-202, 208, 283-284, 285-286, 287-288, 289-290, 291-292, 296	Work book – board – manipulatives – graphs	August – Dec
1.A.1.2 Skip-count on a hundreds chart (e.g., by 2s up to 20 and 5s and 10s up to 100) to identify, describe, and predict number patterns.	195-196, 197-198	Number chart – board – groups – work book – grid	August – Nov
1.A.1.3 Identify number patterns on the hundreds chart.	195-196, 197-198	Number chart	Oct – May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.2.1 Write number sentences that use concrete objects, pictorial, and verbal representations to express mathematical situations using invented and conventional symbols (e.g., +, -, =).	9-10, 37-38, 93-94, 123-124, 217-218, 237-238	Board – workbook – oral – manipulatives – pattern blocks	Oct – Nov
1.A.2.2 Demonstrate and describe the concept of equal (e.g., using objects, balance scales).	5-6, 457-458	Work book – manipulatives groups – math box – problema del dia (problem of the day)	Feb – May
1.A.2.3 Solve open number sentences that have variables representing numbers up to 10 (e.g., $10 = \bullet + 2$).	130, 235-236	Math book – board – paper – groups Teacher directed instruction	Sept – Nov

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.3.1 Represent equivalent forms of the same number through the use of physical models, diagrams, and number expressions to 20 (e.g., $3 + 5 = 8$, $2 + 6 = 8$).	17-18, 19-20, 21-22, 23-24, 64, 68, 89-90, 165-166, 335-336, 348	Manipulatives – work book – math box- board work – work sheets – charts	Aug – Nov
1.A.3.2 Describe situations that involve addition and subtraction of whole numbers including objects, pictures, and symbols (e.g., Robert has four apples, Maria has five more).	9-10, 25-26, 33-34, 35-36, 49-40, 55-56, 57-58, 63, 77-78, 93-94, 107-108, 123-124, 129, 217-218, 221-222, 237-238, 323-324, 337-338, 344	Math box – work book – board work – manipulatives – touch math – visual examples	August - Nov

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.4: Analyze changes in various contexts.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.4.1 Describe qualitative change (e.g., a student growing taller, trees getting bigger, ice melting).	539-540	Graphs – seasons – observations – weather chart	Oct – Nov/May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.G.1.1 Identify common geometric figures and classify them by common attributes:		Math box – math book – oral	Nov - Jan
a. recognize, name, build, and draw both polygonal (up to six sides) and curved shapes	255-256, 257-258, 259-260	Math box – math book – oral	March – May
b. sort two- and three-dimensional shapes into categories based on common attributes	251-252, 253-254, 257-258	Math box – math book – oral	March – May
c. use the attributes of shapes to analyze and identify examples and non-examples of geometric shapes	267-268	Math box – math book – oral	March – May
d. participate in discussions comparing, identifying, and analyzing attributes to develop the vocabulary needed to describe two- and three-dimensional geometric shapes and their attributes (e.g., sides, corners, edges, faces)	251-252, 257-258	Math box – math book – oral Geo blocks/boards Shape Chart Bingo shape game Manipulatives	March - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY

Standard: Students will understand geometric concepts and applications.

K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
<p>1.G.2.1 Participate in group and individual activities based on the concepts of space and location:</p> <p>a. describe direction, location, space, and shape (e.g., left, right, over, under, near, far, between)</p> <p>b. visualize, describe, and record directions for navigating from one location to another to develop the vocabulary needed to describe direction, distance, location, and representation</p> <p>c. use materials to create representations of the surrounding environment (e.g., three-dimensional models, maps of the classroom)</p> <p>d. develop estimates and measure distances using nonstandard measurements</p>	<p>269-270, 271-272, 280, 343</p> <p>269-270, 271-272, 343</p> <p>545-546, 543-544</p> <p>547-548</p>	<p>Oral – maps – rulers – math - books – groups – field trip - songs</p> <p>Oral – maps – rulers – math - books – groups – field trip - songs</p> <p>Oral – maps – rulers – math - books – groups – field trip – songs</p> <p>Oral – maps – rulers – math - books – groups – field trip – songs</p> <p>Oral – maps – rulers – math - books – groups – field trip - songs</p>	<p>Oct - Jan</p> <p>August – May</p> <p>August – May</p> <p>Nov – May</p> <p>Nov – May</p>

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.G.3.1 Predict the results of changing a shape's position or orientation by using rotation (i.e., turns), reflection (i.e., flips), and translations (i.e., slides) .	251-252, 275-276	Oral, math book, groups, coins, music	Dec – May
1.G.3.2 Create simple symmetrical shapes and pictures.	273-274	Drawings – groups - oral – art	Jan – May
1.G.3.3 Recognize and describe the symmetric characteristics of designs (e.g., geometric designs made with pattern blocks).	273-274	Math box, math book, oral, groups, pattern blocks	Jan - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.G.4.1 Use combinations of shapes to make a new shape to demonstrate relationships between shapes (e.g., a hexagon can be made from six triangles).	259-260, 264	Math box – work books – art	March – May
1.G.4.2 Create three-dimensional shapes based on two-dimensional representations.	541-542	Math box – work books – geo blocks	May
1.G.4.3 Participate in activities to develop mental visualization and spatial memory (e.g., “quick image” activities that require students to recall or reproduce a configuration of dots on a card or to determine the number of dots without counting).	255-256, 257-258	Board – oral – work books – math box – visual chart - # line – touch math – dominoes	Sept – Nov
1.G.4.4 Describe how to get from one location to another by visualizing the landmarks along the route.	343	Oral – drawings – groups – maps with directions	March – April
1.G.4.5 Identify structures from different views or match views of the same structure portrayed from different perspectives.	255-256	Pictures – drawings – groups – compare and contrast – visual structures	Oct - March

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.M.1.1 Develop an understanding of measurable properties (e.g., length, volume, weight, area, and time) using appropriate concepts and vocabulary: a. length by measuring and estimating (e.g., longer, shorter, meter, centimeter, inch, yard) b. weight by measuring, estimating, and weighing (e.g., heavy [-ier], light [-er]) c. volume by measuring, estimating, and weighing (e.g., full, empty) d. area by measuring and estimating (e.g., perimeter, rectangles, squares) e. time by estimating (e.g., minutes, hours, days, weeks)	401-402, 405-406, 407-408, 409-410, 414, 430, 436 439-440, 441-442, 443-444, 445-446, 447-448, 449-450, 454 457-458, 459-460, 461-462, 463-464, 468 457-458, 459-460 553-554, 555-556 403-404, 417-418, 125-426	Pitcher – bottle Math book – measuring cup Rulers, paper clips – groups Measuring cup – manipulatives groups Tape measure – walking of area Clocks – work book – work sheet - calendars	April - May April - May April - May April - May April - May
1.M.1.2 Use digital and analog (face) clocks to tell time to the half hour.	401-402, 405-406, 400-408, 409-410, 414, 430, 436	clocks	April - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.M.2.1 Measure with multiple copies of units the same size (e.g., paper clips).	441-442, 449-450, 484	Paper clips – manipulatives	April – May
1.M.2.2 Use repetition of a single unit to measure something larger than the unit (e.g., a yardstick/meterstick to measure a room).	441-442, 449-450, 484	Rulers - yard stick – measuring tape	April - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.1.1 Collect, organize, represent, and compare data by category on graphs and charts to answer simple questions: a. answer questions about “how” data can be gathered b. gather data by interviewing, surveying, and making observations c. organize data into appropriate categories by sorting based on shared properties d. participate in discussions about selecting an appropriate way to display the data e. represent data using objects, pictures, tables, and simple bar graphs	139-140, 141-142, 143-144, 145-146, 149-150, 154, 421-422	Graphs – groups – work book	Oct – Nov
	145-146	Charts	Oct – Nov
	139-140, 143-144, 421-422	Oral	Oct – Nov
	137-138, 139-140, 141-142, 143-144, 145-146, 154	Oral math box	Oct – Nov
	545-546	Board – graphs – oral	May
	139-140, 141-142, 143-144, 145-146, 154, 421-422	drawings – math book	Oct – Nov

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.2.1 Analyze simple data: a. interpret what the graph or other representation shows b. determine whether or not the data gathered helps answer the specific question that was posed c. compare parts of the data (e.g., “How many students have lost none, one, two, or three teeth?”) to make statements about the data as a whole (e.g., “Most students in the class have lost only two teeth”)	139-140, 141-142, 143-144, 145-146, 147-148, 149-150, 431 139-140 139-140, 141-142, 143-144, 145-146, 147-148, 149-150	Paper – groups – story problems – graphs – die cut shapes – charts Oral – work book - paper	Oct – May September - October

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.3.1 Make conclusions based on data (e.g., whether or not other groups would reach similar conclusions based on the same data).	139-140, 141-142, 143-144, 145-146, 147-148, 149-150	Board – groups – paper – scavenger hunt – science reader – graphs	Oct - Dec

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.4: Understand and apply basic concepts of probability.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.4.1 Discuss the likelihood of events (based on student experiences or from books) using terminology such as “more likely”, “less likely”, “possible”, or “certain”.	507-508, 509-510, 511-512	Oral – work book – math box – big books	March
1.D.4.2 Observe, explore, and discuss whether some events occur more often than others (e.g., tossing two die and recording the sum after each toss to explore whether or not certain sums occur more frequently than others).	513-514	Math box – oral - Ven diagrams – chart papers – dice	Oct /Dec/May

Grade 1 Math Curriculum Alignment with State Standards

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District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: NUMBER AND OPERATIONS	Standard: Students will understand numerical concepts and mathematical operations.	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.N.1.1 Demonstrate an understanding of the place-value structure of the base-ten number system:		Lego blocks, - Manipulatives - Math box	Oct. thru Feb.
a. read, write, model, and sequence whole numbers up to 100 (including filling in missing numbers in a sequence)	157-158, 159-160, 161-162, 163-164, 165-166, 172, 181-182, 183-184, 185-186, 193-194, 195-196, 197-198, 201-202, 248	Manipulatives	August - September
b. count with understanding and recognize “how many” in sets of objects up to 50	157-158, 159-160, 161-162, 163-164, 165-166, 167-168, 172, 185-186, 193-194	Oral	August – December
c. count orally by 2s to 20 and by 5s and 10s to 100	193-194, 195-196, 197-198, 201-202, 208	Board – math books – number chart	August
d. count orally backward from 100	183-184	Number chart	May
e. compare and order numbers up to 100	175-186, 190	Manipulatives – math books	May
f. decompose and recombine numbers using manipulatives (e.g., by breaking numbers apart and recombining) to create and construct equivalent representations for the same number (e.g., $10 = 3 + 7$ or $1 + 2 + 7$ or $3 + 2 + 5$)	157-158, 159-160, 161-162, 163-164, 165-166, 375-376 17-18, 19-20, 21-22, 23-24, 89-90, 165-166, 348 157-158, 159-160, 161-162, 163-164, 161-165, 165-166,	Board work, - math book	January
g. group objects by 10s and 1s to explore place value (e.g., 24 equals two tens and four ones)	172, 301-302, 303-304, 305-306, 489-490, 495-496	Manipulatives – math book	November
h. use ordinal numbers (e.g., what position?) and cardinal numbers (e.g., how many?) appropriately	157-158, 159-160, 161-162, 163-164, 165-166, 203-204	Students – manipulatives	April
i. connect number words and numbers to the quantities they represent	157-158, 159-160, 161-162, 163-164, 165-166, 172	Math books – flashcards – oral – board work	March

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.N.2.1 Use a variety of models to demonstrate an understanding of addition and subtraction of whole numbers.	3-10, 17-26, 33-34, 35-36, 37-38, 39-40, 41-42, 49-50, 51-52, 53-54, 55-56, 57-58, 63, 64, 71-72, 73-74, 75-76, 77-78, 87-88, 101-102, 103-104, 105-106, 107-108, 121-122, 123-124, 211-212, 213-214, 215-216, 219-220, 221-222, 229-230, 231-232, 235-236, 237-238, 299-300, 301-302, 303-304, 305-306, 317-308, 335-336, 337-338, 489-490, 495-496	Math box – quiz. Rods – board work – math book-groups	August – May
1.N.2.2 Solve addition and subtraction problems with one- and two-digit numbers (e.g., $5 + 58 = \bullet$).	3-26, 30, 33-42, 46, 49-58, 62, 63, 64, 68, 71-72, 73-74, 75-76, 77-78, 82, 85-86, 87-88, 89-90, 91-92, 93-84, 98, 101-102, 103-104, 105-106, 107-108, 112, 115-116, 117-118, 119-120, 121-122, 123-124, 128, 129, 130, 134, 211-212, 213-214, 215-216, 217-218, 219-220, 221-222, 226, 229-230, 231-232, 233*-234, 235-236, 237-238, 242, 299-300, 301-302, 303-304, 305-306, 309-310, 314, 317-318, 319-320, 321-322, 323-324, 328, 331-332, 333-334, 335-336, 337-338, 342, 344, 348, 487-488, 249-490, 491-492, 493-494, 495-496, 497-498, 499-500, 504, 524	Map – board work – math box – math book – work sheets - groups	September – May
1.N.2.3 Find the sum of three one-digit numbers to the sum of 15.	215-216, 307-308	Board work – math book	April
1.N.2.4 Understand and use the inverse relationship between addition and subtraction to solve problems and check solutions (e.g., $8 + 6 = 14$ is related to $14 - 6 = 8$).	105-106, 121-122, 229-230, 231-232, 233-234, 235-236, 319-320, 321-322, 331-332	Board – math book – manipulatives – flash cards	August - December -
1.N.2.5 Use concrete materials to investigate situations that relate to multiplication and division (e.g., equal groupings of objects, sharing equally).	549-550, 551-552	Math book – math box	April – May
1.N.2.6 Given simple story problems, explain verbally how to select and use appropriate operations.	123-124, 237-238	Math book – board - groups	February - May

