

**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Exploring Numbers	Quarter: 1st	Weeks: 1-9
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Strand I. NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

Essential Questions: What is a whole number? What are cardinal numbers? How do we connect number words with the numbers they represent? How do you sequence whole numbers?

Benchmark 1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Demonstrate an understanding of the place value structure of the base ten number system:</p> <p>a. Read, write, model and sequence whole numbers 0-50 including filling in a sequence. (R, I)</p> <p>b. Count with understanding and recognize "how many" in sets of objects up to 50. (R, I)</p> <p>c. Count orally by 2s to 20 and by 5s to 50 and 10s to 100 (R)</p> <p>d. Count orally backward from 10 (R, M)</p> <p>e. Compare and order numbers up to 50. (R, I)</p> <p>h. Use ordinal numbers to tenth (e.g., what position?) and cardinal numbers 0-50 (e.g., how many?) appropriately (R)</p> <p>i. Connect number words and numbers to the quantities they represent. (0- 20) (R)</p>	<ul style="list-style-type: none"> - Write numbers 0-50 on blank number charts -Sequence numbers 0-50 - Recite #'s 0-50 in order and backwards 10-0 - Match objects to #'s 0-50 to show how many (towers, beans,etc) (Rep) - Sequence number cards 0-10, 0-25 and 0-50 - Math journals - have students write numeral, number word and illustrate to show number representation. (Con) -Number Bingo (teacher directed as whole group & in centers for small group) -Monster squeeze with number line 0-25 and 25-50 -Caterpillar comparison, pulling 2 numbers from a tub and compare using <, > cards -paper chains with different colored links and a directions page for order of colored links -Bags of numbers. Students choose a bag and decide if they will be counting by 2s, 5s, or 10s then order #'s. 	<ul style="list-style-type: none"> *Teacher can assess mastery by observation, checking charts filled in and by listening to students for proficiency. *Check math journal with rubric *BOY MAPS Testing *Data Folder *Math Snapshot 1st 9 weeks pre-assessment data 	<p style="text-align: center;">Resources</p> <p>http://rubistar.4teachers.org/index.php</p> <ul style="list-style-type: none"> - Handwriting Without Tears - math word wall www.apples4theteacher.com/math.html#interactivenumbercharts (reproducible # chart) http://www.internet4classrooms.com/skills_1st_math.htm (2. Connect the Dots, 12. Spooky Sequence, 1. Ghost Blaster) http://www.harcourtschool.com/glossary/math2/index6.html <p style="text-align: center;">Materials</p> <ul style="list-style-type: none"> - hundreds charts - chalk/chalkboard - word /number cards - linking cubes, math journals - 1st Math Snapshot - student data folder - number bingo game - number lines - monster patterns - caterpillar template/cards - colored links, directions pg - bags with # cards for ctg by 2s, 5s, 10s 	<ul style="list-style-type: none"> -<i>The Crayon Counting Book</i> by J. Pollatta -<i>M&M Counting Book</i> by Barbara Barbieri -<i>Chicka Chicka 1, 2, 3</i> by B. Martin Jr. -<i>How Many, How Many, How Many?</i> by R. Walton -<i>10 Kangaroos</i> (Harcourt Reader)

R=Review
I=Introduce
M=Mastery

PS=Problem Solving
RP=Reasoning and Proof
Com=Communication
Con=Connections
Rep=Representation

**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Understanding Addition and Subtraction	Quarter: 1st	Weeks: 1-9
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Strand I. NUMBER AND OPERATIONS

Standard: *Students will understand numerical concepts and mathematical operations.*

Essential Questions: How do we add numbers together? How do we know we're right?

Benchmark 2: *Understand the meaning of operations and how they relate to one another.* **Benchmark 3:** *Compute fluently and make reasonable estimates.*

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 2 1. Use a variety of models to demonstrate an understanding of addition of whole numbers. (R)</p>	<p>-Solve addition by joining 2 groups of cubes - Work with a partner to combine cubes - 1 partner rolls the die & 1 partner will add cubes to show how many all together. Students will explain to partner the results produced. Then students will draw 1 story problem created. (Com, RP, PS)</p> <p>-Addition "War" with cards</p>	<p>*Teacher will look at written responses from students.</p>	<p style="text-align: center;">Resources</p> <p>- Harcourt TE pg. 3B http://www.internet4classrooms.com/skills_1st_math.htm (2. Farm Addition)</p> <p>- Harcourt TE pg. 3B</p>	<p>- <i>Shoes</i> by F. Robinson (Harcourt Math Reader)</p> <p>- <i>Ten Red Apples</i> by Pat Hutchins (adding apples)</p> <p>- <i>Fish Eyes</i></p>
<p>Benchmark 3 1. Use strategies for whole-number computation, with a focus on addition. (R)</p> <p>2. Demonstrate a variety of methods to compute. (R,I)</p> <p>3. Perform addition with whole number combinations. (R,I)</p>	<p>-Addition with dominoes</p> <p>-Zap! Addition with craft sticks</p> <p>-Counting on with number lines</p>	<p>*Teacher observations</p> <p>*Student journal entries</p>	<p style="text-align: center;">Materials</p> <p>- 6 red/6 blue cubes - die -dominoes -Zap! Sticks -decks of playing cards - math journals - math rubric</p>	<p>- <i>Roll Over, Counting Song</i></p> <p>- <i>Ten Little Mice</i></p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Understanding Addition and Subtraction/patterns	Quarter: 1st	Weeks: 1-9
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Strand II. ALGEBRA

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: How many different ways can you make a pattern/number patterns? Why would you count by 2s, 5s, or 10s instead of 1s?

Benchmark 1: Understand patterns, relations, and functions.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 1</p> <p>1. Recognize, reproduce, describe, extend, and create repeating patterns and translate from one representation to another. (R)</p> <p>2. Skip-count on a hundreds chart (e.g., by 2s up to 20 and 5s to 50 and 10s up to 100) to identify, describe, and predict number patterns. (M)</p> <p>3. Identify number patterns on the hundreds chart. (I)</p>	<ul style="list-style-type: none"> - Teacher models for students how to make an ABAB & AABB pattern (ex. clap, snap) -Have the students reproduce, identify & extend pattern in journal -Have students create their own pattern in small groups with pattern blocks -Draw patterns in journal. (Com, Rep) -Have students line up in a pattern determined by the teach or a child -Students will color numbers as class discusses counting by 2s, 5s, and 10s -Students will be challenged to find other patterns on the hundreds chart 	<ul style="list-style-type: none"> *Students explain answer in journal *Check Math Journal with rubric *Teacher Observation 	<p style="text-align: center;"><u>Resources</u></p> <ul style="list-style-type: none"> - math word wall -rubric -Harcourt /web CD Mega Math - game - (Numberopolis) <p style="text-align: center;"><u>Materials</u></p> <ul style="list-style-type: none"> - math journals - hundreds charts 	<ul style="list-style-type: none"> -<i>The Very Busy Spider</i> by Eric Carle (patterns) -<i>M&M Counting Book</i> by Barbara Barbieri -<i>Chicka Chicka 1, 2, 3</i> by Bill Martin

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Understanding Addition and Subtraction	Quarter: 1st	Weeks: 1-9
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Strand II. ALGEBRA

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: How would we show a story in numbers? How would we show a story in words?

Benchmark 2: Represent and analyze mathematical situations and structures using algebraic symbols.

Benchmark 3: Use mathematical models to represent and understand quantitative relationships.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 2 1. Write number sentences that use concrete objects, pictorial, and verbal representations to express mathematical situations using invented and conventional symbols. (R,I)</p> <p>Benchmark 3 2. Describe situations that involve addition of whole numbers including objects, pictures, and symbols. (R,I)</p>	<p>-Teacher will create a story problem & read aloud to students. (Com, PS, Con)</p> <p>-Independent practice on desktops with dry erase</p> <p>-Pairs/Groups of students will create addition story problems, draw a picture, and solve</p> <p>-Student will write number sentences in math journal</p>	<p>*Students explain answer in journal</p> <p>*Check Math Journal with rubric</p> <p>*Teacher Observation</p> <p>*Students explain answer in journal</p> <p>*Check Math Journal with rubric</p> <p>*Teacher Observation</p>	<p style="text-align: center;">Resources</p> <p>http://www.internet4classrooms.com/skills_1st_math.htm (Miro on the Move-addition/subtraction)</p> <p>- Harcourt TE pg. 3B http://www.internet4classrooms.com/skills_1st_math.htm (Sum Sense)</p> <p style="text-align: center;">Materials</p> <p>- math journals - math rubric</p>	<p>- <i>Ten Red Apples</i> by Pat Hutchins</p> <p>- <i>Ten Black Dots</i> by Donald Crew</p> <p>- <i>Bears Can Share</i></p>

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Teacher:	Grade: 1	Subject: Mathematics Unit: Understanding Addition and Subtraction	Quarter: 1st	Weeks: 1-9
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Strand V. DATA ANALYSIS AND PROBABILITY

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

Essential Questions: What is a bar/picture graph? Why would we use a bar/picture graph? Where have you seen graphs before?

What is a chart? Why would we use a chart? Where have you seen charts before?