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Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.3: Compute fluently and make reasonable estimates.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.N.3.1 Use strategies for whole-number computation, with a focus on addition and subtraction (e.g., counting on or counting back, doubles, sums that make 10, direct modeling with pictures or objects, numerical reasoning based on number combinations and relationships).	3-4, 5-6, 7-8, 9-10, 17-18, 19-20, 21-22, 23-24, 25-26, 33-34, 35-36, 37-38, 39-40, 41-42, 49-50, 51-52, 53-54, 55-56, 57-58, 62, 63, 64, 68, 71-72, 73-74, 75-76, 77-78, 85-86, 87-88, 89-90, 93-84, 101-102, 103-104, 105-106, 107-109, 115-116, 117-118, 121-122, 123-124, 128, 130, 211-212, 213-214, 215-216, 219-220, 221-222, 229-230, 231-232, 233-234, 235-236, 237-238, 242-299-300, 301-302, 303-304, 305-306, 317-318, 319-320, 321-322, 331-332, 333-334, 335-336, 337-338, 344	Manipulatives – board – flash cards – math book – drawing	September – December
1.N.3.2 Demonstrate a variety of methods to compute (e.g., objects, mental computation, paper and pencil, and estimation).	3-10, 17-18, 19-26, 33-42, 49-50, 51-52, 53-54, 55-56, 57-58, 62, 63, 64, 71-72, 73-74, 75-76, 77-78, 82, 85-86, 93-94, 101-102, 103-104, 105-106, 107-108, 115-116, 123-124, 128, 129, 134, 211-212, 213-214, 217-218, 219-220, 221-222, 229-230, 231-232, 233-234, 235-236, 237-238, 299-300, 301-302, 303-304, 305-306, 317-318, 319-320, 321-322, 323-324, 331-332, 337-338, 487-488, 489-490, 493-494, 495-496, 499-500	Board – math book – art work	August – May
1.N.3.3 Perform addition and subtraction with whole number combinations.	3-26, 30, 33-42, 46, 49-50, 51-52, 53-54, 55-56, 57-58, 62, 63, 64, 68, 71-72, 73-74, 75-76, 77-78, 82, 85-86, 87-88, 89-90, 91-92, 93-94, 98, 101-102, 103-104, 105-106, 107-108, 112, 115-116, 117-119, 119—120, 121-122, 123-124, 128, 129, 130, 134, 211-212, 213-214, 215-216, 217-218, 219-220, 221-222, 226, 229-230, 231-232, 233-234, 235-236, 237-238, 242-299-300, 301-302, 303-304, 305-306, 309-310, 314, 317-318, 319-320, 321-322, 323-324, 328, 331-332, 333-*334, 335-336, 337-338, 342, 344, 348, 487-488, 489-4-490, 491-492, 493-494, 495-496, 497-498, 499-500, 504	Work book – board – manipulatives – drawings – flash cards	September – May
1.N.3.4 Use and explain estimation strategies to determine the reasonableness of answers involving addition and subtraction.	167-168, 323-324, 499-500	Work book - board	August - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.1: Understand patterns, relations, and functions.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.1.1 Recognize, reproduce, describe, extend, and create repeating patterns (e.g., color, shape, size, sound, movement, simple numbers) and translate from one representation to another (e.g., red, red, blue, blue to step, step, clap, clap).	193-194, 199-200, 201-202, 208, 283-284, 285-286, 287-288, 289-290, 291-292, 296	Work book – board – manipulatives	August – May
1.A.1.2 Skip-count on a hundreds chart (e.g., by 2s up to 20 and 5s and 10s up to 100) to identify, describe, and predict number patterns.	195-196, 197-198	Number chart – board – groups – work book	August – May
1.A.1.3 Identify number patterns on the hundreds chart.	195-196, 197-198	Number chart	January

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.2.1 Write number sentences that use concrete objects, pictorial, and verbal representations to express mathematical situations using invented and conventional symbols (e.g., +, -, =).	9-10, 37-38, 93-94, 123-124, 217-218, 237-238	Board – workbook – oral – manipulatives	August – September
1.A.2.2 Demonstrate and describe the concept of equal (e.g., using objects, balance scales).	5-6, 457-458	Work book – manipulatives groups – math box	April – May
1.A.2.3 Solve open number sentences that have variables representing numbers up to 10 (e.g., $10 = \bullet + 2$).	130, 235-236	Math book – board – paper – groups	January

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.3.1 Represent equivalent forms of the same number through the use of physical models, diagrams, and number expressions to 20 (e.g., $3 + 5 = 8$, $2 + 6 = 8$).	17-18, 19-20, 21-22, 23-24, 64, 68, 89-90, 165-166, 335-336, 348	Manipulatives – work book – math box- board work – work sheets	January
1.A.3.2 Describe situations that involve addition and subtraction of whole numbers including objects, pictures, and symbols (e.g., Robert has four apples, Maria has five more).	9-10, 25-26, 33-34, 35-36, 49-40, 55-56, 57-58, 63, 77-78, 93-94, 107-108, 123-124, 129, 217-218, 221-222, 237-238, 323-324, 337-338, 344	Math box – work book – board work - manipulatives	August - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.4: Analyze changes in various contexts.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.A.4.1 Describe qualitative change (e.g., a student growing taller, trees getting bigger, ice melting).	539-540	Graphs – seasons – observations	September - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.G.1.1 Identify common geometric figures and classify them by common attributes: a. recognize, name, build, and draw both polygonal (up to six sides) and curved shapes b. sort two- and three-dimensional shapes into categories based on common attributes c. use the attributes of shapes to analyze and identify examples and non-examples of geometric shapes d. participate in discussions comparing, identifying, and analyzing attributes to develop the vocabulary needed to describe two- and three-dimensional geometric shapes and their attributes (e.g., sides, corners, edges, faces)		Math box – math book – oral	March – May
	255-256, 257-258, 259-260	Math box – math book – oral	March – May
	251-252, 253-254, 257-258	Math box – math book – oral	March – May
	267-268	Math box – math book – oral	March – May
	251-252, 257-258	Math box – math book - oral	March - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY

Standard: Students will understand geometric concepts and applications.

K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
<p>1.G.2.1 Participate in group and individual activities based on the concepts of space and location:</p> <p>a. describe direction, location, space, and shape (e.g., left, right, over, under, near, far, between)</p> <p>b. visualize, describe, and record directions for navigating from one location to another to develop the vocabulary needed to describe direction, distance, location, and representation</p> <p>c. use materials to create representations of the surrounding environment (e.g., three-dimensional models, maps of the classroom)</p> <p>d. develop estimates and measure distances using nonstandard measurements</p>	<p>269-270, 271-272, 280, 343</p> <p>269-270, 271-272, 343</p> <p>545-546, 543-544</p> <p>547-548</p>	<p>Oral – maps – rulers – math - books – groups – field trip - songs</p> <p>Oral – maps – rulers – math - books – groups – field trip - songs</p> <p>Oral – maps – rulers – math - books – groups – field trip – songs</p> <p>Oral – maps – rulers – math - books – groups – field trip – songs</p> <p>Oral – maps – rulers – math - books – groups – field trip - songs</p>	<p>August – May</p> <p>August – May</p> <p>August – May</p> <p>August – May</p> <p>August - May</p>

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY

Standard: Students will understand geometric concepts and applications.

K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.G.3.1 Predict the results of changing a shape's position or orientation by using rotation (i.e., turns), reflection (i.e., flips), and translations (i.e., slides) .	251-252, 275-276	Oral – math book - groups	April
1.G.3.2 Create simple symmetrical shapes and pictures.	273-274	Drawings – groups - oral	April
1.G.3.3 Recognize and describe the symmetric characteristics of designs (e.g., geometric designs made with pattern blocks).	273-274	Math box – math books – oral – groups	April

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: GEOMETRY

Standard: Students will understand geometric concepts and applications.

K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.G.4.1 Use combinations of shapes to make a new shape to demonstrate relationships between shapes (e.g., a hexagon can be made from six triangles).	259-260, 264	Math box – work books	April
1.G.4.2 Create three-dimensional shapes based on two-dimensional representations.	541-542	Math box – work books	May
1.G.4.3 Participate in activities to develop mental visualization and spatial memory (e.g., “quick image” activities that require students to recall or reproduce a configuration of dots on a card or to determine the number of dots without counting).	255-256, 257-258	Board – oral – work books – math box	September
1.G.4.4 Describe how to get from one location to another by visualizing the landmarks along the route.	343	Oral – drawings - groups	April
1.G.4.5 Identify structures from different views or match views of the same structure portrayed from different perspectives.	255-256	Pictures – drawings - groups	May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: MEASUREMENT

Standard: Students will understand measurement systems and applications.

K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.M.1.1 Develop an understanding of measurable properties (e.g., length, volume, weight, area, and time) using appropriate concepts and vocabulary: a. length by measuring and estimating (e.g., longer, shorter, meter, centimeter, inch, yard) b. weight by measuring, estimating, and weighing (e.g., heavy [-ier], light [-er]) c. volume by measuring, estimating, and weighing (e.g., full, empty) d. area by measuring and estimating (e.g., perimeter, rectangles, squares) e. time by estimating (e.g., minutes, hours, days, weeks)	401-402, 405-406, 407-408, 409-410, 414, 430, 436 439-440, 441-442, 443-444, 445-446, 447-448, 449-450, 454 457-458, 459-460, 461-462, 463-464, 468 457-458, 459-460 553-554, 555-556 403-404, 417-418, 125-426	Pitcher – bottle Math book – measuring cup Rulers, paper clips – groups Measuring cup – manipulatives groups Tape measure – walking of area Clocks – work book – work sheet - calendars	April - May April - May April - May April - May April - May
1.M.1.2 Use digital and analog (face) clocks to tell time to the half hour.	401-402, 405-406, 400-408, 409-410, 414, 430, 436	clocks	April - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G1*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.
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Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.M.2.1 Measure with multiple copies of units the same size (e.g., paper clips).	441-442, 449-450, 484	Paper clips	April – May
1.M.2.2 Use repetition of a single unit to measure something larger than the unit (e.g., a yardstick/meterstick to measure a room).	441-442, 449-450, 484	Rulers	April - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.1.1 Collect, organize, represent, and compare data by category on graphs and charts to answer simple questions:	139-140, 141-142, 143-144, 145-146, 149-150, 154, 421-422	Graphs – groups – work book	November – May
a. answer questions about “how” data can be gathered	145-146	Oral	February
b. gather data by interviewing, surveying, and making observations	139-140, 143-144, 421-422	Oral	February
c. organize data into appropriate categories by sorting based on shared properties	137-138, 139-140, 141-142, 143-144, 145-146, 154	Oral math box	August – May
d. participate in discussions about selecting an appropriate way to display the data	545-546	Board – graphs – oral	February
e. represent data using objects, pictures, tables, and simple bar graphs	139-140, 141-142, 143-144, 145-146, 154, 421-422	drawings – math book	October - May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.2.1 Analyze simple data: a. interpret what the graph or other representation shows b. determine whether or not the data gathered helps answer the specific question that was posed c. compare parts of the data (e.g., “How many students have lost none, one, two, or three teeth?”) to make statements about the data as a whole (e.g., “Most students in the class have lost only two teeth”)	1319-140, 141-142, 143-144, 145-146, 147-148, 149-150, 431 139-140 139-140, 141-142, 143-144, 145-146, 147-148, 149-150	Paper – groups Oral – work book - paper	September – May September - October

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.3.1 Make conclusions based on data (e.g., whether or not other groups would reach similar conclusions based on the same data).	139-140, 141-142, 143-144, 145-146, 147-148, 149-150	Board – groups – paper	May

Grade 1 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G1*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.4: Understand and apply basic concepts of probability.

Grade 1 Performance Standards	Grade 1 Textbook Pages	Supplemental Materials	Month(s) when Addressed
1.D.4.1 Discuss the likelihood of events (based on student experiences or from books) using terminology such as “more likely”, “less likely”, “possible”, or “certain”.	507-508, 509-510, 511-512	Oral – work book – math box	March
1.D.4.2 Observe, explore, and discuss whether some events occur more often than others (e.g., tossing two die and recording the sum after each toss to explore whether or not certain sums occur more frequently than others).	513-514	Math box – oral	May

Grade 2 Math Curriculum

Grade 2 Math Curriculum Alignment with State Standards

NM Statute 22-13-1.6.A. Each school district shall align its curricula to meet the state standards for each grade level and subject area so that students who transfer between public schools within the school district receive the same educational opportunity within the same grade or subject area.