Benchmark 1: Select and use appropriate statistical methods to analyze data. **Benchmark 2:** Select and use appropriate statistical methods to analyze data.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 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. (R) b. gather data by interviewing, surveying, and making observations. (R) c. organize data into appropriate categories by sorting based on shared properties. (R) d. participate in discussions about selecting an appropriate way to display the data. (R) e. represent data using objects, pictures, tables, and simple bar graphs. (R,I)</p> <p>Benchmark 2 1. Analyze simple data: a. interpret what the graph or other representation shows. (R, I) b. determine whether or not the data gathered helps answer the specific question that was posed. (I)</p>	<p>Class will graph length of our names (number of letters in each child's name).</p> <p>Students will scoop a cup full of color tiles or attribute shapes, sort shapes and graph quantity.</p> <p>Students will recognize shared attributes (color of hair, kind of shoe, way we get to school, birthdays) and graph quantity.</p> <p>Students will interview each other to find favorite foods, ice cream flavor, etc.</p>	<p>* Math journal entry</p> <p>* Teacher observation</p> <p>* Teacher observation and math journal possibilities</p>	<p style="text-align: center;"><u>Resources</u></p> <p>http://www.oswego.org/ocsd-web/games/BangOnTime/clockwordres.html http://www.amblesideprimary.com/ambleweb/mentalmaths/lock.html -Harcourt Problem Solving Workbook -Harcourt TE: Volume 3 Ch. 25 pg. 421B (graphing)- Student practice book-p. pw126, p ps126 http://www.internet4classrooms.com/skills_1st_math.htm (I am special graphs)</p> <p style="text-align: center;"><u>Materials</u></p> <p>-Paper -Teacher created graph (vertical/horizontal) - Dry erase magnetic graphs -Cards for graphs -Tape, Scissors -Markers/pencils - journals -color tiles, attribute shapes</p>	

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Numbers to 100/Number Words to 20	Quarter: 2nd	Week:10-17
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Strand I. NUMBER AND OPERATIONS	Standard: <i>Students will understand numerical concepts and mathematical operations.</i>		
Essential Questions: What is place value?	Where is the one's place?	Where is the ten's place?	How do you sequence whole numbers to 100?
	What can you use to count by 2's, 5's and 10's?	What is skip counting?	

Benchmark 1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 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 a sequence) (R,I) b. Count with understanding and recognize "how many" in sets of objects up to 100 (R) c. Count orally by 2s to 20 , 5s to 100 and 10s to 100 (R) d. Compare & order numbers up to 100 (R) e. Decompose and recombine numbers using manipulatives to create and construct equivalent representations for the same number (R) f. Group objects by 10s and 1s to explore place value (e.g., 24 equals two tens and four ones) (R,I) g. Use ordinal numbers (e.g., what position?) and cardinal numbers (e.g., how many?) appropriately (R) h. Connect number words and numbers to the quantities they represent (R(0-20) I(11-20))</p>	<ul style="list-style-type: none"> - Write numbers 0-100 on blank number charts -Teacher will check charts completion - Recite #'s 0-100 in order and backwards 50-1 - Use straws on calendar for recording place value to show # of days - Match objects to #'s 0-100 to show how many (towers, beans, etc) - Sequence number cards 0-20 0-50 0-100 -Have students sit in a circle with legs extended to center of circle. Teacher will direct students to count feet by 2s to determine how many feet altogether. -Guide children in using color tiles to cover numbers on the hundred number chart by tens (blue tiles), fives (yellow tiles), and twos (green tiles). Have children count aloud as they cover one set of numbers at a time. Discuss the number pattern being covered. Then have children recount by tens, fives, or twos as they remove the tiles. (Rep, Com) 	<ul style="list-style-type: none"> *Teacher can assess mastery by observation, checking charts filled in and by listening to students for proficiency. *Check math journal with rubric *Teacher will observe listening to students counting orally. 	<p style="text-align: center;"><u>Resources</u></p> <ul style="list-style-type: none"> -Harcourt TE: Vol. 2, Chap 2, pg. 192 http://www.apples4theteacher.com/math.html#interactivenumbercharts (Reproduce # chart) http://www.internet4classrooms.com/skills_1st_math.htm (Connect dots by 2s, Counting by 2s, Count by 10s, Fairy Fog-2s and 10s, Numbers to 100, Counting to 100, Counting down,) Harcourt Vol. 2 TE P. 193 <p style="text-align: center;"><u>Materials</u></p> <ul style="list-style-type: none"> - hundreds charts - chalk/chalkboard - word /number cards - linking cubes - math journals - student data folder -color tiles -Harcourt student workbook pg. 192 -Harcourt Student Book p. 193-194 	<p><i>Pancakes for Breakfast</i> by T. dePaola (Counting by 2's, 5s, 10s, even and odds) <i>-M&M Counting Book</i> by Barbara Barbieri</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Addition and Subtraction Models/computation	Quarter: 2nd	Week:10-17
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Strand I. NUMBER AND OPERATIONS

Standard: Students will understand numerical concepts and mathematical operations.

Essential Questions: How can you use models to demonstrate and understand subtraction of whole numbers? What is a whole number?
What does computation mean? What methods can be used to compute problems?

Benchmark 2: Understand the meaning of operations and how they relate to one another. Benchmark 3: Compute fluently and make reasonable estimates.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 2</p> <p>1. Use a variety of models to demonstrate an understanding of addition and subtraction of whole numbers. (R,M)</p> <p>6. Given simple story problems, explain verbally how to select and use appropriate operations. (I)</p>	<p>-Subtraction "war" with cards -Subtraction with dominoes -Zap! Subtraction with craft sticks -Use number line -student will use white boards to write a subtraction number sentence using 2 dice. Use cubes to demonstrate the sentence.</p>	<p>-math journals with rubric -teacher observation -Harcourt pg. 38, 52</p>	<p style="text-align: center;">Resources</p> <p>- Harcourt TE pg. 3B - Harcourt TE: Vol. 1, Chap. 4, pg. 52 http://themathworksheetsite.com/ (create + & - problems) -Harcourt TE: Vol. 2, Chap. 13, pg. 210, 211-212, 219,220 http://themathworksheetsite.com/ (number line worksheet) http://www.internet4classrooms.com/skills_1st_math.htm (Math Fact from Harcourt, The Art of Math, Mad Math Minutes) -Harcourt Mega Math Country Countdown, <i>Counting Critters</i>, <i>Cross Town Number Line</i></p>	<p>-<i>Hershey's Kisses Subtraction Book</i> by Jerry Pallotta</p> <p>- <i>Ten Little Mice</i> by Joyce Dunbar</p> <p>-<i>Ant Friends</i></p> <p>- <i>Who's at the Zoo?</i></p> <p>-<i>10 Kangaroos</i></p> <p>-<i>Let's Count It Out</i>, <i>Jesse Bear</i> by Nancy White Carlstrom (count to 20)</p> <p>- <i>Two of Everything</i> by Lily Toy Hong (concept of doubles)</p>
<p>Benchmark 3</p> <p>1. Use strategies for whole-number computation, with a focus on addition and subtraction. (R,M)</p> <p>2. Demonstrate a variety of methods to compute. (R)</p> <p>3. Perform addition and subtraction with whole number combinations. (M)</p>	<p>-Have students use a number line to count on for addition: $1+1=$, $8+2=$, $5+3=$ (write on board). -Have students use a number line to count back for subtraction: $9-3=$, $6-2=$, $4-1=$ (write on board). -Have students complete & discuss worksheets on counting on & counting back for understanding.</p>	<p>*Harcourt student workbook: Review/Test: Vol. 2, Chap. 19, pg. 326</p>	<p style="text-align: center;">Materials</p> <p>-deck of cards -dominoes -Zap! Sticks -number line -2 dice cubes</p>	

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Number Sentences/Concept of Equal	Quarter: 2nd	Week:10-17
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Strand II. ALGEBRA

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: How can you write a number sentence using verbal representations?

What are invented and conventional symbols?

What materials can you use to demonstrate equal/unequal?

Benchmark 2: Represent and analyze mathematical situations and structures using algebraic symbols.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Write number sentences that use concrete objects, pictorial, and verbal representations to express mathematical situations using invented and conventional symbols (e.g., +, -, =). (R,M)</p>	<p>-Students will write & illustrate addition sentences (Harcourt TE) -Student will write number sentences in math journal with a partner using pennies (ex. Joe has 6 pennies. Jim takes two pennies. How many pennies does Joe have now? $6-2=4$) (remind students that the first number has to be larger or equal to the second number) (Rep, Con)</p>	<p>*Students explain answer in journal *Teacher will check finished product</p>	<p>Resources - Harcourt TE pg. 5B -Harcourt Mega Math Country Countdown, <i>Block Busters</i></p> <p>Materials -paper -crayons/markers -pennies - math journals -balance</p>	<p>-<i>Ten Red Apples</i> by Pat Hutchins - <i>Trick and Treat</i> by Bill Martin - <i>Ten Black Dots</i> by Donald Crew -<i>Just a Little Bit</i> by Ann Tompert -<i>Under the Picnic Tree</i></p>
<p>2. Demonstrate and describe the concept of equal (e.g., using objects, balance scales). (R,M)</p>	<p>-Teacher will demonstrate how a balance looks when pans hold equal & unequal amounts of pennies. Have students predict & compare weights of various amounts of pennies using a balance. (Rep, Con)</p>	<p>*Teacher Observation</p>		

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Teacher:	Grade: 1	Subject: Mathematics Unit: Addition and Subtraction Strategies/Qualitative Change	Quarter: 2 nd	Week: 10-17
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Strand II. ALGEBRA

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: What is qualitative change? How can objects and pictures help us when adding and subtracting? What are the four seasons?

Benchmark 3: Use mathematical models to represent and understand quantitative relationships. **Benchmark 4:** Analyze changes in various contexts.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 3</p> <p>2. Describe situations that involve addition and subtraction of whole numbers including objects, pictures, and symbols. (R)</p>	<p>-Students and teacher will model related addition & subtraction facts in partners using connecting cubes (10 each of 2 different colors) using Harcourt lesson on related addition & subtraction facts. -Problem: Suppose you have dice with 9 dots altogether. Draw a picture to show all the possible ways the dice could look in your math journal. Explain how you got your answers. (9 & 0, 8 & 1, etc.) (PS, Rep)</p>	<p>* Teacher/student question & answer * Teacher will check finished product as student explains to class what they answered</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Harcourt TE: Vol. 2, Chap. 14, pg. 229A - Harcourt Math Jingles® CD Primary (track 6 - addition & subtraction)</p>	<p><i>-Splash!</i> By Ann Jonas (counting & adding to 12)</p>
<p>Benchmark 4</p> <p>1. Describe qualitative change. (M -Rev. for 2nd Grade)</p>	<p>-Students will identify changes in season fall. -Teacher and students will take a walk and collect leaves. (from trees and off the ground) Make predictions on what will happen to the leaves. -Student will choose 2 leaves. Justify the differences and similarities in the leaves by doing leaf rubbings and writing what they observed in math journal.</p>	<p>* Teacher/student question & answer * Teacher will check finished product as student explains to class what they answered</p>	<p style="text-align: center;"><u>Materials</u></p> <p>- linking cubes - dice - math journals -leaves -pictures of four seasons (summer, fall, winter, spring) -bags -chart paper</p>	<p><i>Leaves, Leaves, Leaves</i> by Nancy Wallace <i>-Fall of Freddie the Leaf</i> by Leo Buscaglia <i>-Red Leaf, Yellow Leaf</i> by Lois Ehlert <i>-Why do Leaves Change Color?</i> by Betsy Maestro</p>

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Teacher:	Grade: 1	Subject: Mathematics Unit: Solid Figures and Plane Shapes/measurement	Quarter: 2nd	Week:10-17
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Strand III. GEOMETRY

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: What is an attribute? How are angles classified? What is the different between lines and angles? Describe a solid figure? What is non-standard unit?

Benchmark 1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships. **Benchmark 2:** Specify locations & describe spatial relationships using coordinate geometry & other representational systems

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Identify common geometric figures and classify them by common attributes:</p> <p>a. recognize, name, build, and illustrate both polygonal (up to six sides) and curved shapes (R,M)</p> <p>b. sort two- and three-dimensional shapes into categories based on common attributes (R.)</p> <p>c. use the attributes of shapes to analyze and identify examples and non-examples of geometric shapes (R.)</p> <p>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) (M)</p> <p>Benchmark 2:</p> <p>c. develop estimates & measure distances using nonstandard measurements (R,M)</p>	<p>-Show children solid figures and ask them to describe what they see. Then have children find real objects in the classroom that are shaped like each one.</p> <p>-Discuss which figures were most common and which were difficult to find.</p> <p>-Sort shapes by common attributes</p> <p>-Use solids to demonstrate stacks, roll, and slide. Have children stack, roll, and slide the real objects. (Com, Con)</p> <p>-Teacher will lead discussion on estimating distance to Lab. (What non Standard measuring tools could we use to measure?) Students will choose a tool to measure, predict & record estimate on their map. Have students use nonstandard tool to measure distance. (PS, Com, Con, Rep)</p>	<p>*Students will add math vocabulary to math journal and draw picture of a real object shaped like each one. Teacher will check finished product using rubric.</p>	<p style="text-align: center;"><u>Resources</u></p> <p>- Harcourt TE Vol. 2 Unit 4 pg. 251a,b</p> <p>-Math Word Wall (add vocabulary)</p> <p>-Harcourt CD ROM (<i>Shapes Ahoy!</i>)</p> <p>http://www.Mathforkids.com/symmetry.asp#</p> <p>(change in shape when rotated)</p> <p style="text-align: center;"><u>Materials</u></p> <p>-math journals</p> <p>-math rubric</p> <p>-paper shapes in variety of colors/ solids (cone, cube, cylinder, rectangular prism, pyramid, sphere etc)</p> <p>-rulers</p> <p>-paper clips</p> <p>-cubes</p>	<p>-<i>Greedy Triangle</i> by M. Burns</p> <p>-<i>Shapes of Things</i> by D. Dodd</p> <p>-<i>Color Farm</i> by L. Ehert</p> <p>-<i>Shapes</i> by Little Celebrations</p> <p>-Harcourt Math Reader</p> <p>- <i>Oscar & Norman</i> (shapes)</p>

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Teacher:	Grade: 1	Subject: Mathematics Unit: Spatial Change	Quarter: 2nd	Week:10-17
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Strand III. GEOMETRY

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: What will will a shape have in order to slide, stack or roll?
What is symmetrical?

Benchmark 3: Apply transformations and use symmetry to analyze mathematical situations.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Predict the results of changing a shape's position or orientation by using rotation (i.e., turns), (i.e., flips), and translations (i.e., slides). (R,M) <u>(Slide, stack and roll)</u></p> <p>2. Create simple symmetrical shapes and pictures. (I)</p>	<p>-Teacher will model meaning of slide and turn by using motion with construction paper. Have children trace the triangle pattern block on to a sheet of paper then have them lay the pattern block over the trace and slide the pattern block to a new position. Instruct them to trace the shape again, draw an arrow from the first figure to the second, and label the drawing as a slide.</p> <p>.</p> <p>-Have student fold a paper in half and then open it flat. Place a small blob of paint to the left of the crease. Fold paper and press flat with hand. Students will describe what the shape made by the paint and point out the two parts that are the same size and shape. Student will examine picture and explain in math Journal if it is symmetrical. Why or why not? (PS, Rep, RP, Con)</p>	<p>*Teacher will check completed practice page 16.5. * Teacher observation</p>	<p>Resources</p> <p>-Math Word Wall (add vocabulary) (slide, turn, line of symmetry) -Harcourt CD ROM (<i>Shapes Ahoy!</i>) <i>Ship Shapes Level N and O</i> http://www.Mathforkids.com/symmetry.asp# (slides and turns, symmetry) -16.5 page PW 83 on slides and turns. (Con)</p> <p>Materials</p> <p>-paper -crayons -pattern blocks for a triangle, square, and rectangle -Student WB pages 275-278, 273-274 - paint -paper isosceles triangle, circle, rectangle, and hexagon</p>	<p>-<i>Shapes of Things</i> by D. Dodd</p> <p>-Circus Shapes by S Murphey</p> <p>-Math Reader - <i>Oscar & Norman</i></p>

R=Review
I=Introduce
M=Mastery

PS=Problem Solving
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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: ; Estimating Time	Quarter: 2nd	Week:10-17
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Strand IV. MEASUREMENT

Standard: *Students will understand measurement systems and applications.*

Essential Questions: How many hours in a day? How many days in a week? How many weeks in a month? Is 60 min. or 1 hour longer? Explain

Benchmark 1: Understand measurable attributes of objects and the units, systems, and process of measurement.

<i>Performance Standard</i>	<i>Activities/Strategies</i>	<i>Assessments</i>	<i>Resources/Materials</i>	<i>Suggested Reading</i>
<p>1. Develop an understanding of measurable properties using appropriate concepts and vocabulary:</p> <p>e.. Time by estimating (e.g., minutes, hours, days, weeks) (R, M)</p>	<p>-Students will create an analog clock using a paper plate with movable hands. Use clock during the day to relate different to various hours. Estimate how many hours until -Ex. Lunch, end of day. (RP, PS, Con, Com)</p> <p>- Estimate about how long it will take to write your name, read a book, play a baseball game, say ABC's ect. Then time students to check estimation.</p>	<p>*Teacher Observation *Teacher checks finished products.</p> <p>**2nd Nine weeks math Snapshot post-assessment</p> <p>** 3rd nine weeks Math snapshot Pre-assessment</p> <p>** Maps MOY Assessment</p>	<p style="text-align: center;"><u>Resources</u></p> <p>Mega Math CD Shapes Ahoy! Made to Measure, Level E</p> <p style="text-align: center;"><u>Materials</u></p> <p>- -classroom objects -analog clock models p.TR73 -paper plates -paper fasteners -markers -paper for min. and hour hands -Student workbook p. 439-440, 401-404 -calendar -vocabulary (hour hand, minute hand, o'clock, shortest, longest, heaviest, lightest, inch, foot.) -timer</p>	<p>Harcourt Math Readers:</p> <p><i>The Caterpillar</i> by Jo Sumara (time)</p> <p><i>Koala Lou</i> by Mem Fox</p> <p><i>Isn't it Time?</i> by J. J. Hindley</p> <p><u>A Wrinkle in Time</u> by Madeleine L'Engle</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Numbers to 100 and Place value	Quarter: 3rd	Week: 18-28
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Strand I: NUMBER & OPERATIONS	Standard: Students will understand numerical concepts & mathematical operations.
Essential Questions: Why is it important to group objects by 10? What happens when you have 10 in the ones place?	