District: Las Vegas City Schools **Textbook:** *Harcourt Math G2*

Strand: NUMBER AND OPERATIONS	Standard: Students will understand numerical concepts and mathematical operations.	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
<p>2.N.1.1 Understand the relationship between numbers, quantities, and place value in whole numbers up to 1,000 and develop flexible ways of thinking about numbers:</p> <p>a. use multiple models to explore place value and the base-ten number system</p> <p>b. represent whole numbers and use them in flexible ways including decomposing and recombining numbers and see their relationships (e.g., 3 is one less than 4, one more than 2, two less than 5)</p> <p>c. identify whether a set of objects has an odd or even number of elements</p> <p>d. compare and order numbers using a variety of terms (e.g., tens, less than, odd numbers)</p> <p>e. apply strategies for computation utilizing an understanding of place value (e.g., $48 + 25$ would be $40 + 20$ is 60, $8 + 5$ is 13, $60 + 13$ is 73)</p>	<p>3-4, 5-6, 7-8, 11-12, 41-42, 43-44, 469-470, 471-472, 473-474, 477-478, 544</p> <p>3-4, 5-6, 11-12, 39-40, 41-42, 48, 91-92, 469-470, 471-472, 475-476, 485-486, 487-488, 489-490, 491-492</p> <p>25-26, 35-36, 37-38, 39-40, 41-42, 48, 100, 485-486, 487-488, 489-490</p> <p>35-36, 37-38, 39-40, 41-42, 48, 100, 485-486, 487-488, 489-490</p> <p>71-72, 107-108, 109-110, 133-134, 143-144, 167-168, 179-180, 183-184, 185-186, 503-504, 505-506, 507-508, 509-510, 513-514, 544</p>	<p>Math kit manipulatives Directive teaching TPR Digi-blocks Calendar Class Number Grids Touchmath</p>	<p>August-May</p>

<p>2.N.1.2 Apply counting skills and number sense through meaningful activities:</p> <p>a. count and recognize “how many” in sets of objects up to 1,000</p> <p>b. count forward and backward from given numbers to 1,000</p> <p>c. connect number words and numerals to the quantities they represent using physical models and other representations (e.g., 23 can be twenty-three 1s, one 10 and thirteen 1s, or two 10s and three 1s)</p> <p>d. model how many parts make a whole using equal fractional parts (e.g., $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, and $\frac{1}{6}$ as equal parts of a whole)</p>	<p>3-4, 5-6, 11-12, 13-14, 25-26, 205-206, 207-208, 209-210, 211-212, 215-216, 220, 223-224, 225-226, 227-228, 229-230, 231-232, 240, 249-470, 471-472, 477-478, 482, 487-488, 557-558</p> <p>21-22, 23-24, 32, 39-40, 469-470, 471-472, 477-478, 482, 487-488, 489-490, 491-492, 493-494, 495-496</p> <p>3-4, 5-6, 9-10, 11-12, 18, 469-470, 471-472, 475-476</p> <p>445-446, 447-448, 449-450, 451-452, 460, 462, 466, 575-576</p>	<p>Skip Counting CD Intervention CD-ROMS Web-Based learning sites Activities Resources Recipes Overhead Projector Story Problems</p>	<p>Aug- Oct.</p>
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Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.N.2.1 Find the sum of two whole numbers up to three digits long (e.g., $235 + 476 = \bullet$; $564 - 273 = \bullet$).	67-68, 69-70, 71-72, 73-74, 80, 104, 107-108, 109-110, 111-112, 113-114, 15-116, 120, 123-124, 125-126, 127-127, 129-130, 131-132, 133-134, 135-136, 140, 179-180, 181-182, 183-184, 189-190, 191-192, 196, 198, 202, 503-504, 505-506, 507-508, 515-516, 520, 539, 540	Touch Math Index cards with 3 digit numbers Base ten blocks	Jan-May
2.N.2.2 Find the difference of two whole numbers up to three digits long.	85-86, 87-88, 89-90, 91-92, 98, 104, 143-144, 145-146, 147-148, 149-150, 151-152, 156, 161-162, 163-164, 165-166, 167-168, 169-170, 171-172, 176, 185-186, 187-188, 189-190, 509-510, 511-512, 513-514, 515-516, 539, 540	Word problem cards Board problems Reinforcement sheets Touchmath	Sept. Oct April/May
2.N.2.3 Understand and use the inverse relationships between addition and subtraction to solve problems and check solutions ($28 + 31 = 59$; therefore, $59 - 31 = 28$).	85-86, 87-88, 89-90, 91-92, 169-170	Touch Math Calculators	Sept./Oct.
2.N.2.4 Identify and describe situations that require multiplication and division and develop strategies to solve problems for repeated joining of groups and partitioning into equal subgroups or shares (e.g., repeated addition and subtraction, counting by multiples, equal sharing).	523-524, 525-526, 527-528, 529-530, 531-532, 533-534, 538	Picture cards Addition sentences Groups Skip counting songs Skip counting worksheets and posters Touchmath	April-May

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.3: Compute fluently and make reasonable estimates.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.N.3.1 Use and explain strategies for addition and subtraction of multi-digit whole numbers.	107-108, 109-110, 111-112, 113-114, 115-116, 120, 125-126, 127-127, 129-130, 131-132, 133-134, 135-136, 140, 143-144, 145-146, 147-148, 149-150, 151-152, 156, 161-162, 163-164, 165-166, 167-168, 169-170, 171-172, 176, 179-180, 181-182, 183-184, 185-186, 187-188, 189-190, 191-192, 196, 197, 198, 202, 503-504, 505-506, 507-508, 509-510, 511-512, 513-514, 515-516, 520	Touch Math Math 4 kids	March-May
2.N.3.2 Model and solve problems representing adding and subtracting amounts of money using dollars and coins.	229-230, 235-236, 240, 477-478	Manipulative coins and dollars	Feb. March
2.N.3.3 Use addition combinations (addends through 10) and related subtraction combinations, and develop strategies for computing based on number sense (e.g., 25 + 37: Take 3 from the 25 and use it to turn 37 into 40; then add 40 and 22 to get 62).	67-68, 69-70, 71-72, 73-74, 80, 83-84, 85-86, 87-88, 89-90, 91-92, 98, 107-108, 109-110, 143-144, 145-146, 179-180, 181-182, 183-184, 185-186, 503-504, 509-510	Everyday math kit class grids	Ongoing
2.N.3.4 Select and use a variety of appropriate strategies methods to compute (e.g., objects, mental computation, estimation, paper and pencil).	67-68, 69-70, 71-72, 73-74, 75-76, 83-84, 85-86, 87-88, 89-90, 91-92, 93-94, 107-108, 109-110, 111-112, 113-114, 115-116, 120, 125-126, 127-127, 129-130, 131-132, 133-134, 135-136, 140, 143-144, 145-146, 147-148, 149-150, 151-152, 156, 161-162, 163-164, 165-166, 167-168, 169-170, 171-172, 176, 179-180, 181-182, 183-184, 185-186, 187-188, 189-190, 191-192, 196-197, 198, 202, 503-504, 505-506, 507-508, 509-510, 511-512, 513-514, 515-516, 520, 539, 540, 544	Connecting cubs Coins Mental Images	Aug-May
2.N.3.5 Skip-count by 2, 5, and 10 to develop multiplicative reasoning and notational representations (e.g., 5, 10, 15, 20; $4 \times 5 = 20$; four groups of 5 equals 20).	23-24, 27-28, 32, 493-494, 495-496	Literature Copying masters Charts Skip counting CD	Aug, Sept. and May

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.1: Understand patterns, relations, and functions.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.A.1.1 Recognize, reproduce, describe, extend, and create repeating and growing patterns, and translate from one representation to another.	23-24, 25-26, 27-28, 359-360, 361-362, 363-364, 365-366, 367-368, 372	Ruler Flip Book Class Charts and Graphs	April-May
2.A.1.2 Skip-count using calculators or a hundreds chart to identify, describe, predict, and make generalizations about number patterns to differentiate rote counting versus the meaning of the numbers.	23-24, 32, 378, 493-494, 495-496	Calculators Science Lab Group Predictions	March-May
2.A.1.3 Construct and solve open sentences that have variables (e.g., $10 = \bullet + 7$).	73-74, 75-76, 83-84, 85-86, 89-90, 93-94, 100, 104, 143-144, 145-146, 151-152, 171-172, 191-192, 197, 235-236, 515-516, 539, 540	Open Sentence Strips Word Problems	Oct-Nov
2.A.1.4 Relate everyday problem situations to number sentences involving addition and subtraction (e.g., 25 students are going to the store. Five students can ride in a car. How many cars will be needed?).	73-74, 75-76, 93-94, 99, 104, 115-116, 135-136, 151-152, 171-172, 191-192, 197, 235-236, 515-516, 539	Number Sentence Cards Index Cards Word Problems	Sept-Oct April May

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.A.2.1 Use mathematical language to describe a variety of representations and mathematical ideas and situations.	5-6, 7-8, 25-26, 35-36, 37-38, 43-44, 51-52, 55-56, 57-58, 59-60, 67-68, 69-70, 73-74, 75-76, 83-84, 85-86, 87-88, 89-90, 111-112, 123-124, 133-134, 147-148, 159-160, 167-168, 183-184, 207-208, 211-212, 231-232, 243-244, 245-246, 247-248, 261-262, 263-264, 277-278, 279-280, 281-282, 283-284, 293-294, 295-296, 297-298, 299-300, 301-302, 317-318, 319-320, 331-332, 333-334, 345-346, 347-348, 349-350, 351-352, 359-360, 385-386, 387-388, 389-390, 401-402, 405-406, 415-416, 417-418, 419-420, 431-432, 433-434, 437-38, 445-446, 453-454, 469-470, 485-486, 493-494, 505-506, 511-512, 523-524, 527-528, 529-530	Ruler Flip Book Class Charts and Graphs	April-May
2.A.2.2 Explain the concept of equal (e.g., quantities on both sides of equation are the same) by using objects or giving examples.	37-38, 485-486, 540	Calculators Science lab Predictions	March-May
2.A.2.3 Construct and solve open number sentences that have variables representing numbers up to 20 (e.g., $20 = \bullet + 6$).	73-74, 75-76, 83-84, 85-86, 89-90, 93-94, 100, 104, 143-144, 145-146, 151-152, 171-172, 191-192, 197, 235-236, 515-516, 539, 540	Open Sentence Strips Word Problems	Oct-May
2.A.2.4 Use objects, words, and symbols to explain the concept of addition.	69-70, 71-72, 75-76, 80, 104, 107-108, 109-110, 111-112, 113-114, 115-116, 120, 123-124, 125-126, 127-127, 131-132, 133-134, 140, 179-180, 183-184, 196, 503-504, 505-506, 5007-508, 520	Number sentence cards Index cards Word problems	Sept-Oct April-May

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.A.3.1 Model situations of addition and subtraction of whole numbers using objects, pictures, and symbols.	69-70, 71-72, 75-76, 80, 83-84, 85-86, 87-88, 93-94, 98, 104, 107-108, 109-110, 111-112, 113-114, 115-116, 120, 123-124, 125-126, 127-127, 131-132, 133-134, 140, 143-144, 145-146, 147-148, 149-150, 151-152, 156, 159-160, 161-162, 167-168, 169-170, 171-172, 176, 179-180, 183-184, 185-186, 196, 198, 202, 503-504, 505-506, 5007-508, 509-510, 511-512, 513-514, 520	Directive Teaching Manipulative Word Problems Misc. methods	August-May
2.A.3.2 Solve problems related to trading (e.g., coin trading, measurement trading).	211-212, 215-216, 223-224, 225-226, 247-248, 249-250, 263-264, 401-402	Everyday Objects Number problems	Sept. May
2.A.3.3 Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences.	59-60, 93-94, 99, 100, 269-270, 283-284, 285-286, 303-304, 337-338	Story Problems	Aug ./May

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G2*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.4: Analyze changes in various contexts.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.A.4.1 Describe quantitative change (e.g., a student growing two inches in one year, water heating up to boil).	359-360, 361-362, 363-364, 389-390	Word problem sheets Daily math problem	Aug.-May

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.G.1.1 Identify and describe the attributes of common figures in a plane and common objects in space: a. sort, describe, and analyze plane and solid geometric shapes (e.g., circle, triangle, square, rectangle, sphere, pyramid, cube, rectangular prism) based on various attributes (e.g., faces, edges, and corners) b. put shapes together and take them apart to form other shapes (e.g., two congruent right triangles can be arranged to form a rectangle) c. explore lines of symmetry in two-dimensional shapes	345-346 317-318, 319-320, 331-332, 333-334, 335-336, 337-338, 342, 374 321-322, 323-324, 328, 335-336, 337-338, 373, 374 347-347, 373	Geometric shapes Overhead transparencies Flip books	Feb-Mar

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: GEOMETRY

Standard: Students will understand geometric concepts and applications.