Benchmark 1: Understand numbers, ways of representing numbers, relationships among numbers, & number systems.				
Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Demonstrate an understanding of the place value structure of the base ten number system:</p> <p>d. Count orally backward from 100 (R,M)</p> <p>f. Decompose and recombine numbers using manipulatives to create and construct equivalent representations for the same number (R,M)</p> <p>g. Group objects by 10s and 1s to explore place value (e.g., 24 equals two tens and four ones) (R,,M)</p>	<p>- use number cards to organize number backwards from 100 to 0. -Using number cards 0-9, have students create equivalent representation for same number.</p> <p>-Teacher will read "100th day of school to students. Discuss different things we can collect to equal 100. Teacher will have beans to count & group them in sets of 10 to equal 50 & 100. Students will work in groups of three & draw items in sets to equal 50 & 100. (toys, fish, circles, squares, etc.) Teacher will organize a class book to share with other classrooms. (Com, Con, PS)</p>	<p>*Teacher can assess mastery by observation, checking adding machine tape with numbers & by listening to students for proficiency. *Check math journal with rubric *MOY MAPS testing</p>	<p style="text-align: center;">Resources</p> <p>-Harcourt TE: Vol. 2, Chap 2, pg. 183-186, 165-166, 197-198 http://math.about.com/library/missing2510.pdf (order #'s) http://www.321know.com/g1_k5ex1.htm (# words) www.apples4theteacher.com/math/games/100-number-chart-one.html#interactive100chart (Reproduce # chart) Hands-On Learning Place Value Card Game (Hands-On Learning Card Games) by School Specialty Publishing</p> <p style="text-align: center;">Materials</p> <p>- hundreds charts - paper - word /number cards - linking cubes - math journals - assortment of small objects to count -adding machine tape -Markers</p>	<p>The 100th Day of School (Hello Reader!, Level 2) by Angela Shelf Medearis and Joan Holub (Counting)</p> <p>Place Value, Grade 1 by MathQueue</p> <p>Places Along the Way (Rookie Read-About Math) by Brian Sargent</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Addition and Subtraction/strategies	Quarter: 3rd	Week: 18-28
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Strand I: NUMBER & OPERATIONS	Standard: Students will understand numerical concepts & mathematical operations.
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Essential Questions: what are some ways you could check addition and subtraction solutions?

Benchmark 2: Understand the meaning of operations & how they relate to one another. Benchmark 3: Compute fluently & make reasonable estimates.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 2</p> <p>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 $14 - 6 = 8$). (I)</p> <p>Benchmark 3</p> <p>1. Use strategies for whole-number computation, with a focus on add. & sub.. (REVIEW FOR 2ND)</p> <p>2. Demonstrate a variety of methods to compute. (REVIEW FOR 2ND)</p> <p>3. Perform addition & subtraction with whole number combinations. (REVIEW FOR 2ND)</p> <p>4. Use & explain estimation & mental math strategies to determine the Reasonableness of answers involving add. & sub..</p>	<p>- Teacher will model concept of inverse relationship with addition & subtraction problems. Working with partner the student will compare answers in math journal & compile math problems using tens or ones column digits to correlate a number sentence & check solutions. ($8-3=5, 5+3=8$)</p> <p>- Using number cards, student will construct an addition sentence and then move numbers around, change from addition to subtraction by moving same numbers around to show relationship between addition and subtraction.</p>	<p>*Math Journal *Teacher observation *Student pg. 85 *addition & subtraction bingo</p>	<p style="text-align: center;"><u>Resources</u></p> <p>http://www.321know.com/sub1.htm http://www.bbc.co.uk/schools/laac/numbers/ch3.shtml -Harcourt CD Country Countdown (Block Busters-level E-F) Add/Sub. -Harcourt CD Numeropolis (Carnival Stories Level B) Number stories Harcourt Vol.2 Lesson 19.1 http://www.aplusmath.com/games/matho/AddMatho.html http://www.aplusmath.com/games/picture/SubPicture.html</p> <p style="text-align: center;"><u>Materials</u></p> <p>-addition & subtraction bingo game -Math Journal -Harcourt TE. P.85 -Student pg. 85 -pencils -cubes -number cards 0-9</p>	<p>- <i>Addition Annie</i> by David Gisler - <i>The Hershey's Kisses Addition Book</i> by Jerry Pallotta - <i>10, 9, 8 Polar! A Counting Backward Book (A+ Books)</i> by Rebecca Fjelland Davis (counting backwards) - <i>Bears on Wheels</i> by Stan and Berenstain</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Patterns	Quarter: 3rd	Week:18-28
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Strand II. ALGEBRA

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: What is a repeating pattern? How can you create a repeating pattern? What number patterns can you find on a hundreds chart?

Benchmark 1: Understand patterns, relations, and functions.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>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). (R,M)</p> <p>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. (R,M-10'S)</p> <p>3. Identify number patterns on the hundreds chart. (I M)</p>	<p>- Teacher models for students how to make an ABAB & AABB,ABCABC pattern (ex. clap, snap) -Have the students translate patterns from one medium to another(clap, snap show it with cubes or other materials) - Each group of 5 students will have 3 colors of paint to use in making a variety of patterns on sentence strips. Teacher will demonstrate how to use the sponge shapes to make prints. Students will paint a pattern, share and compare their pattern with the group. Use the painted strips to border a bulletin board display. -Give each child 100 number chart to analyze. (What numbers are on the chart?, How are they organized?, How many numbers are in each row? etc.) Students will place a cube on the chart as they count by 10s. Discuss and Evaluate the pattern that is being used. (Rep, Com, PS)</p>	<p>*Student will complete page PW 86 making new patterns. *Teacher will check finished product *Teacher will give students a starting number. Students will use 100 to determine the pattern. Page. PW 59 Student will complete page and teacher will assess finished product. *Check Math Journal with rubric *Teacher Observation</p>	<p style="text-align: center;">Resources</p> <p>- math word wall -rubric -Harcourt /web CD mega math - game - (Numberopolis) Harcourt Volume 2, PW page 86,59 http://theworksheet.com/h_chart.html</p> <p style="text-align: center;">Materials</p> <p>- math journals - student data folder -hundreds charts -number cards -cubes -Paints(3 colors) -Sentence strips (1 per student) -sponge shapes</p>	<p>-<i>The Very Busy Spider</i> by Eric Carle (patterns) -<i>M&M Counting Book</i> by Barbara Barbieri -<i>Chicka Chicka 1, 2, 3</i> by Bill Martin <i>Pancakes for Breakfast</i> by T. dePaola (Counting by 2's, 5s, 10s, even and odds and patterns) Pattern (Math Counts) by Henry Arthur Pluckrose Pattern Fish by Trudy Harris</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Open number addition and subtraction sentences	Quarter: 3rd	Week: 18-28
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Strand II: ALGEBRA	Standard: Students will understand algebraic concepts & applications.
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Essential Questions: What is an open ended number sentence?	What is a diagram?
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Benchmark 2: Represent & analyze mathematical situations & structures using algebraic symbols. Benchmark 3: Use mathematical models to represent & understand quantitative relationships

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 2: 3. Solve open number sentences that have variables representing numbers up to 10 (e.g., $10 = \square + 2$). (I)</p>	<p>-Teacher will demonstrate to students that equal numbers of identical objects will balance (explain a balance is like an addition sentence). Students will review number problems in math journal. Predict & demonstrate if any of the math problems are equal by using balance & objects. Circle the problems if they are equal.</p> <p>-Set up a place in front of the classroom to shield 3-4 students. Line & count 6 children in the front of the classroom. Have students close their eyes while 4 students move behind the shield. Students will determine what how many students are gone. Write the number sentence $2 + \square = 6$. Ask students to use what they learned from the model to decide what number is missing.</p>	<p>*math journal (number sentence) *teacher observation</p>	<p style="text-align: center;"><u>Resources</u></p> <p>Harcourt Mega Math Numberopolis Carnival Stories, Lev. H Harcourt TE. Pg. 235A-235B</p>	<p>-Harcourt math reader- <i>Ant Friends by Fay Robinson (addition & subtraction stories)</i></p> <p>Subtraction Action by Loreen Leedy</p> <p>Two Plus Two is Not Five (Easy Methods to Learn Addition & Subtraction) by Susan R. Greenwal</p> <p>Monster Musical Chairs (MathStart 1) by Stuart J. Murphy and Scott Nash</p>
<p>Benchmark 3: 1. Represent equivalent forms of the same number through the use of physical models, diagrams, and number expressions to 20 (e.g., $3 + 5 = 8$, $2 + 6 = 8$). (I)</p>	<p>-Teacher will distribute 20 counting bears to each pair of students & number cards 1-20. One partner shuffles cards & places them face down. One partner turns over a card & using order of property shows different number sentences that equals the number on card. Record in math journal. Student will then compose & illustrate a story problem to support results that were recorded.</p>		<p style="text-align: center;"><u>Materials</u></p> <p>-number cubes -math journal -cubes -counting bears -number cards to 20</p>	

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: shapes, 3 dimensional	Quarter: 3rd	Week: 18-28
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Strand III: GEOMETRY	Standard: Students will understand geometric concepts & applications.
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Essential Questions: What is the most common attribute? What is the difference between solid figures and 3 dimensional shapes?
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Benchmark 1: Analyze characteristics & properties of two & three dimensional geometric shapes & develop mathematical arguments about geometric relationships.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Identify common geometric figures & classify them by common attributes:</p> <p>b. sort two- and three-dimensional shapes into categories based on common attributes (.M)</p> <p>c. use the attributes of shapes to analyze and identify examples and non-examples of geometric shapes (.M)</p> <p>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) (M)</p>	<ul style="list-style-type: none"> - Use 3 dimensional shapes to demonstrate common attributes. - Students will construct their own geometric figures. - Play the game Musical shapes. Teacher will choose a shape. When music begins, students will pass shape around the circle till music stops. Student to the left of the person holding the shape will "name an attribute", and student to right will name a different attribute. 	<ul style="list-style-type: none"> -teacher observation - finished product 	<p style="text-align: center;"><u>Resources</u></p> <ul style="list-style-type: none"> -Math Wall - vocab: sides, corners, vertices, edges, faces, hexagon, rhombus, trapezoid -Harcourt Mega Math <i>Shapes Ahoy!</i> Under Sea 3D (Level B, C, D - solids / Level F - vertices & faces) <i>Sea Cave</i> (Level I, J, N - sorting shapes) http://www.Mathforkids.com/symmetry.asp# (change in shape when rotated) <p style="text-align: center;"><u>Materials</u></p> <ul style="list-style-type: none"> -3 dimensional shapes -pattern blocks -Harcourt workbook pg. 257-260 -solid shapes 	<ul style="list-style-type: none"> -<i>Greedy Triangle</i> by M. Burns -<i>Shapes of Things</i> by D. Dodd -<i>Color Farm</i> by L. Ehert -<i>Shapes</i> by Little Celebrations -Harcourt <i>Math Reader</i> - <i>Oscar & Norman</i> (shapes)

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: spatial sense	Quarter: 3rd	Week: 18-28
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Strand III: GEOMETRY	Standard: Students will understand geometric concepts & applications.
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Essential Questions: What tools can be used to measure distance?
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Benchmark 2: Specify locations & describe spatial relationships using coordinate geometry & other representational systems.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Participate in group and individual based on the concepts of space and location:</p> <p>b. describe direction, location, space, and shape <i>(R)</i></p> <p>c. directions for navigating from one location to another to develop the vocabulary needed to describe direction, distance, location, and representation <i>(I)</i></p> <p>d. use materials to create representations of the surrounding environment <i>(I)</i></p>	<p>-Students will visualize, describe & record directions, in math journal, on how to get to the computer lab classroom at Steiner. Use vocabulary (to the left of, to the right, close by, how far, near etc.)</p> <p>-The students will work with a partner & create a map using different materials to represent the buildings & landmarks.</p> <p>-Teacher will lead discussion on estimating distance to Lab. (What non Standard measuring tools could we use to measure?) Students will choose a tool to measure, predict & record estimate on their map. Have students use nonstandard tool to measure distance. (PS, Com, Con, Rep)</p>	<p>Teacher will observe students using correct vocabulary & following directions as they report observations to the class. Check maps & math journal for accuracy.</p>	<p style="text-align: center;"><u>Resources</u></p> <p>Harcourt -unit 4</p> <p style="text-align: center;"><u>Materials</u></p> <p>-Math journal -Vocabulary cards (to the left of, to the right of, close by, how far, near) -Materials to represent landmarks (blocks, construction paper, etc) -Non-Standard unit materials (paper clips, yard sticks, rulers, tape measure, big blocks etc.)</p>	<p>-<i>Up, Down, and Around</i> (Hardcover) by Katherine Ayres (Author), <i>Mapping Penny's World</i> (Paperback) by Loreen Leedy Westcott Oscar and Norman by Mona Lee (Location)</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Spatial Change	Quarter: 3rd	Week: 18-28
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Strand III: GEOMETRY	Standard: Students will understand geometric concepts & applications.
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Essential Questions: What is a reflection? What happens when you flip the shape?
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Benchmark 3: Apply transformations & use symmetry to analyze mathematical situations.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>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). (R,M)</p> <p>3. Recognize and describe the symmetric characteristics of designs (e.g., geometric designs made with pattern blocks). (I,M)</p>	<p>- use a hand held mirror and look at shape to see reflection or flip shape. -Have students fold a sheet of paper in half & then open it up & draw a line on the fold. -Teachers ask students to choose two matching pattern blocks & place them on either side of the fold, forming one shape. Then have one student hold the blocks together as the other student traces around the outside of the newly formed shape. Ask them to remove blocks & orally identify the newly formed shape. -Have students explore similarities in pattern blocks (PS, Com, Rep)</p>	<p>*Teacher Observation</p> <p>*Teacher checks student page 16.4 (drawing missing part)</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Harcourt TE: Vol. 2, Unit 4, pg. 273B</p> <p style="text-align: center;"><u>Materials</u></p> <p>-paper -pattern blocks -challenge pg. 16.4 (CW82) - hand help mirror</p>	<p>Mouse Shapes by Ellen Stoll Walsh</p> <p>When a Line Bends . . . A Shape Begins by Rhonda Gowler Greene</p> <p>Icky Bug Shapes by Jerry Pallotta</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Spatial Change	Quarter: 3rd	Week: 18-28
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Strand III: GEOMETRY	Standard: Students will understand geometric concepts & applications.
Essential Questions: What is a hexagon? What does quick image mean?	

Benchmark 2: Understand the meaning of operations & how they relate to one another.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>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). (I,M)</p> <p>2. Create three-dimensional shapes based on two-dimensional representations. (I,M)</p> <p>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). (R,M)</p> <p>5. Identify structures from different views or match views of the same structure portrayed from different perspectives. (R,M)</p>	<p>-Have students add shapes of the same type to create new or larger shapes & count vertices & sides. (a hexagon can be made from six triangles) Trace & report results in Math Journal.</p> <p>-Instruct students to examine the rectangular prism pattern. Ask students to predict what solid figure the pattern will make & describe any clues that helped them make the prediction. (Repeat with triangle pattern) -Students will recreate a configuration of dots without counting (In math journal (quick image)) (Com, RP, Con)</p>	<p>*Teacher checks math journal for completion</p> <p>*Teacher checks finished products</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Harcourt TE: Vol. 2, Unit 4 pg. 259B</p> <p style="text-align: center;"><u>Materials</u></p> <p>-math journals -pattern blocks -tape -copies of Transparencies TR93 & 98 (Rec. prism & pyramid)</p>	<p>Ten Black Dots by Donald Crews</p> <p>Three-Dimensional Shapes (Discovering Shapes) - Hardcover (Jan 1997) by David L. Stienecker and Richard Maccabe</p> <p>Captain Invincible and the Space Shapes: Level 2- Three Dimensional Shapes (Mathstart) - Hardcover (Sep 2001) by Stuart J. Murphy and Remy Simard</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Spatial Sense	Quarter: 3rd	Week: 18-28
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Strand III. GEOMETRY

Standard: *Students will understand algebraic concepts and applications.*

Essential Questions: What is a landmark? Why is it important to identify different structures?

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

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>3. Participate in to develop mental visualization and spatial memory. (I)</p> <p>4. Describe how to get from one location to another by visualizing the landmarks along the route. (R,M)</p> <p>5. Identify structures from different views or match views of the same structure portrayed from different perspectives. (I)</p>	<p>-Students will do "quick image" that require them to recall or reproduce a configuration of dots on a card or to determine the number of dots without counting in their math journal.</p> <p>- Student will follow directions along a route by listening; visualizing, & following directions in the game Can You Follow Directions?</p> <p>-The student will use manipulative to model slides & turns to identify structures from matched or different views: Have children place a dot on one side of a pattern block. Have them draw a line down the middle of the paper. Place the pattern block on one side of the line, dot side up. Have students slide the block so that it is now on the other side of the line, dot side up. Do the same with "turning" the block. Have students explain the difference in items that have been slid & items that have been turned. (Rep, Com, Con)</p>	<p>*Teacher will assess finished product in math journal</p> <p>*Teacher observation</p> <p>*Student explanation of differences (slide/turn)</p>	<p>Resources</p> <p>http://eliot.needham.k12.ma.us/technology/lessons/internet/q1/1_teacher_math.htm (Shape Sorter, Shape Sorter Match Up)</p> <p>http://www.cogcon.com/gamegoo/games/tina2/tina2.html - (Can You Follow Directions? - Tina will give you directions. Click on the pictures in the correct order.)</p> <p>Materials</p> <p>-images of dots on cards</p> <p>-math journal</p> <p>-pattern blocks</p> <p>-pencil</p> <p>-paper</p>	<p><i>Circus Shapes</i> by Stuart J. Murphy (shapes)</p> <p>Me on the Map (Dragonfly Books) by Joan Sweeney and Annette Cable</p> <p>There's a Map on My Lap!: All About Maps (Cat in the Hat's Learning Library) by Tish Rabe and Aristides Ruiz</p> <p>As the Crow Flies: A First Book of Maps by Gail Hartman and Harvey Stevenso</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Length and Measuring tools	Quarter: 3rd	Week: 18-28
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Strand IV. MEASUREMENT

Standard: *Students will understand measurement systems and applications.*

Essential Questions: How may feet in a yard? When do we use centimeter to measure?