K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.G.2.1 Find and name locations with simple relationships like “near to” and apply ideas about relative position.	561-562	Supplemental worksheets Web-based learning sites	Jan/may
2.G.2.2 Describe, name, and interpret direction in navigating space and apply ideas about direction and distance.	565-566	Tape measure Globe Maps	May
2.G.2.3 Use maps to locate points and navigate through mazes or maps.	563-564	Word problems mazes	May
2.G.2.4 Visualize, justify, and create paths using landmarks, space, shapes, and descriptive language.	567-568	maps	May
2.G.2.5 Make and draw rectangular arrays of squares.	525-526	Rulers Geo boards	On going

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.G.3.1 Use systematic thinking to solve geometric puzzles (e.g., pentominoes).	323-324, 328	Puzzle worksheets Manipulative puzzles	October
2.G.3.2 Use materials to investigate rotational and line symmetry and create shapes that have symmetry.	571-572	Wood shapes Shape manipulatives Velcro shapes	Nov.

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.G.4.1 Demonstrate relationships of different attributes with concrete materials (e.g., change one characteristic of a shape while preserving others such as increasing number of sides while perimeter stays the same).	433-434	Geo boards	May
2.G.4.2 Select and use visualization skills to create mental images of geometric shapes.	335-336, 337-338, 356, 361-362, 363-364, 365-366, 367-368	Paper models	May
2.G.4.3 Describe geometric shapes and structures from different perspectives.	335-336, 337-338, 374	Paper 3-D Models Over head projector	May
2.G.4.4 Relate geometric ideas to numbers (e.g., seeing rows in array as a model of repeated addition).	525-526, 527-528, 533-534	Skip counting Posters and class grids	Sept/May
2.G.4.5 Recognize geometric shapes and structures in the environment and specify their location.	342, 569-570	Science Tool Manipulatives	On going

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.
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Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.M.1.1 Identify a unit of measure (e.g., nearest inch) and repeat that unit comparing it to the item being measured.	381-382, 383-384, 385-386, 387-388, 396, 399-400, 401-402, 403-404, 415-416, 417-418, 419-420	Ruler Flip Book	April
2.M.1.2 Use direct comparison to compare and order objects according to length, mass, and area.	383-384, 403-404, 405-06, 419-420, 423-424, 433-434	Science Lab Tools	On going
2.M.1.3 Measure and compare common objects using standard and non-standard units of length.	381-382, 383-384, 385-386, 387-388, 396, 415-416, 423-424	Ruler flip books Rulers Manipulatives	On going
2.M.1.4 Find and represent the value of a collection of coins and dollars up to \$5.00, using appropriate notation.	205-206, 207-208, 209-210, 211-212, 215-216, 223-224, 225-226, 227-228, 229-230, 231-232, 240	Coins and manipulatives	On going
2.M.1.5 Identify and use time intervals (e.g., hours, days, weeks, months).	243-244, 253-254, 261-262, 265-266, 269-270, 309	Birthday chars Calendars Word problems Clock manipulative and worksheet s	On going
2.M.1.6 Select and use appropriate measurement tools (e.g., ruler, yardstick, meter stick)	387-388, 391-392, 396, 407-408, 415-416, 417-418, 419-420	Rulers, yardsticks, meter sticks	On going
2.M.1.7 Tell time to the nearest quarter hour.	249-250, 251-252, 258, 308, 314	Clocks/watches	On going

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: MEASUREMENT

Standard: Students will understand measurement systems and applications.

K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.M.2.1 Develop common referents to make comparisons and estimates of length, volume, weight, area, and time.	243-244, 245-246, 247-248, 265-266, 267-268, 274, 310, 381-382, 383-384, 385-386, 387-388, 391-392, 399-400, 401-402, 403-404, 405-406, 407-408, 412, 415-416, 417-418, 419-420, 421-422, 423-424, 431-432, 433-434, 435-436, 437-438, 573-574	Scales	April
2.M.2.2 Develop an understanding that different measuring tools will yield different numerical measurements of the same object (e.g., ruler, yardstick, meterstick, paper clip).	381-382, 387-388, 396	Manipulatives 3-D objects	On going
2.M.2.3 Estimate measurements and develop precision in measuring objects.	383-384, 385-386, 387-388, 389-390, 391-392, 399-400, 401-402, 403-404, 405-406, 407-408, 412, 415-416, 417-418, 419-420, 421-422,	Prediction charts 3-d objects	On going

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.D.1.1 Collect numerical data systematically.	51-52, 285-286	Surveys Data notebooks	On going
2.D.1.2 Represent data by using concrete objects, pictures, tables, numbers, tallies, and graphs (e.g., pictographs).	51-52, 55-56, 57-58, 277-278, 285-286	Tally charts	On going
2.D.1.3 Pose questions about students' selves and their surroundings and gather data by interviewing, surveying, and making observations to answer the questions posed.	51-52, 55-56	Journals graphs and charts	On going
2.D.1.4 Identify patterns and explain the relationships of the units in the pattern (e.g., the number of ears on one dog, two dogs, etc., or linear numerical patterns).	23-24, 27-28, 378, 495-496	Sequencing worksheets	April

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.D.2.1 Describe and interpret data by drawing conclusions and making conjectures based on the data collected.	51-52, 53-54, 55-56, 57-58, 59-60, 277-278, 283-284, 285-286, 303-304, 337-338	Math Journals and Science journals	On going
2.D.2.2 Display data in a variety of formats.	51-52, 55-56, 57-58, 277-278, 337-338	Class charts and grids	On going

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.D.3.1 Discuss events related to students' experiences as "likely" or "unlikely" and "possible" or "certain".	295-296, 297-298, 299-300	Prediction charts	Seasonal
2.D.3.2 Recognize appropriate conclusions generated from the data collected.	51-52, 53-54, 55-56, 59-60, 277-278, 283-284, 303-304	Science tools	On going
2.D.3.3 Recognize inappropriate descriptions of the data set.	559-560	Graphs Charts and grids	On going

Grade 2 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G2*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.4: Understand and apply basic concepts of probability.

Grade 2 Performance Standards	Grade 2 Textbook Pages	Supplemental Materials	Month(s) when Addressed
2.D.4.1 Investigate concepts of chance (e.g., outcomes of a simple experiment).	64, 293-294	Science Kit manipulatives Store bought items Lab materials	On going
2.D.4.2 Investigate whether outcomes of a simple event are equally likely to occur.	301-302	Group activities	On going

Grade 3 Math Curriculum

Grade 3 Math Curriculum Alignment with State Standards

NM Statute 22-13-1.6.A. Each school district shall align its curricula to meet the state standards for each grade level and subject area so that students who transfer between public schools within the school district receive the same educational opportunity within the same grade or subject area.

District: Las Vegas City Schools **Textbook:** *Harcourt Math G3*

Strand: NUMBER AND OPERATIONS	Standard: Students will understand numerical concepts and mathematical operations.	K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.N.1.1 Exhibit an understanding of the place-value structure of the base-ten number system by: a. reading, modeling, writing, and interpreting whole numbers up to 10,000 b. comparing and ordering numbers up to 1,000 c. recognizing the position of a given number in the base-ten number system and its relationship to benchmark numbers such as 10, 50, 100, 500	20-21, 22-23, 24-27, 32-33, 40-41, 42-45, 46-47, 50-51, 58 42-45, 46-47, 48-49, 62, 116-117, 566-567 40-41, 50-51, 52-53	Charts Worksheets Manipulative materials Quadrille paper	August-September
3.N.1.2 Use whole numbers by using a variety of contexts and models (e.g., exploring the size of 1,000 by skip-counting to 1,000 using hundred charts or strips 10 or 100 centimeters long).	20-21, 22-23, 24-27, 32-33, 40-41, 42-45, 46-47, 50-51, 58	Charts Worksheets Manipulative materials Quadrille paper	August-September
3.N.1.3 Identify some representations for some numbers and generate them by decomposing and recombining numbers (e.g., $853 = 8 \times 100 + 5 \times 10 + 3$; $85 \times 10 + 3 = 853$; $853 = 900 - 50 + 3$).	22-23, 24-27, 28-29, 32-33, 74-75, 114-115, 564-565	Base ten blocks	October
3.N.1.4 Identify the relationship among commonly encountered factors and multiples (e.g., factor pairs of 12 are 1×12 , 2×6 , 3×4 ; multiples of 12 are 12, 24, 36).	178-179, 183-185, 194-195, 196-197, 198-199, 202-205, 212-215, 216-217, 246-249, 258-259, 260-261, 280-283, 600-601	Flash cards, beads, number lines, multiplication practice board game	September-December
3.N.1.5 Use visual models and other strategies to recognize and	522-525, 532-533, 542-543, 546-549, 550-551, 558-559, 560-561, 590	Manipulative materials, practice sheets, folded paper	January-February

generate equivalents of commonly used fractions and mixed numbers (e.g., halves, thirds, fourths, sixths, eighths, and tenths).		strips and food	
3.N.1.6 Demonstrate an understanding of fractions as parts of unit wholes, parts of a collection or set, and as locations on a number line.	516-519, 520-521, 526-529, 532-533, 566-567, 591, 594	Counting chips, groups of students, compass learning practice activities and tests	January- February
3.N.1.7 Use common fractions for measuring and money (e.g., using fractions and decimals as representations of the same concept, such as half of a dollar = 50 cents).	110-113, 530-531, 560-561, 562-563, 564-565, 576-577, 578-579, 580-583, 590, 591, 594, 595, 596-597	Play money, empty boxes of food, newspaper advertisement	January- February

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.N.2.1 Use a variety of models to show an understanding of multiplication and division of whole numbers (e.g., charts, arrays, diagrams, and physical models [i.e., modeling multiplication with a variety of pictures, diagrams, and concrete tools to help students learn what the factors and products represent in various contexts]).	158-159, 160-161, 162-163, 164-167, 176-177, 178-179, 180-181, 182-185, 186-187, 194-195, 196-197, 198-199, 200-201, 202-205, 212-215, 216-217, 218-219, 220-221, 228, 229, 232, 233, 238-239, 240-241, 242-245, 246-249, 250-251, 258-259, 260-261, 262-263, 274-277, 278-279, 280-283, 293, 296, 298-299, 600-601, 602-605, 606-607, 608-611, 618-619, 620-623, 626-627, 628-629, 635, 638	Charts Worksheets Manipulative materials Quadrille paper	September-March
3.N.2.2 Find the sum or difference of two whole numbers between 0 and 10,000.	8-9, 10-11, 12-13, 68-69, 70-71, 72-73, 76-79, 88-89, 90-91, 92-95, 96-97, 98-101	Charts Worksheets Manipulative materials Number line	August-September
3.N.2.3 Solve simple multiplication and division problems (e.g., $135 \div 5 = \bullet$).	158-159, 160-161, 162-163, 164-17, 168-169, 176-177, 178-179, 180-181, 182-185, 186-187, 194-195, 196-197, 198-199, 200-201, 202-205, 212-215, 216-217, 218-219, 220-221, 222-223, 228, 229, 232, 233, 234-235, 238-239, 240-241, 242-245, 246-249, 250-251, 258-259, 260-261, 264-265, 266-267, 274-277, 278-279, 2800-283, 284-285, 286-287, 292, 298-299	Charts Worksheets Manipulative materials Number line Games	February-March
3.N.2.4 Identify how the number of groups and the number of items in each group equals a product.	158-159, 160-161, 162-163, 164-167, 168-169, 176-177, 182-185, 186-187, 194-195, 196-197, 198-199, 200-201, 202-205, 216-217, 218-219, 220-221, 222-223, 234-235, 250-251, 266-267, 284-285, 286-287, 298-299	Math manipulative materials	August-December
3.N.2.5 Demonstrate the effects of multiplying and dividing on whole numbers (e.g., to find the total number of legs on 12 cats, 4 represents the number of each [cat] unit, so $12 \times 4 = 48$ [leg] units).	158-159, 160-161, 162-163, 164-167, 168-169, 176-177, 178-179, 180-181, 182-185, 186-187, 194-195, 196-197, 198-199, 200-201, 202-205, 212-215, 216-217, 218-219, 220-221, 222-223, 232, 233, 234-235, 238-239, 240-241, 242-245, 246-249, 250-251, 258-259, 260-261, 264-265, 266-267, 274-277, 278-279, 280-283, 284-285, 286-287, 296, 298-299, 602-605, 606-607, 608-611, 618-619, 620-623, 624-625, 626-627, 635	Charts Worksheets Manipulative materials Number line Games	February-March

3.N.2.6 Identify and use relationship between multiplication and division (e.g., division is the inverse of multiplication) to solve problems.	242-251	Charts Worksheets Manipulative materials Number line Games	January-March
3.N.2.7 Select and use operations (e.g., addition, multiplication, subtraction, division) to solve problems.	12,28,46-48,74-76,96-102,110-114,130-132, 168, 186, 198-202, 222, 250, 266, 278-286, 314-342, 362, 388-400, 416, 428, 436, 450-456, 480, 496-500, 530, 550, 568, 584, 606, 624, 640	Charts Worksheets Manipulative materials Number line Games	August-May