Benchmark 1: Understand measurable attributes of objects and the units, systems, and process of measurement. Benchmark 2: Apply appropriate techniques, tools, & formulas to determine measurements.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 1 1. Develop an understanding of measurable properties using appropriate concepts and vocabulary: a. Length by measuring and estimating (e.g., longer, shorter, meter, centimeter, inch, yard) (R-longer, shorter I-inch, centimeter)</p> <p>Benchmark 2: 1. Measure with multiple copies of units the same size (e.g., paper clips). (R,M)</p> <p>2. Use repetition of a single unit to measure something larger than the unit (e.g., a yardstick/meter stick to measure a room). (I)</p>	<p>-Teacher gives partners 3 strips of paper (different lengths) to compare the lengths. Have them place the strips side by side and discuss what they see. Then have student order them from shortest to longest. Teacher directs student to point to the shortest and longest.</p> <p>-In groups of 3, trace around foot with pencil on chart paper. Each student measures foot with linking cubes and determines which foot is shortest and longest within the group. Use ruler to measure in inches and record on "foot". Repeat with Centimeters.</p> <p>-Have students estimate & check by measuring a length of string using different items (paper clips, pennies, color tiles) & tape string in math journal recording measurement tool & number used. (Prob., Comm., Con.)</p> <p>-Have student's measure length of classroom with a partner using a yardstick & record in math journal (Repeat with meter stick). (RP, Rep, Con)</p>	<p>*Strips ordered in math journal</p> <p>*Measurements of foot</p> <p>*Measurements of string</p> <p>*Measurements of classroom</p>	<p>Resources Mega Math CD Shapes Ahoy! Made to Measure, Level E</p> <p>Materials -Linking cubes -string -scissors -paper -classroom objects -yardstick -math journal</p>	<p>Harcourt Math Readers: <i>Just Right!</i> by Maria Kate(length)</p> <p>How Long or How Wide?: A Measuring Guide (Math Is Categorical)</p> <p>Measuring (Question of Math) by Sheila Cato and Sami Sweeten</p> <p>Measuring: The Perfect Playhouse (Burstein, John. Math Monsters.) by John Burstein</p> <p>Learn About Measuring With Big Bird (Sesame Street 1 2 3)</p>

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Rep=Representation

**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Numbers and Operations	Quarter: 4th	Weeks 29-36
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Strand I: NUMBER & OPERATIONS	Standard: Students will understand numerical concepts & mathematical operations.
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Essential Questions: How might we use what we know about place values to write the number six hundred seventy five? Tell me what your thinking about the order of the numbers? What would you suppose we need to know about money?

Benchmark 1: Understand numbers, ways of representing numbers, relationships among numbers, & number systems.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Demonstrate an understanding of the place value structure of the base ten number system:</p> <p>f. Decompose and recombine numbers using manipulative to create and construct equivalent representations for the same number (M)</p> <p>* Introduce coins: penny, nickel, dime, and quarter</p>	<p>-Students will make a pencil rubbing of the front/back of each coin. Students will list all physical descriptors of each coin.</p> <p>-Student will describe & compare penny & nickel. Teacher will model skip counting by 2's & 5's. In pairs, group pennies in 2 have & practice counting by 2's -20 (Discuss why we count by two's.)</p> <p>-Use nickels to relate counting by 5's-100</p> <p>Give partners bags of nickels with index card & have them skip-count to find the value of nickels for each one. Have them write the values on index card & place in bag. Have sets of partner's trade bags & check the other's value.</p> <p>-Have each student take a numeral card & tape it to the left side of a sheet of paper. Then have children count backward from that number. Have them write the numbers to the Right of the taped card as they count. Repeat activity using other numbers.</p> <p>-Teacher will provide numbers. In math journal students will use cubes to create & construct equivalent representations for the same number (ex. $10=3+7$, $6+4=10$, $5+5=10$, $2+5+3=10$)</p> <p>(Rep, Com, Con)</p>	<p>*Teacher observation</p> <p>*Math journal</p> <p>* Completed number page</p> <p>*Student work book page 181-182</p>	<p style="text-align: center;"><u>Resources</u></p> <p>http://www.eyepleezers.com/th/cnt25ax2.htm</p> <p>Harcourt TE. Vol. 2, Pg. 181-184</p> <p>Harcourt student workbook. Pg. 181-182</p> <p style="text-align: center;"><u>Materials</u></p> <p>-pennies, nickels</p> <p>-dimes, quarters</p> <p>-bags with cones</p> <p>-index cards</p> <p>-paper</p> <p>-math journal</p> <p>-cubes</p> <p>-tape</p>	<p>-26 letters & 99 cents by Tana Hoban (coins)</p> <p>The M&M's Count to One Hundred Book by Barbara Barbieri McGrath</p> <p>98, 99, 100! Ready or Not, Here I Come! (Hello Reader! Math, Level 2) by Teddy Slater & Gioia Giammenghi</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Numbers and Operations	Quarter: 4th	Weeks 29-36
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Strand I: Number & Operations	Standard: Students will understand numerical concepts & mathematical operations.
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Essential Questions: How do you know which words are important in a story problem? Can you think of examples of times when you might need to add double digit numbers together?

Benchmark 2: Understand the meaning of operations & how they relate to one another.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>2. Solve addition and subtraction problems with one- and two-digit numbers (e.g., $5 + 58 = \square$). (M)</p> <p>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 $14 - 6 = 8$). (M)</p> <p>5. Use concrete materials to investigate situations that relate to multiplication and division (e.g., equal groupings of objects, sharing equally). (M)</p> <p>6. Given simple story problems, explain verbally how to select and use appropriate operations. (M)</p>	<p>-Teacher will prepare & display the chart of rain forest animals. (Show pictures) Jaguar, Macaw, monkey, sloth, tapir, toucan. Students will use subtraction to complete the chart. How many inches longer are the forest animals than the toucan? Compare answers with classmates. Students will check answers using inverse problems. In math journal, student will write simple story problem explaining measurements. (The Jaguar is 67 inches long & toucan is 25 inches.) ($67-25=42$). The jaguar is 42 inches longer than the toucan. Show reverse. Toucan plus the 42 inches is jaguar's 67 inches.</p> <p>-Teacher will cut 6 squares or paper and explain this to be a c&y bar. Students will plan how they will share the c&y bar equally between 6, 2, 3, and finally 4 then 5 children. They will physically represent and orally explain their thinking. (Rep, Con, com)</p>	<p>*student workbook. pg. 489 *math journal *teacher observation</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Harcourt vol. 3 Chapter 29 -Think math p. Addition & Subtraction</p> <p>http://www.321know.com/sub1.htm</p> <p>http://www.bbc.co.uk/schools/laac/numbers/ch3.shtml</p> <p style="text-align: center;"><u>Materials</u></p> <p>_Harcourt vol.3 page TE 485 -teacher made chart -math journal -pictures of rainforest animals -paper squares -student workbook. Pg. 489</p>	<p><i>The Honey Shop by Maria Kathe (2 digit math)</i></p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Numbers and Operations	Quarter: 4th	Weeks 29-36
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Strand I: NUMBER & OPERATIONS	Standard: Students will understand numerical concepts & mathematical operations.
Essential Questions: How might you show me that a problem makes sense? Why is it important that your answers make sense?	

Benchmark 3: Compute fluently & make reasonable estimates.				
Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>4. Use & explain estimation & mental math strategies to determine the reasonableness of answers involving addition & subtraction.</p> <p>(REVIEW FOR 2ND GRADE)</p>	<p>-Teacher will model thinking through estimation for addition and subtraction using rods (tens). Teacher will break down her thinking through a problem and estimation with rods. Example – For the story problem “Mrs. Maez had 52 roses in her flower garden. 19 frozen in an unexpected snowstorm. How many flowers does Mrs. Maze have left?” the teacher would model the thinking sequence saying Mrs. Maez started with 52 flowers. Using our counting by tens numbers and what we know about estimating about how many flowers was that? (50) I’m going to use our rods to show those flowers. (10, 20, 30, 40, 50) And using our counting by 10s numbers and what we know about estimation about how many flowers died? (20) We’re going to take those flowers away. How many rods do we need to remove? About how many flowers are left?</p> <p>-Students will talk through their thinking with rods and a partner for 3-4 more examples of given story problems. Students can show their thinking, drawing pictures in their math journal.</p>	<p>* Teacher observation and or math journal entries</p>	<p style="text-align: center;"><u>Resources</u></p> <p>Harcourt Vol. 2 Lesson 19.4</p> <p>http://www.oswego.org/ocsd-web/games/Estimate/estimate.htm ↓ http://www.funbrain.com/cgi-bin/mb.cgi</p> <p style="text-align: center;"><u>Materials</u></p> <p>-place value rods</p> <p>-Teacher made 3 section spinner(about 5, about 20, about 10)</p> <p>-Teacher made 2 section spinner (+, -)</p> <p>-paper</p> <p>-Numeral cards 0-30 for each pair of students.</p> <p>-Harcourt student WB. Page 323-325</p>	<p><i>The Crayon Counting Book</i> by Jerry Pallotta (addition & subtraction)</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Algebra	Quarter: 4th	Weeks 29-36
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Strand II: ALGEBRA	Standard: Students will understand algebraic concepts and applications.
Essential Questions: Tell me what you know about the hundreds chart. Give me some examples of times when the hundreds chart might help you solve a problem.	

Benchmark 1: Understand patterns, relations, & functions.				
Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>2. Skip-count on a hundreds chart (e.g., by 2s up to 20 & 5s & 10s up to 100) to identify, describe, & predict number patterns. (R) (REVIEW FOR 2ND GRADE)</p>	<p>-Provide students a portion of a hundreds chart (Xerox and cut out just the numbers 23,33,43,44,& 45, the cover-up the 33 and 43. Make several problems like this. Tape on a single paper and copy for a teacher made problem page). Students must use what they know about patterns on the hundreds chart to solve for the missing numbers.</p>	<p>*Teacher made problem page</p>	<p style="text-align: center;"><u>Resources</u></p> <p>http://theworksheetsonline.com/cgi-bin/h_chart.pl?startnumber=1&df.x=26&pdf.y=4</p> <p>http://www.toonuniversity.com/flashes.asp?err=507&engine=7</p> <p style="text-align: center;"><u>Materials</u></p> <p>-teacher made problem page</p>	<p><i>Curious George Learns to Count from 1 to 100 (Curious George)</i> by H. A. Rey</p> <p><i>Exploring the Numbers 1 to 100 (Grades PreK-2)</i> by Mary Beth Spann</p> <p><i>Did I Ever Tell You How High You Can Count?: Learn About Counting Beyond 100 (Dr. Seuss Beginner Fun Books)</i> by Dr. Seuss</p> <p><i>The Counting Family</i></p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Algebra	Quarter: 4th	Weeks 29-36
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Strand II: Algebra	Standard: Students will understand algebraic concepts & applications.
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Essential Questions: Sometimes you'll have to use what you know about addition and subtraction to solve a problem that's missing some information. How would I show this as an addition problem and how might I solve this problem: I need \$10 for a class field trip. I have \$8. My mom needs to add some money to my \$8 so I can go. How much money does she need to add?

Benchmark 2: Represent & analyze mathematical situations & structures using algebraic symbols.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>3. Solve open number sentences that have variables representing numbers up to 10 (e.g., $10 = ? + 2$). (R,M)</p> <p>*Review skill needed for 2nd grade</p>	<p>-Teacher will distribute the numeral, sign & square card to one partner. Distribute the connection cubes to the other partner. Remind students that the square card represents a missing number.</p> <p>Have one partner organize the cards into a number sentence using the square card as the missing number. Have the other partner determine what number should replace the square card, using connecting cubes to model the problem.</p> <p>Have students replace the square card with the appropriate numeral card & check that the number sentence is true. Have students change roles & repeat the activity.</p> <p>In math journal, explain how you would find the missing number in $3 + \underline{\quad} = 5$ (RP, Com)</p> <p>- To review - students play mystery number in groups of three. Two students pull a number (0-12) from a bag and hold the number to their forehead without looking at the number. The third partner adds the 2 numbers and gives the 2 with cards the sum. Each child with a mystery number uses their partners number and the known sum to determine their mystery number.</p> <p>-To review - students play diamond mine</p>	<p>*math journal with explanation. (math rubric)</p> <p>*Verbal questioning & teacher observation</p>	<p style="text-align: center;"><u>Resources</u></p> <p>http://www.edhelper.com/math/additionfg305.htm (missing number)</p> <p>http://www.haelmedia.com/html/mc_m1_001.html (number sentence)</p> <p>Harcourt vol.2 p 235A-235B</p> <p style="text-align: center;"><u>Materials</u></p> <p>-two sets of numeral cards 0-12</p> <p>-sign cards +,-,=</p> <p>-card with box drawn on it</p> <p>-connecting cubes</p>	<p>-I Can Add (<i>I Can Count</i>) by Anna Nilsen (number sentence)</p> <p>-<i>Splash!</i> By Ann Jonas (adding 12)</p>

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CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Algebra	Quarter: 4th	Weeks 29-36
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Strand II: ALGEBRA	Standard: Students will understand algebraic concepts & applications.
Essential Questions: What thinking tools/strategies help you when your adding double digit numbers together?	

Benchmark 3: Use mathematical models to represent & understand quantitative relationships.				
Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>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). (R,M)</p>	<p>-Students will act out story to match number sentence with missing addend. Explain to classmates other strategies they could use to solve the problem. (PS, Con, Com)</p> <p>-Students will use animal cards with weigh from Think Math to create/solve “How much do the ----- and ----- weigh together?” and “How much more does the ---- weigh than the ----?” problems as a review. They will be encouraged to show their thinking with rods and cubes.</p>	<p>*Complete Problem Solving pg. 72</p>	<p style="text-align: center;"><u>Resources</u></p> <p>Math jungles (Harcourt) CD Track 1 Harcourt vol.1 TE. Page 17a-17b</p> <p style="text-align: center;"><u>Materials</u></p> <p>-Problem Solving 14.4 p. 72</p>	<p><i>Fish eyes by Lois Ehlert (count on, using pictures for number sentence)</i></p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Algebra	Quarter: 4th	Weeks 29-36
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Strand II: Algebra	Standard: Students will understand algebraic concepts & applications.
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Essential Questions: When you compare 2 things side by side, what characteristics might you consider? (Height, weight, color, etc.)

Benchmark 4: Analyze changes in various contexts.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>2. Describe qualitative change. <i>(Review for 2nd grade)</i></p>	<p>-Identify spring. Take class on a walk around the school & look for changes in the season. Compile a list of changes observed by class. Each student draws & colors picture of spring on chart paper. (Com, Con)</p> <p>Teacher will provide 2 pictures. Students will 1) describe the change they see and 2) speculate what might have happened to cause the change.</p> <p>-Picture of a slice of watermelon and picture or just the rind.</p> <p>-Picture of a pumpkin and picture of a jack-o-lantern.</p> <p>-Picture of an apple and picture of an apple pie.</p> <p>-Picture of a full garden ready for harvest and picture of an empty field.</p>	<p>*math journal with explanation. (math rubric) *Verbal questioning & teacher observation</p>	<p style="text-align: center;"><u>Resources</u></p> <p>http://www.edhelper.com/math/additionfg305.htm (missing number)</p> <p>http://www.haelmedia.com/html/mc_m1_001.html (number sentence)</p> <p>Harcourt vol.2 p 235A-235B</p> <p>School grounds</p> <p style="text-align: center;"><u>Materials</u></p> <p>-two sets of numeral cards 0-12 -sign cards +, -, = -card with box drawn on it -connecting cubes -math journals -chart paper, markers -contrasting pictures</p>	<p>-I Can Add (<i>I Can Count</i>) by Anna Nilsen (number sentence) -<i>Splash!</i> By Ann Jonas (adding 12)</p> <p>- <i>The Best Time of Year</i> by ??? (weather)</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade 1	Subject: Mathematics Unit: Geometry	Quarter: 4th	Weeks 29-36
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Strand III: GEOMETRY	Standard: Students will understand geometric concepts & applications.
Essential Questions: Do you think speed, how fast or slow we are at knowing our numbers, makes a difference when we're adding and subtracting?	

Benchmark 4: Use visualization, spatial reasoning, & geometric modeling to solve problems.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>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). (R-review for 2nd grade)</p> <p>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). (R-review for 2nd grade)</p>	<p>-Students will play musical shapes. Solids will be passed around the circle until the music stops. The students left holding the shape will name and list 1 attribute. Students on the left/right will also list an attribute.</p> <p>-Students create solid figures from clay.</p> <p>-Students create solid figures using marshmallows and toothpicks.</p> <p>-Teacher explains that 7 shapes in a tangram can be combined into a single square by arranging the shapes. Students rotate & turn shapes to produce a square & glue in math journal.</p> <p>-In pairs students will use dots on a ten frame (first a single ten frame with dots for quantities 1-10, then cards with several ten frames for larger numbers) to flash/determine how many and solve for, How many more to 10? How many more to 20? How many more to 100? (Depending on differentiation needs.)</p>	<p>Teacher checks finished product</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Harcourt TE: pg. 259B (tangrams) http://pbskids.org/arthur/games/gorgego/index.html (tangrams)</p> <p style="text-align: center;"><u>Materials</u></p> <p>-clay -toothpicks, marshmallows -sets of cards with ten frames and dots for #s 1-10, 11-20, and 20-100 -student copies of TR 95 (tangram pattern)</p>	<p><i>Shapes of Things</i> by D. Dodd</p>

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**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Measurement	Quarter: 4th	Weeks 29-36
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Strand IV. MEASUREMENT	Standard: Students will understand measurement systems and applications.
Essential Questions: How would you predict that your dad/mom uses measurement in his/her job? How would you predict that a policeman/nurse uses measurement in his/her job?	