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.3: Compute fluently and make reasonable estimates.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.N.3.1 Choose computational methods based on understanding the base-ten number system, properties of multiplication and division, and number relationships.	12-13, 76-79, 98-101, 266-267, 606-607, 608-611	Base ten blocks Number line Math manipulative materials	August-May
3.N.3.2 Use strategies (e.g., 6×8 is double 3×8) to become fluent with the multiplication pairs up to 10×10 .	178-179, 180-181, 182-185, 182-185, 186-187, 194-195, 196-197, 198-199, 200-201, 202-205, 212-215, 216-217, 218-219, 220-221, 222-223, 228, 229, 232, 233, 234-235, 238-239, 240-241, 242-245, 246-249, 250-251, 258-259, 260-261, 264-265, 266-267, 274-277, 278-279, 280-283, 284-285, 286-287, 292, 298-299	Number line Counting chips Games Charts Math manipulative materials	September-November
3.N.3.3 Compute with basic number combinations (e.g., multiplication pairs up to 10×10 and their division counterparts).	158-159, 160-161, 162-163, 164-167, 168-169, 176-177, 178-179, 180-181, 182-185, 186-187, 194-195, 196-197, 198-199, 200-201, 202-205, 212-215, 216-217, 218-219, 220-221, 222-223, 228, 229, 232, 233, 234-235, 238-239, 240-241, 242-245, 246-249, 250-251, 258-259, 260-261, 264-265, 266-267, 274-277, 278-279, 280-283, 284-285, 286-287, 292, 298-299	Number line Counting chips Games Charts Math manipulative materials	September-November
3.N.3.4 Demonstrate reasonable estimation strategies for measurement, computation, and problem solving.	40-41, 50-51, 52-53, 64-65, 68-69, 72-73, 74-75, 88-89, 96-97, 102-103, 120-121, 128-131, 338-341, 344-345, 346-347, 350-351, 358-361, 364-365, 366-367, 368-369, 444-447, 628-629	Rulers Charts Number line Games	August-March

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.1: Understand patterns, relations, and functions.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.A.1.1 Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.	42-45, 80-81, 262-263, 264-265, 280-283	Practice worksheets	September-November
3.A.1.2 Solve problems involving numeric equations.	264-265	Practice worksheets	November-December
3.A.1.3 Select appropriate operational and relational symbols to make an expression true (e.g., “If $4 \cdot 3 = 12$, what operational symbol goes in the box?”).	80-81, 120-121, 202-205, 240-241, 264-265	Practice worksheets	November-December
3.A.1.4 Use models of feet and inches to express simple unit conversions in symbolic form (e.g., 36 inches = • feet x 12) that develop conceptual understanding versus procedural skills.	348-349, 362-363	Rulers, tiles on the classroom floor, yard sticks, strings	January
3.A.1.5 Recognize and use the commutative property of multiplication (e.g., if $5 \times 7 = 35$, then what is 7×5 ?).	162-163, 164-167, 182-185, 202-205, 220-221	Number line Math manipulative materials Quadrille paper Practice worksheets	August-January
3.A.1.6 Create, describe, and extend numeric and geometric patterns including multiplication patterns.	20-21, 30-31, 63, 180-181, 194-195, 212-215, 216-217, 470-473, 474-475, 476-477, 478-479, 480-481, 507, 512-513, 600-601	Practice worksheet Number lines charts	August-May

<p>3.A.1.7 Represent simple functional relationships:</p> <p>a. solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit)</p> <p>b. extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s, by multiplying the number of horses by 4, or through the use of tables)</p>	<p>216-217, 284-285, 297</p> <p>20-21, 30-31, 63, 180-181, 194-195, 212-215, 216-217, 476-477, 478-479, 480-481, 512-513, 600-601</p>	<p>Number line Counting chips Games Charts Math manipulative materials</p>	<p>September-May</p>
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Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.A.2.1 Determine the value of variables in missing part problems (e.g., $139 + \bullet = 189$).	2-3, 4-5, 80-81, 98-101, 186-187, 202-205, 212-215, 218-219, 220-221, 233, 242-245, 258-259, 274-277, 280-283	Practice worksheets	August-November
3.A.2.2 Recognize and use the commutative and associative properties of addition and multiplication (e.g., "If $5 \times 7 = 35$, then what is 7×5 ? And if $5 \times 7 \times 3 = 105$, then what is $7 \times 3 \times 5$?").	6-7, 162-163, 164-167, 182-185, 202-205, 218-219, 220-221	Practice worksheets Number line	August-November
3.A.2.3 Explore the ways that commutative, distributive, identity, and zero properties are useful in computing with numbers.	6-7, 162-163, 164-167, 176-177, 182-185, 202-205, 218-219, 220-221	Practice worksheets Number line	September-December

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.A.3.1 Model problem situations with objects and use representations such as pictures, graphs, tables, and equations to draw conclusions.	20-21, 24-27, 48-49, 70-71, 90-91, 92-95, 114-115, 118-119, 134-135, 136-137, 138-141, 142-143, 162-163, 198-199, 238-239, 242-245, 246-249, 264-265, 302-303, 304-305, 308-309, 310-313, 314-315, 322-323, 362-363, 375, 400-401, 416-417, 424-427, 432-435, 444-447, 448-449, 450-451, 452-455, 461, 278-279, 490-491, 492-495, 496-497, 498-499, 500-501, 522-525, 526-529, 530-531, 540-541, 542-543, 544-545, 546-549, 560-561, 562-563, 578-579, 600-601, 602-604, 618-619, 620-623	Pictures, graphs, tables, practice worksheets, and manipulative materials	August-May
3.A.3.2 Solve problems involving proportional relationships including unit pricing (e.g., four apples cost 80 cents; therefore, one apple costs 20 cents).	216-217, 284-285, 286-287	Compass math, play money, practice sheets	October
3.A.3.3 Describe relationships of quantities in the form of mathematical expressions, equations, or inequalities.	42-45, 46-47, 48-49, 80-81, 120-121, 196-197, 202-205, 262-263, 264-265, 266-267, 280-283	Practice worksheets	November-October
3.A.3.4 Select appropriate operational and relational symbols to make an expression true (e.g., "If $4 \cdot 3 = 12$, what operational symbol goes in the box?").	80-81, 120-121, 202-205, 240-241, 264-265	Number lines Charts Practice worksheets	November-December

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: ALGEBRA

Standard: Students will understand algebraic concepts and applications.

K-4 Benchmark A.4: Analyze changes in various contexts.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.A.4.1 Demonstrate how change in one variable can relate to a change in a second variable (e.g., input-output machines, data tables).	216-217, 242-245	Practice worksheets	November & January

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.G.1.1 Describe and compare the attributes of plane and solid geometric figures to show relationships and solve problems: a. identify, describe, and classify polygons (e.g., pentagons, hexagons, and octagons) b. identify lines of symmetry in two-dimensional shapes c. explore attributes of quadrilaterals (e.g., parallel and perpendicular sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square) d. identify right angles e. identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder)	384-387, 390-391, 392-395, 396-399, 400-401, 408-409, 424-427, 428-429 390-391, 430-431, 432-435, 436-437, 460 410-411, 412-413, 465 390-391, 396-399 384-387, 388-389, 392-395, 396-399, 461 424-427, 428-429, 436-437	3-d models of geometric shapes, practice sheets, compass math	January-May

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: GEOMETRY

Standard: Students will understand geometric concepts and applications.

K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.G.2.1 Describe location and movement using common language and geometric vocabulary (e.g., directions from classroom to gym).		Teacher made worksheets, actual school building	August-May
3.G.2.2 Use ordered pairs to graph, locate specific points, create paths, and measure distances within a coordinate grid system.	328-329, 374	Plotting worksheets, quadrille paper	January-May
3.G.2.3 Use a two-dimensional grid system (e.g., a map) to locate positions representing actual places.		Practice worksheets, teacher made materials	August-February

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G3*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.G.3.1 Predict and describe the results of sliding, flipping, and turning two-dimensional shapes.	414-415, 430-431	Compass Math, worksheets, manipulative materials	September-March
3.G.3.2 Identify and describe the line of symmetry in two- and three-dimensional shapes.	410-411, 412-413, 465	Compass Math, worksheets, manipulative materials	September-March

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.G.4.1 Visualize, build, and draw geometric objects.	416-417, 427, 428-429, 430-431, 432-435, 436-437, 474-475	Compass Math, worksheets, manipulative materials	January-May
3.G.4.2 Create and describe mental images of objects, patterns, and paths.	428-429, 430-431, 470-473	Compass Math, worksheets, manipulative materials	January-May
3.G.4.3 Recognize geometric shapes and structures (e.g., in the environment).	428-429, 466-467	Compass Math, worksheets, manipulative materials	January-May
3.G.4.4 Use geometric models to solve problems in other areas of mathematics (e.g., using arrays as models of multiplication or area).	162-163, 182-185, 186-187, 194-195, 196-197, 200-201, 202-205, 218-219, 220-221, 246-249, 274-277, 280-283, 448-449, 450-451, 452-455	Compass Math, worksheets, manipulative materials	January-May
3.G.4.5 Identify and build three-dimensional objects from two-dimensional representations of that object.	416-417, 424-427	Compass Math, worksheets, manipulative materials	January-May
3.G.4.6 Investigate two-dimensional representations of three-dimensional shapes.	424-427, 428-429, 432-435, 436-437	Compass Math, worksheets, manipulative materials	January-May
3.G.4.7 Explore geometric ideas and relationships as they apply to other disciplines and to problems that arise in the classroom or in everyday life.	428-429, 430-431, 444-447, 448-449, 450-451, 452-455, 465, 466-467, 474-475	Compass Math, worksheets, manipulative materials	January-May

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.M.1.1 Demonstrate understanding of the need for measuring with standard units and become familiar with standard units in the U.S. customary system.	338-341, 342-343, 344-345, 346-347, 348-349	Science materials, rulers, yardsticks, scale, thermometer, manipulative materials	August-May
3.M.1.2 Choose and use the appropriate units and measurement tools to quantify the properties of objects (e.g., length [ruler], width [ruler], or mass [balance scale]).	338-341, 342-343, 344-345, 346-347, 348-349, 350-351, 358-361, 364-365, 366-367	Science materials, rulers, yardsticks, scale, thermometer, manipulative materials	August-May
3.M.1.3 Identify time to the nearest minute (elapsed time) and relate time to everyday events.	128-131, 132-133, 134-135, 136-137, 138-141, 142-143, 154-155	Clock manipulative materials, wall clock, worksheets, digital clock	August-May
3.M.1.4 Identify and use time intervals (e.g., hours, days, weeks, months, years).	128-131, 132-133, 134-135, 136-137, 138-141, 142-143, 154-155	Daily Calendar, worksheets, Math manipulative materials	September-February
3.M.1.5 Identify properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each property.	338-341, 342-343, 344-345, 346-347, 348-349, 358-361, 364-365, 366-367, 380-381, 448-449, 452-455	Science materials, rulers, yardsticks, scale, thermometer, manipulative materials	August-May
3.M.1.6 Demonstrate understanding that measurements are approximations, investigate differences in units and their effect on precision, and consider the degree of accuracy for different situations.	342-343, 348-349, 358-361, 362-363, 364-365, 366-367, 380-381	String, rulers, number line	January-March

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools **Textbook:** *Harcourt Math G3*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.
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Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.M.2.1 Find the area of rectangles using appropriate tools (e.g., grid paper, tiles).	448-449, 450-451	Quadrille paper Tiles, worksheets	January-May
3.M.2.2 Estimate measurements.	338-341, 342-343, 344-345, 346-347, 350-351, 358-361, 364-365, 366-367, 368-369, 444-447	Rulers and yardsticks	August, September & January
3.M.2.3 Use appropriate standard units and tools to estimate, measure, and solve problems (e.g., length, area, weight).	338-341, 342-343, 344-345, 346-347, 348-349, 350-351, 358-361, 364-365, 366-367, 368-369, 380-381, 444-447, 448-449, 452-455	Rulers, yardsticks and balance scale	August, September & January
3.M.2.4 Recognize a 90-degree angle and use it as a strategy to estimate the size of other angles.	385-387, 392-295, 461	Protractor, compass	January

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.D.1.1 Collect and organize data using observations, measurements, surveys, or experiments.	302-303, 304-305, 306-307, 308-309, 310-313, 322-323, 324-325, 326-327, 490-491, 492-494	Science Text Experiments, surveys, rulers, balance scale, quadrille paper, student made charts	August-May
3.D.1.2 Represent data using tables and graphs (e.g., line plots, bar graphs, and line graphs).	302-303, 304-305, 306-307, 308-309, 310-313, 322-323, 324-325, 326-327, 511	Worksheets, charts, manipulative materials	August-May
3.D.1.3 Conduct simple experiments by determining the number of possible outcomes and make simple predictions: a. identify whether events are certain, likely, unlikely, or impossible b. record the outcomes for a simple event and keep track of repetitions c. summarize and record the results in a clear and organized way d. use the results to predict future events	488-489, 490-491, 492-494, 512-513 308-309, 490-491, 492-494, 506 308-309, 490-491, 492-494, 500-501 490-491, 496-497	Math manipulative material, charts and graphs	September & January

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.D.2.1 Apply and explain the uses of sampling techniques (e.g., observations, polls, tally marks) for gathering data.	302-303, 304-305, 306-307, 308-309, 310-313	Charts and graphs	September-May

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.D.3.1 Analyze data displayed in a variety of formats to make reasonable inferences and predictions, answer questions, and make decisions.	48-49, 302-303, 304-305, 306-307, 308-309, 310-313, 314-315, 322-323, 324-325, 330-331	Charts and graphs,	October & January-March

Grade 3 Math Curriculum Alignment with State Standards

District: Las Vegas City Schools

Textbook: *Harcourt Math G3*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.4: Understand and apply basic concepts of probability.

Grade 3 Performance Standards	Grade 3 Textbook Pages	Supplemental Materials	Month(s) when Addressed
3.D.4.1 Discuss the degree of likelihood of events and use terminology such as “certain,” “likely,” “unlikely”.	488-489, 490-491, 492-494, 512-513	Worksheets,	January-February
3.D.4.2 Predict the outcomes of simple experiments (e.g., coin tossing) and test the predictions using concrete objects (e.g., coins, counters, number cubes, spinners).	490-491, 496-497, 498-499, 500-501	Worksheets, math manipulative materials	January-February
3.D.4.3 Record the probability of a specific outcome for a simple probability situation (e.g., probability is three out of seven for choosing a black ball; $\frac{3}{7}$).	490-491, 496-497, 498-499, 500-501	Worksheets, math manipulative materials	January-February

Grade 4 Math Curriculum

Grade 4 Math Curriculum Alignment with State Standards

NM Statute 22-13-1.6.A. Each school district shall align its curricula to meet the state standards for each grade level and subject area so that students who transfer between public schools within the school district receive the same educational opportunity within the same grade or subject area.

District:

Textbook: *Harcourt Math G4*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
<p>4.N.1.1 Exhibit an understanding of the place-value structure of the base-ten number system by reading, modeling, writing, and interpreting whole numbers up to 100,000; compare and order the numbers:</p> <p>a. recognize equivalent representations for the same number and generate them by decomposing and combining numbers (e.g., $853 = 8 \times 100 + 5 \times 10 + 3$; $853 = 85 \times 10 + 3$; $853 = 900 - 50 + 3$)</p> <p>b. identify the numbers less than 0 by extending the number line and using negative numbers through familiar applications (e.g., temperature, money)</p>	<p>2-3, 4-5, 6-9, 10-11, 20-23, 24-27, 28-29, 30-33, 56-57,</p> <p>4-5, 6-9, 20-23</p> <p>420-421, 422-423, 434-435, 436-437, 437</p>		<p>August/ September</p> <p>August/ September</p> <p>January</p>

<p>4.N.1.2 Identify fractions as parts of unit wholes, as parts of groups, and as locations on number lines:</p> <p>a. use visual models and other strategies to compare and order commonly used fractions</p> <p>b. use models to show how whole numbers and decimals (to the hundredths place) relate to simple fractions (e.g., $\frac{1}{2}$, $\frac{5}{10}$, 0.5)</p> <p>c. identify different interpretations of fractions:</p> <ul style="list-style-type: none"> • division of whole numbers by whole numbers • ratio • equivalence • ordering of fractions • parts of a whole or parts of a set 	<p>452-455, 456-457, 458-461, 468-471, 522-525</p> <p>560-563, 564-565, 568-571, 607</p> <p>448-451</p> <p>452-455, 458-461</p> <p>448-451, 566-567, 568-571</p> <p>452-455, 456-457, 458-461, 468-471, 522-525</p> <p>446-447, 448-451, 466-567, 568-571</p>		<p>January</p> <p>March</p> <p>January</p> <p>January January/ March January/ February January/ February/ March</p>
<p>4.N.1.3 Add and subtract fractions with common and uncommon denominators using a variety of strategies (e.g., manipulatives, numbers, pictures):</p> <p>a. recognize and generate equivalent decimal forms of commonly used fractions (e.g., halves, quarters, tenths, fifths)</p> <p>b. identify the numbers less than 0 by extending the number line and using negative numbers through familiar applications (e.g., temperature, money)</p>	<p>560-563, 564-565, 566-567, 568-571, 607</p> <p>420-421, 422-423, 424-425, 426-427, 437</p>		<p>March/ April</p> <p>January</p>
<p>4.N.1.4 Recognize classes of numbers (e.g., odd, even, factors, multiples, square numbers) and apply these concepts in problem-solving situations.</p>	<p>164-165, 172-173, 214-215, 236-237, 240-241, 316-317, 338-341, 342-345, 348-349, 355, 424-425</p>		<p>October/ December/ December/ January</p>

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.2: Understand the meaning of operations and how they relate to one another.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.N.2.1 Demonstrate an understanding of and the ability to use: a. standard algorithms for the addition and subtraction of multi-digit numbers b. standard algorithms for multiplying a multi-digit number by a two-digit number and for dividing a multi-digit number by a one-digit number	40-43, 44-47, 48-49, 50-51, 52-55, 64-67 236-237, 238-239, 240-241, 242-243, 252-255, 256-257, 258-259, 260-261, 262-263, 278-279, 280-291, 282-285, 286-287, 288		September October/ November
4.N.2.2 Select and use appropriate operations (addition, subtraction, multiplication, and division) to solve problems.	52-55, 176-177, 258-259, 306-307, 326-327, 478-479		September/ October/ November/December/ February
4.N.2.3 Extend the uses of whole numbers to the addition and subtraction of simple decimals (positive numbers to two places).	586-587, 588-589, 590-591, 592-595		April
4.N.2.4 Demonstrate commutative, associative, identity, and zero properties of operations on whole numbers (e.g., $37 \times 46 = 46 \times 37$ and $(6 \times 2) \times 5 = 6 \times (2 \times 5)$).	50-51, 68-69, 174-175, 226-227, 236-237, 288-289, 302-305, 316-317		September/ October/ November/ December
4.N.2.5 Demonstrate the concept of distributivity of multiplication over addition and subtraction (e.g., 7×28 is equivalent to $(7 \times 20) + (7 \times 8)$ or $(7 \times 30) - (7 \times 2)$).	238-239		October

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

K-4 Benchmark N.3: Compute fluently and make reasonable estimates.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.N.3.1 Demonstrate multiplication combinations through 12 x 12 and related division facts, and use them to solve problems mentally and compute related problems (e.g., 4 x 5 is related to 40 x 50, 400 x 5, and 40 x 500).	44-47, 48-49, 50-51, 52-55, 56-57, 164-165, 166-167, 168-171, 172-173, 174-175, 184-185, 186-187, 188-191, 192-193, 194-197, 198-199, 214-215, 216-217, 236-237, 288-289, 204, 209, 210-211		September/ October/ November
4.N.3.2 Add, subtract, and multiply up to two double-digits accurately and efficiently.	40-43, 64-67, 164-165, 166-167, 168-171, 172-173, 174-175, 184-185, 186-187, 188-191, 192-193, 194-197, 198-199, 204, 209, 210-211, 214-215, 216-217, 218-221, 222-225, 226-227, 236-237, 238-239, 240-241, 252-255		September/ October/ November
4.N.3.3 Use a variety of strategies (e.g., rounding and regrouping) to estimate the results of whole number computations and judge the reasonableness of the answers.	10-11, 30-33, 44-47, 48-49, 50-51, 52-55, 216-217, 218-221, 242-243, 253-255, 256-257, 258-259, 260-261		August/ September/ October/ November/
4.N.3.4 Use strategies to estimate computations involving fractions and decimals.	471, 477, 586-587		February/ April

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.1: Understand patterns, relations, and functions.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.A.1.1 Represent and analyze patterns and simple functions using words, tables, and graphs.	74-75, 198-199, 205, 214-215, 236-237, 288-289, 316-317, 346-347, 410-411, 412-413, 636-637		September/ October/ November/ December/January/ May
4.A.1.2 Create and describe numeric and geometric patterns including multiplication and division patterns.	74-75, 168-171, 198-199, 205, 214-215, 236-237, 288-289, 316-217, 346-347, 410-411, 412-413, 648-649		September/ October/ November/ December/ January/ May
4.A.1.3 Express mathematical relationships using equations.	70-73, 74-75, 76-79, 80-81, 188-191, 192-193, 194, 197, 198-199, 228-229		September/ October
4.A.1.4 Use and interpret variables, mathematical symbols, and properties to write and simplify expressions and sentences: a. use letters, boxes, or other symbols to stand for any number in simple expressions or equations (e.g., demonstrate an understanding of the concept of a variable) b. interpret and evaluate mathematical expressions using parentheses c. use and interpret formulas (e.g., Area = Length x Width or $A = L \times W$) to answer questions about quantities and their relationships	64-67, 68-69, 70-73, 74-75, 76-79, 80-81, 188-191, 192-193, 194-197, 198-199		September/ October
	64-67, 184-185, 186-187, 192-193, 194-197, 204		September/ October
	614-617, 620-621, 630-633, 634-635, 636-637, 650-653, 661		April

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.A.2.1 Identify symbols and letters that represent the concept of a variable as an unknown quantity.	65-67, 70-73, 74-75, 76-79, 80-81, 188-191, 192-193, 194-197, 198-199		September/ October
4.A.2.2 Explore the uses of properties (commutative, distributive, associative) in the computation of whole numbers.	43, 68-69, 174-175, 238-239		September/ October
4.A.2.3 Express mathematical relationships using equations.	70-73, 76-79, 188-191, 192-193, 194-197, 198-199, 228-229		September/ October
4.A.2.4 Determine the value of variables in simple equations (e.g., $80 \times 15 = 40 \times \text{?}$).	65-67, 188-191, 192-193		September/ October
4.A.2.5 Develop simple formulas in exploring quantities and their relationships (e.g., $A = L \times W$).	614-617, 620-621, 630-633, 650-653, 661		April/ May

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: ALGEBRA

Standard: Students will understand algebraic concepts and applications.

K-4 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.A.3.1 Solve problems involving proportional relationships (including unit pricing and map interpretations; e.g., one inch = five miles; therefore, five inches = • miles).	216-217, 228-229, 256-257, 258-259, 260-261, 526-527, 528-529, 530-531, 532-533, 544-545, 546-547, 548-549, 550-551, 552-553, 543		October/ November/ February /March
4.A.3.2 Model problem situations and use graphs, tables, pictures, and equations to draw conclusions (e.g., different patterns of change).	12-13, 28-29, 33, 92-93, 101, 102-103, 114-117, 118-121, 122-123, 124-125, 126-127, 128-129, 136-137, 138-139, 140-141, 142-143, 144-147, 148, 149, 155, 159		August/ September/
4.A.3.3 Use and interpret formulas (e.g., Area = Length x Width or $A = L \times W$) to answer questions about quantities and their relationships.	614-617, 620-621, 630-633, 650-653, 661		April/ May

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	K-4 Benchmark A.4: Analyze changes in various contexts.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.A.4.1 Identify and describe situations with constant or varying rates of change and compare them.		NM2-NM3	
4.A.4.2 Determine how a change in one variable relates to a change in a second variable (e.g., data tables, input-output machines).	64-67, 74-75, 87, 198-199		September/ October
4.A.4.3 Find and analyze patterns using data tables (e.g., T tables).	74-75, 122-123, 124-125, 126-127, 128-129, 136-137, 138-139, 140-141, 142-143, 144-147, 148-149, 155, 159, 198-199, 205, 636-637		September/ October/ May
4.A.4.4 Demonstrate and describe varying rates of change in relation to real-world situations (e.g., plant growth, students' heights).		NM4-NM5	

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.G.1.1 Identify, compare, and analyze attributes of two- and three-dimensional shapes and develop vocabulary to describe the attributes: a. build, draw, create, and describe geometric objects b. identify lines that are parallel or perpendicular c. identify and compare congruent and similar figures	366-369, 370-371, 372-373, 380-381, 382-383, 384-387, 388-389, 390-391, 402-403, 404-405, 406-409, 410-411		December/ January
4.G.1.2 Classify two- and three-dimensional shapes according to their properties and develop definitions of classes like triangles and pyramids: a. visualize, describe, and make models of geometric solids in terms of the number of faces, edges, and vertices b. interpret two-dimensional representations of three-dimensional objects	380-381, 382-383, 644-647, 648-649 366-369, 644-647, 648-649, 660, 661		January/ May December/ May
4.G.1.3 Make and test conjectures about geometric properties and relationships and develop logical arguments to justify conclusions.	372-373, 384-387, 388-389, 410-411		December/ January

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.G.2.1 Describe location and movement using common language and geometric vocabulary.	398-401, 406-409		January/
4.G.2.2 Use ordered pairs to graph, locate, identify points, and describe paths in the first quadrant of the coordinate plane.	430-431, 437		January
4.G.2.3 Use a variety of methods for measuring distances between locations on a grid.		NM6-NM7	

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.G.3.1 Create and describe rotational designs using language of transformational symmetry.	398-401, 406-409, 410-411, 412-413		January/
4.G.3.2 Describe a motion or set of motions that will show that two shapes are congruent.	402-403, 406-409		January/

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	K-4 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.G.4.1 Develop and use mental images of geometric shapes to solve problems (e.g., represent three-dimensional shapes in two dimensions).	366-369, 644-647, 648-649, 660, 661		December/ May
4.G.4.2 Use geometric models such as number lines, arrays, and computer simulations to investigate number relationships (e.g., patterns).	166-167, 338-341, 342-345, 346-347, 348-349, 424-425, 428-429, 448-451, 452-455, 456-457, 471, 560-563, 568-571, 572-575, 584-585		October/ December/ January/ February/ March/ April
4.G.4.3 Explore relationships involving perimeter and area: a. measure area of rectangular shapes and use appropriate units b. recognize that area can have the same perimeter but different areas and vice versa c. use models and formulas to solve problems involving perimeter and area of rectangles and squares (e.g., arrays)	628-629, 630-633, 661, 665 630-633, 634-635, 636-637, 665 612-613, 614-617, 620-621, 661, 665		May/ May April/ May

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.M.1.1 Select the appropriate type of unit for measuring perimeter and size of an angle.	366-369, 612-613, 614-617		December/ April/
4.M.1.2 Understand the need for measuring with standard units and become familiar with the standard units in customary and metric system.	518-521, 522-525, 528-529, 530-531, 540-543, 544-545, 546-547, 548-549, 550-551, 552-553		February/ March/
4.M.1.3 Identify the inverse relationship between the size of the units and the number of units.	526-527, 528-529, 530-531, 532-533, 544-545, 546-547, 548-549		February/ March
4.M.1.4 Develop formulas to determine the surface areas of rectangular solids.	661, NM8-NM9		May
4.M.1.5 Develop, understand, and use formulas to find the area of rectangles and related triangles and parallelograms.	628-629, 630-633, 636-637, 661, 665		May
4.M.1.6 Carry out simple conversions within a system of measurement (e.g., hours to minutes, meters to centimeters).	96-97, 98-101, 526-527, 528-529, 530-531, 532-533, 544-545		September/ February/ March

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	K-4 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.M.2.1 Estimate perimeters, areas of rectangles, triangles, and irregular shapes.	612-613, 614-617, 620-621, 628-629, 634-635, 665		April/ May
4.M.2.2 Find the area of rectangles, related triangles, and parallelograms.	628-629, 630-633, 636-637, 661, 665, NM10-NM11		May
4.M.2.3 Estimate, measure, and solve problems involving length, area, mass, time, and temperature using appropriate standard units and tools.	96-97, 98-101, 102-103, 104-107, 420-421, 422-423, 518-521, 522-525, 526-527, 532-533, 540-543, 544-545, 548-549, 550-551, 552-553, 614-617, 628-629, 630-633, 636-637, 661, 665, 666-667		September/ January/ February/ March/ April/ May
4.M.2.4 Identify common measurements of turns (e.g., 360 degrees in one turn, 90 degrees in a quarter-turn).	398-401, 406-409		January/
4.M.2.5 Compute elapsed time and make and interpret schedules.	96-97, 98-101, 102-103, 104-107		September
4.M.2.6 Use tools to measure angles (e.g., protractor, compass).	366-369, 398-401		December/ January

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.D.1.1 Organize, represent, and interpret numerical and categorical data and clearly communicate findings: a. choose and construct representations that are appropriate for the data set b. recognize the differences in representing categorical and numerical data	114-117		September
	28-29, 144-147		September
	144-147		September
4.D.1.2 Design investigations and represent data using tables and graphs (e.g., line plots, bar graphs, line graphs).	28-29, 114-117, 124-125, 126-127, 128-129, 136-137, 138-139, 144-147		September

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.2: Select and use appropriate statistical methods to analyze data.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.D.2.1 Compare and describe related data sets.	126-127, 136-137, 144-147		September
4.D.2.2 Use the concepts of median, mode, maximum, minimum, and range and draw conclusions about a data set.	118-121, 122-123, 18-149, 328-329		September/ December
4.D.2.3 Use data analysis to make reasonable inferences/predictions and to develop convincing arguments from data described in a variety of formats (e.g. bar graphs, Venn diagrams, charts, tables, line graphs, and pictographs).	12-13, 114-117, 118-121, 122-123, 124-125, 126-127, 128-129, 136-137, 138-139, 140-141, 142-143, 148-149, 388-389		August/ January

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: DATA ANALYSIS AND PROBABILITY	Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.	K-4 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.
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Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.D.3.1 Propose and justify conclusions and predictions based on data.	12-13, 114-117, 118-121, 122-123, 124-125, 126-127, 128-129, 136-137, 138-139, 140-141, 142-143, 148-149, 388-389		August/ January
4.D.3.2 Develop convincing arguments from data displayed in a variety of formats.	12-13, 114-117, 118-121, 122-123, 124-125, 126-127, 128-129, 136-137, 138-139, 140-141, 142-143, 148-149, 388-389		August/ January

Grade 4 Math Curriculum Alignment with State Standards

District:

Textbook: *Harcourt Math G4*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

K-4 Benchmark D.4: Understand and apply basic concepts of probability.

Grade 4 Performance Standards	Grade 4 Textbook Pages	Supplemental Materials	Month(s) when Addressed
4.D.4.1 Describe events as “likely,” “unlikely,” or “impossible” and quantify simple probability situations: a. represent all possible outcomes for a simple probability situation in an organized way (e.g., tables, grids, tree diagrams) b. express outcomes of experimental probability situations verbally and numerically (e.g., three out of four, $\frac{3}{4}$)	492-495, 496-497 490-491, 498-499, 500-501, 502-503, 509 490-491, 496-497, 498-499, 500-501		February February February
4.D.4.2 List all the possible combinations of objects from three sets (e.g., spinners, number of outfits from three different shirts, two skirts, and two hats).	490-491, 500-501, 502-503		February

Grade 5 Math Curriculum

Grade 5 Math Curriculum Alignment with State Standards

NM Statute 22-13-1.6.A. Each school district shall align its curricula to meet the state standards for each grade level and subject area so that students who transfer between public schools within the school district receive the same educational opportunity within the same grade or subject area.

District: LVCS

Textbook: *Harcourt Math G5*

Strand: NUMBER AND OPERATIONS	Standard: Students will understand numerical concepts and mathematical operations.	5-8 Benchmark N.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.N.1.1 Compare and order using concrete or illustrated models: a. whole numbers (to millions) b. common fractions (halves, thirds, fourths, eighths) c. decimals (thousandths)	2-3, 4-7, 10-13, 14-15, 91, 484-485 322-325, 326-327, 640-641 28-29, 30-31, 640-641	Place value charts to the billions place Base ten blocks, population bar graphs	August September
5.N.1.2 Demonstrate understanding of the magnitude of the value of numbers from thousandths to millions, including common fractions.	2-3, 4-7, 8-9, 10-13, 14-15, 22-25, 26-27, 28-29, 30-31, 314-315, 316-319, 320-321, 322-325, 326-327, 328-331, 337	Place value charts to the billions place Base ten blocks, population bar graphs	August September
5.N.1.3 Represent place value using concrete or illustrated models up to one billion (1,000,000,000).	2-3, 4-7, 8-9, 10-13, 14-15, 22-25, 26-27, 28-29, 30-31, 38-39, 40-41, 42-45, 166-167	to the billions place Base ten blocks, population bar graphs	August September
5.N.1.4 Interpret percents as part of a hundred (i.e., find decimal and percent equivalents for common fractions, explain how they represent the same value, and compute a given percent of a whole number).	632-633, 634-635, 636-639, 640-641, 642-645, 646-647, 670	Place value charts that include decimals, working with money , bar graphs, pie graphs	August September
5.N.1.5 Identify and represent on a number line decimals, fractions, and mixed numbers.	10-13, 22-25, 28-29, 314-315, 320-321, 328-331, 352-353	Place value charts that include decimals, working with money , bar graphs, pie graphs	September
5.N.1.6 Identify prime and composite numbers to 50.	300-301, 302-305	Show students the difference between prime and composite numbers using a number chart.	January February

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

5-8 Benchmark N.2: Understand the meaning of operations and how they relate to one another.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.N.2.1 Explain and perform whole number division and express remainders as a whole number or a fractional part as appropriate to the context of real-life problems.	192-193, 194-195, 196-197, 198-199, 200-201, 208-209, 210-211, 212-215, 216-217, 218-219, 220-221, 276-277	Teacher explanation visuals manipulatives	September
5.N.2.2 Add and subtract decimals.	42-45, 48-51, 52-55	Teacher lecture, math books	September
5.N.2.3 Add and subtract fractions and mixed numbers without regrouping and express answers in simplest form.	346-347, 348-351, 352-353, 354-355, 356-359, 360-361, 368-371, 372-373, 374-375, 376-377, 378-379, 423	Teacher explanation visuals manipulatives,	February
5.N.2.4 Find the factors and multiples of whole numbers.	148-149, 166-167, 276-277, 278-281, 282-283, 284-285, 302-305, 336	Teacher explanation, math books	January February
5.N.2.5 Use arithmetic operations and inverse relationships to represent and solve real-world problems.	194-197, 212-215, 218-219, 228-229, 232-235	Teacher explanation visuals manipulatives,	
5.N.2.6 Identify and represent on a number line decimals, fractions, and mixed numbers.	10-13, 22-25, 28-29, 314-315, 320-321, 328-331, 352-353	Teacher explanation visuals manipulatives,	August September
5.N.2.7 Demonstrate proficiency with division, including one- and two-digit divisors.	192-193, 194-195, 196-197, 198-199, 200-201, 208-209, 210-211, 212-215, 216-217, 218-219, 220-221, 228-229, 230-231, 232-235, 236-237, 238-239, 276-277	Teacher explanation visuals manipulatives,	October November
5.N.2.8 Solve simple problems involving the addition and subtraction of fractions and mixed numbers.	346-347, 348-351, 352-353, 354-355, 356-359, 360-361, 368-371, 372-373, 374-375, 376-377, 378-379, 423, 424-425	Teacher explanation visuals manipulatives.-	February March
5.N.2.9 Represent and use fractions and decimals in equivalent forms.	26-27, 28-29, 30-31, 238-239, 314-315, 316-319, 328-331, 354-355, 356-359, 374-375, 363-341	Teacher explanation	

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

5-8 Benchmarks N.3: Compute fluently and make reasonable estimates.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.N.3.1 Add, subtract, multiply, and divide whole numbers.	42-45, 46-47, 52-55, 64-67, 68-69, 70-73, 74-75, 76-79, 80-81, 148-149, 150-151, 152-153, 154-155, 156-157, 187, 192-193, 194-195, 196-197, 198-199, 200-201, 208-209, 210-211, 212-215, 216-217, 218-219, 220-221, 246-249, 250-251, 252-253, 254-25, 258-259, 260-261, 276-277, 278-281, 282-283	Teacher explanation visuals manipulatives,	August thru January
5.N.3.2 Add and subtract decimals.	42-45, 48-51, 52-55	Lecture, math book, manipulatives	
5.N.3.3 Use estimation strategies to verify the reasonableness of calculated results.	8-9, 42-45, 46-47, 48-51, 150-151, 152-153, 156-157, 170-173, 368-371, 372-373, 376-377	Teacher explanation visuals manipulatives,	August thru February
5.N.3.4 Explain how the estimation strategy impacts the result.	8-9, 42-45, 55, 148-149, 156-157, 192-193, 210-211, 352-353	Teacher explanation visuals manipulatives, on	August thru February
5.N.3.5 Relate the basic arithmetic operations to one another (e.g., multiplication and division are inverse operations).	194-197, 212-215, 218-219, 228-229, 232-235	Teacher explanation	September thru October
5.N.3.6 Simplify numerical expressions using order of operations.	64-67, 246-249, 250-251, 260-261, 271, NM6-NM7	Teacher explanation	August thru October
5.N.3.7 Recognize and explain the differences between exact and approximate values.	8-9, 42-45, 46-47, 48-51, 150-151, 152-153, 156-157, 170-173, 368-371, 372=373, 376-377, 540-541	Teacher explanation	August thru May

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	5-8 Benchmark A.1: Understand patterns, relations, and functions.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.A.1.1 Identify and graph ordered pairs in the first quadrant of the coordinate plane.	120-121, 498-499, 500-503, 504-505, 513	Different types of graphs visuals manipulatives,	September thru May
5.A.1.2 Describe, represent, and analyze patterns and relationships.	148-149, 166-167, 208-209, 228-229, 22-253, 254-255, 295, 296-299, 359, 419, 448-449, 498-499	Teacher explanation visuals manipulatives,	September thru May
5.A.1.3 Identify, describe, and continue patterns presented in a variety of formats (e.g., numeric, visual, oral, written, kinesthetic, pictorial).	148-149, 166-167, 208-209, 228-229, 252-253, 254-255, 296-299, 419, 448-449		September thru May
5.A.1.4 Generate a pattern using a written description.	148-149, 166-167, 208-209, 228-229, 252-253, 254-255, 419, 448-449	Teacher explanation	September thru May

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	5-8 Benchmark A.2: Represent and analyze mathematical situations and structures using algebraic symbols.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.A.2.1 Compute the value of the expression for specific numerical values of the variable.	64-67, 246-249, 250-251, 260-261, NM6-NM7	Teacher explanation, using visuals, from overhead transparencies	September October
5.A.2.2 Use a letter to represent an unknown number.	64-67, 68-69, 70-73, 74-75, 76-79, 80-81, 246-249, 254-255, 256-257, 258-259, 260-261		September October
5.A.2.3 Understand the differences between the symbols for “less than”, “less than or equal to”, “greater than”, and “greater than or equal to”.	10-13, 28-29, 73, 74-75	Teacher explanation, using visuals, from overhead transparencies.	august

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: ALGEBRA	Standard: Students will understand algebraic concepts and applications.	5-8 Benchmark A.3: Use mathematical models to represent and understand quantitative relationships.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.A.3.1 Use mathematical models to represent and explain mathematical concepts and procedures.	4-7, 22-25, 26-27, 28-29, 67, 164-165, 168-169, 230-231, 232-235, 246-249, 260-261, 282-283, 292-295, 300-301, 319, 320-321, 326-327, 328-331, 346-347, 348-351, 359, 368-371, 372-373, 374-375, 386-387, 388-389, 390-391, 402-403, 406-407, 408-411, 462-465, 486-489, 548-549, 554-555, 564-567, 568-571, 572-575, 576-579, 588-589, 590-591, 592-595, 596-597, 614-615, 632-633, 634-635, 636-639, 642-645, 654-655, 670, 675	mathematical models such as: a. the number line to model the relationship between rational numbers and rational number operations b. pictorial representation of addition and subtraction of rational numbers with regrouping c. manipulatives or pictures to model computational procedures	August to May
5.A.3.2 Understand and use mathematical models such as: a. the number line to model the relationship between rational numbers and rational number operations b. pictorial representation of addition and subtraction of rational numbers with regrouping c. manipulatives or pictures to model computational procedures d. graphs, tables, and charts to describe data e. diagrams or pictures to model problem situations	10-13, 22-25, 28-29, 38-41, 45, 74-75, 282-283, 314-315, 320-321, 328-331, 352-353, 480-485, 640-641, 656-7 42-45, 48-51, 52-55, 64-73, 76-79, 80-81, 346-361, 368-371, 372-373, 374-375, 376-377, 378-379, 486-489, 528-531, 536-539 22-29, 67, 70-73, 164-165, 168-169, 182, 215, 230-235, 246-249, 260-261, 282-283, 292-295, 300-301, 319, 320-321, 326-331, 346-351, 359, 368-375, 386-391, 402-403, 406-411, 428-431, 434-447, 456-459, 462-465, 486-489, 522-527, 548-549, 554-555, 564-579, 588-597, 614-615, 632-639, 642-645, 654-657, 670-675 14-15, 30-31, 51, 56-57, 96-99, 100-101, 102-103, 104-105, 106-109, 116-119, 122-125, 128-129, 130-133, 139, 306, 307, 664-665 10-11, 22-25, 28-29, 67, 70-73, 74-75, 126-127, 230-231, 232-235, 246-249, 256-257, 278-281, 282-283, 292-295, 300-301, 322-325, 326-327, 428-431, 486-489,	mathematical models such as: a. the number line to model the relationship between rational numbers and rational number operations b. pictorial representation of addition and subtraction of rational numbers with regrouping c. manipulatives or pictures to model computational procedures d. graphs, tables, and charts to describe data e. diagrams or pictures to model problem situations	August to May

	490-491, 664-665		
5.A.3.3 Demonstrate how a situation can be represented in more than one way.	10-13, 28-29, 70-73, 74-75, 96-99, 102-103, 104-105, 116-119, 164-165, 232-235, 246-249, 256-257, 278-281, 282-283, 292-29, 300-301, 302-305, 322-325, 386-327, 388-389, 390-391	Give the students more than one way to solve problems	August thru February

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: ALGEBRA

Standard: Students will understand algebraic concepts and applications.

5-8 Benchmark A.4: Analyze changes in various contexts.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.A.4.1 Recognize and create patterns of change from everyday life using numerical or pictorial representations.	252-253	Use everyday tools that are in your classroom e.g. Pictures books	October November
5.A.4.2 Generalize patterns of change and recognize the same general patterns presented in different representations.		Assure that students can recognize the same general patterns presented in different representations	October November

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	5-8 Benchmark G.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematics arguments about geometric relationships.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.G.1.1 Identify, describe, and classify two-dimensional shapes and three-dimensional figures by their properties.	434-437, 456-459, 460-461, 466-469, 503	Geometric manipulatives, protractors, compasses, rulers	April may
5.G.1.2 Recognize and describe properties of regular polygons having up to ten sides.	434-437, 503, 466-469	Geometric manipulatives, protractors, compasses, rulers	April may
5.G.1.3 Identify faces, edges, and bases on three-dimensional objects.	466-469, 470-471	Geometric manipulatives, protractors, compasses, rulers	April may

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	5-8 Benchmark G.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.G.2.1 Recognize perpendicular and parallel lines.	428-431	Geometric manipulatives, protractors, compasses, rulers	March April

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	5-8 Benchmark G.3: Apply transformations and use symmetry to analyze mathematical situations.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.G.3.1 Identify line of symmetry in simple geometric figures.	446-447	Geometric manipulatives, protractors, compasses, rulers	April

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: GEOMETRY	Standard: Students will understand geometric concepts and applications.	5-8 Benchmark G.4: Use visualization, spatial reasoning, and geometric modeling to solve problems.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.G.4.1 Understand and compute the perimeter of regular polygons.	548-549, 550-551, 552-553, 568-571, 596-597	Geometric manipulatives, protractors, compasses, rulers	April
5.G.4.2 Identify and explain circumference, radius, and diameter.	438-441, 554-555	Geometric manipulatives, protractors, compasses, rulers	April

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: MEASUREMENT	Standard: Students will understand measurement systems and applications.	5-8 Benchmark M.1: Understand measurable attributes of objects and the units, systems, and processes of measurement.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.M.1.1 Understand properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each using both U.S. customary and metric systems.	522-525, 526-527, 528-531, 532-533, 534-535, 562-563, 564-567, 568-571, 572-575, 576-575, 576-579, 580-581, 592-595, 596-597, 598-599, 605, 609	Geo boards, yard stick, ruler,	April May
5.M.1.2 Select and use appropriate units and tools to measure according to the degree of accuracy required in a particular problem-solving situation.		NM10-NM11 Rulers metric/standard	April May
5.M.1.3 Solve problems involving linear measurement, weight, and capacity (e.g., measuring to the nearest sixteenth of an inch or nearest millimeter; using ounces, milliliters, or pounds and kilograms) to the appropriate degree of accuracy.	522-525, 526-527, 532-533, 534-535	Rulers metric/standard	April May
5.M.1.4 Perform one-step conversions within a system of measurement (e.g., inches to feet, centimeters to meters).	528-531, 532-533, 534-535	Rulers metric/standard	April May

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: MEASUREMENT

Standard: Students will understand measurement systems and applications.

5-8 Benchmark M.2: Apply appropriate techniques, tools, and formulas to determine measurements.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.M.2.1 Solve measurement problems using appropriate tools involving length, perimeter, weight, capacity, time, and temperature.	522-525, 526-527, 528-531, 532-533, 534-535, 536-539, 596-597	Ruler, yard stick, meter stick, measuring tape	April May
5.M.2.2 Select and use strategies to estimate measurements including length, distance, capacity, and time.	522-525, 526-527, 534-535, 536-539, 540-541, 548-549, 562-563, 592-595	Different types of measuring tools ruler, yardsticks meter sticks measuring tape, ETC.	April May
5.M.2.3 Apply strategies and use tools for estimating and measuring the perimeter of regular and irregular shapes.	548-549, 550-551, 552-553, 568-571, 596-597	Applying different formulas to figure out problems.	April May

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: DATA ANALYSIS AND PROBABILITY	Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.	5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.
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Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.D.1.1 Construct, read, analyze, and interpret tables, charts, graphs, and data plots.	92-93, 96-99, 100-101, 102-103, 104-105, 106-109, 116-119, 120-121, 122-125, 126-127, 128-129, 130-133, 138-139, 143, 144-145, 342-343, 646-647, 676-677	Interpret tables, charts, graphs, and data plots.	September thru may
5.D.1.2 Construct, interpret, and analyze data from graphical representations and draw simple conclusions using bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.	92-93, 96-99, 100-101, 102-103, 104-105, 106-109, 116-119, 120-121, 122-125, 126-127, 128-129, 130-133, 138, 139, 143, 144-145, 278-281, 336, 342-343, 646-647, 676-677	tables, charts, graphs, and data plots.	September thru may
5.D.1.3 Display, analyze, compare, and interpret different data sets, including data sets of different sizes.	92-93, 96-99, 100-101, 102-103, 104-105, 106-109, 116-119, 120-121-122-125, 126-127, 128-129, 130-133, 138, 139, 143, 144-145, 278-281, 336, 342-343, 646-647, 676-677	Interpret tables, charts, graphs, and data plots.	September thru may
5.D.1.4 Organize and display single-variable data in appropriate graphs and representations.	116-119, 130-133, 138		September
5.D.1.5 Organize, read, and display numerical (quantitative) and non-numerical (qualitative) data in a clear, organized, and accurate manner including correct titles, labels, and intervals or categories including: a. frequency tables b. stem and leaf plots c. bar, line, and circle graphs d. Venn diagrams e. pictorial displays f. charts and tables	96-99, 128-129 104-105, 130-133 104-105, 106-109, 116-119, 122-125, 130-133, 138, 139, 143, 646-647 126-127, 278-281, 336 51, 106-109 14-15, 96-99, 100-101, 102-103, 104-105, 116-119, 306-307	. frequency tables b. stem and leaf plots c. bar, line, and circle graphs d. Venn diagrams e. pictorial displays f. charts and tables	September thru may
5.D.1.6 Formulate questions and identify data to be collected to correctly answer a question.	96-99, 104-105	Tables, charts, graphs	September

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

5-8 Benchmark D.2: Select and use appropriate statistical methods to analyze data.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.D.2.1 Organize and display single-variable data in appropriate graphs and representations and determine which types of graphs are appropriate for various data sets.	116-119, 130-133, 138	Charts, graphs, tables	September October January February
5.D.2.2 Use fractions and percentages to compare data sets of different sizes.	656-657, 658-659	Graphs	May
5.D.2.3 Correctly rank the values of a numerical data set containing simple fractions and decimals, identify maximum and minimum data values, and calculate the range for a data set.	96-99, 102-103, 322-325, 326-327, NM2-NM3, NM8-NM9	Graphs	September – December January – February

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

5-8 Benchmark D.3: Develop and evaluate inferences and predictions that are based on data.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.D.3.1 Make and justify valid inferences, predictions, and arguments based on statistical analysis.	654-655, 656-657, 658-659, 671	Charts, graphs, tables	May
5.D.3.2 Compare a given prediction with the results of an investigation.	654-655, 658-659	Charts, graphs, tables	May
5.D.3.3 Use counting strategies to determine all the possible outcomes of a particular familiar event.	656-657, 660-661, 664-665	Charts, graphs, tables	May
5.D.3.4 Find all possible outcome sets involving four or more sets of objects.	656-657, 660-661, 664-665	Charts, graphs, tables	May
5.D.3.5 Evaluate the reasonableness of inferences that are based on data in the context of the original solution.	660-661, 662-663, 664-665	Charts, graphs, tables	May
5.D.3.6 Identify the method used to make an inference and/or a prediction on a given data set and solve similar problems.	658-659	Charts, graphs, tables	May
5.D.3.7 Determine the accuracy of a prediction or an inference based on the accuracy of the data in a given data set.	654-655, 658-659	Charts, graphs, tables	May
5.D.3.8 List all possible outcomes of simple events.	656-657, 660-661, 664-665	Charts, graphs, tables	May

Grade 5 Math Curriculum Alignment with State Standards

District: LVCS

Textbook: *Harcourt Math G5*

Strand: DATA ANALYSIS AND PROBABILITY

Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.

5-8 Benchmark D.4: Understand and apply basic concepts of probability.

Grade 5 Performance Standards	Grade 5 Textbook Pages	Supplemental Materials	Month(s) when Addressed
5.D.4.1 Determine probabilities through experiments and/or simulations and compare the results with mathematical expressions.	654-655, 656-657, 658-659, 664-665, 671	Log sheet, charts, tables, graphs	May
5.D.4.2 Make predictions from the results of student-generated experiments of single events.	654-655, 658-659, 671	Log sheet, charts, tables, graphs	May
5.D.4.3 Identify simple experiments where the probabilities of all outcomes are equal.	656-657	Log sheet, charts, tables, graphs	May
5.D.4.4 Describe and predict the results of a probability experiment.	654-655, 656-657, 658-659	Log sheet, charts, tables, graphs	May
5.D.4.5 Use fractions to describe the results of an experiment.	656-657, 658-659	Log sheet, charts, tables, graphs	May
5.D.4.6 Use probability to generalize from a simple pattern or set of examples and justify why the generalization is reasonable.	658-659	Log sheet, charts, tables, graphs	May