Benchmark 1: Understand measurable attributes of objects and the units, systems, and process of measurement.				
Benchmark 2: Apply appropriate techniques, tools, & formulas to determine measurements.				
Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>Benchmark 1: 1. Develop an understanding of measurable properties using appropriate concepts and vocabulary: a. Length by measuring and estimating (e.g., longer, shorter, meter, centimeter, inch, yard) (R-review for 2nd grade) b. Weight by measuring, estimating, and weighing (e.g., heavy [-ier], light [-er]) (I, R) c. Volume by measuring, estimating, and weighing (e.g., full, empty) (R-review for 2nd grade) d. Area by measuring and estimating (e.g., perimeter, rectangles, squares) (R-review for 2nd grade) 2. Use digital & analog (face) clocks to tell time to the half hour. (R -review for 2nd grade)</p> <p>Benchmark 2: 1. Measure with multiple copies of units the same size (e.g., paper clips). (R) 2. Use repetition of a single unit to measure something larger than the unit (e.g., a yardstick/meter stick to measure a room). (R)</p>	<p>-Students estimate & measure classroom (door, rug) using yardstick/ meter stick (Record on chart paper). -Students estimate how many scoops of (Rice, s&) it will take to fill a container. Then evaluate prediction accuracy in math journal. -Teacher explains to students that the distance around an object equals the sum of the lengths of all sides. Teacher models measuring distance in inches (each side) & adds all sides to find the "perimeter". Have students choose objects to measure (books, sheets of paper, desk tops, etc.). -Students will arrange 1 inch cubes inside a rectangle, side by side, to determine "area" of rectangle. Repeat with square. (RP, Rep, Con) -Students will predict and order classroom objects lightest to heaviest. Then use balance to prove prediction and draw final results on paper. -Have students estimate & check by measuring a length of string using different items (paper clips, pennies, color tiles) & tape string in math journal recording measurement tool & number used. (Prob., Comm., Con.) -Have student's measure length of classroom with a partner using a yardstick & record in math journal (Repeat with meter stick). (RP, Rep, Con)</p>	<p>*Students explain answer in journal *Check Math Journal with rubric *Teacher Observation & checking of final products *Teacher observation *Teacher evaluate math journal with rubric</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Mega Math CD Shapes Ahoy! Made to Measure, Level E -Math Rubric -Harcourt TE: Vol. 3, pg. 405 B, 409B, 449A/B -Harcourt Mega Math CD (measurement) -Math Word Wall (area, perimeter, yardstick, meter stick) -Harcourt Country Countdown (Clock a Doodle Doo - Level G -time to hour</p> <p style="text-align: center;"><u>Materials</u></p> <p>-paper clips, pennies, rice -color tiles, linking cubes, rulers -Student workbook pg. 253-254, 255-256, 449-450 -yardstick, meter stick -math journal, rubric -analog clock, timer -measuring scoops & containers</p>	<p>-How Big Were the Dinosaurs? by B. Most -Just Right! -The Caterpillar Isn't It Time by Judy Hendley -The Mitten by Jan Brett -Stone Soup by Ann McGovern</p>

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CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Measurement	Quarter: 4th	Weeks 29-36
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Strand IV: Measurement	Standard: Students will understand measurements & applications.
Essential Questions: How many ways could you measure Mrs. Smith? What possible reasons might I have for wanting you to know how to tell time?	

Benchmark 3: Understand measurable attributes of objects & the units, systems, & process of measurement.				
Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Develop an understanding of measurable properties using appropriate concepts & vocabulary:</p> <p>a. Length by measuring and estimating (e.g., longer, shorter, meter, centimeter, inch, yard) (R-longer,shorter, inch, centimeter I-yard, meter)</p> <p>c. Volume by measuring, estimating, and weighing (e.g., full, empty) (I,R)</p> <p>2. Use digital and analog (face) clocks to tell time to the half hour. (I,M)</p>	<p>-Students will create a measurement mural. Pull a unit of length (centimeter, inch, and foot, yard) card from a bag. Pull a # card (1-3) from a 2nd bag. Students will draw a line "2 - centimeters" long. Partners will add to the mural, taking turns.</p> <p>-Students will apply their knowledge of measuring length by solving the problem, "Mrs. Epps has just sent an urgent message. She needs to know how tall each teacher is." Pair the students and provide them a 3ftx7ft strip of butcher paper. Lay on the paper to let them draw a line for the top or your head/bottom of your feet. Monitor as they solve the problem.</p> <p>-Students will create a larger than life analog clock (face is 24 inches in diameter) to practice setting a clock to the $\frac{1}{2}$ hour.</p> <p>-Students will work with partner to do activity on "How to model time on analog & digital clocks (hour/half hour) Harcourt TE: pg. 405B</p> <p>-Students will work with partner to do activity on "Read & write analog & digital times to the hour & half hour" - Harcourt TE: pg. 409B (Com, Rep)</p>	<p>*Teacher observation</p> <p>*Measurement mural</p> <p>*Height of teacher</p> <p>*Teacher observation</p> <p>*Teacher observation</p> <p>*Teacher evaluate math journal with rubric</p>	<p style="text-align: center;">Resources</p> <p>-Harcourt TE: Vol. 3, Chap. 24, pg. 405B & 409B (how to tell time to hour/half hour)</p> <p>-analog clock</p> <p>-Harcourt Country Countdown (Clock a Doodle Doo - Level G -time to hour</p> <p>-Math Rubric</p> <p style="text-align: center;">Materials</p> <p>-bag with 8 cards (2 each for units centimeter, inch, yard, and foot) per student pairing</p> <p>-bag with 6 cards (2 each for numbers 1, 2, and 3) per student pairing</p> <p>- 2ftx10ft strip of butcher paper per pairing for mural</p> <p>-rulers, yardsticks, markers</p> <p>-3ftx7ft strip of butcher paper / pair</p> <p>-analog clock face</p> <p>-TR72 (clock face - 1 per student)</p> <p>-index cards</p>	<p>-<i>Isn't It Time</i> by Judy Hendley</p> <p>-<i>The Mitten</i> by Jan Brett</p> <p>-<i>Stone Soup</i> by Ann McGovern</p>

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M=Mastery

PS=Problem Solving
RP=Reasoning and Proof
Com=Communication
Con=Connections
Rep=Representation

**Portales Municipal Schools
CURRICULUM MAP 2009**

Teacher:	Grade: 1	Subject: Mathematics Unit: Data Analysis and Probability	Quarter: 4th	Weeks 29-36
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Strand V. DATA ANALYSIS AND PROBABILITY

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

Essential Questions: Why do you think this book uses a chart on this page? (You'll have to find a high interest Non-fiction with charts or graphs)

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

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Collect, organize, represent, and compare data by category on graphs and charts to answer simple questions:</p> <p>a. answer questions about "how" data can be gathered (R)</p> <p>b. gather data by interviewing, surveying, and making observations (R)</p> <p>c. organize data into appropriate categories by sorting based on shared properties (R)</p> <p>d. participate in discussions about selecting an appropriate way to display the data (R)</p> <p>e. represent data using objects, pictures, tables, and simple bar graphs (R)</p>	<p>-Students will brainstorm with small groups about "how" data can be gathered. Small groups will produce on paper (pictures, graphs, written, etc.) & explain how data is gathered to the class. (teacher will discuss appropriate vocabulary terms with class -concrete graph, picture graph, tally table, bar graph, sort, tally mark)</p> <p>-Students will explain how to solve problems by organizing data from observations, interviews, or surveys with graphs. (Harcourt-<i>Guided Instruction</i>)</p> <p>-Students will make & interpret bar graphs (Harcourt Math Game)</p> <p>-Students will explain how to use materials to create representations of the surrounding environment. (Harcourt-<i>Guided Instruction</i>) (Rep, Com, PS)</p>	<p>*Teacher observation & student explanation</p> <p>*Harcourt Vol. 2, Chap. 9, pg. 153, <i>Standardized Test Prep</i></p>	<p style="text-align: center;">Resources</p> <p>-word wall (Harcourt TE: Vol. 2, pg. 135K)</p> <p>-Harcourt TE: Vol. 3, pg. 421-422 - <i>Guided Instruction</i></p> <p>- Harcourt TE: Vol. 2, pg. 154 - <i>Math Game</i></p> <p>-Harcourt TE: Vol. 3, pg. 545-546 - <i>Guided Instruction</i></p> <p>http://www.internet4classrooms.com/skills_1st_math.htm (Use graphs to Answer Questions - I am special graphs)</p> <p>- examples of graphs or charts</p> <p>- Math Wall (for math vocabulary/language)</p> <p>- Harcourt Mega Math CD Country Countdown, White Water Graphing, Levels F, G (graphs)</p> <p style="text-align: center;">Materials</p> <p>-paper/pencil</p> <p>-Harcourt student workbook: pg. 421-422</p> <p>-Harcourt student workbook: pg. 545-546</p>	<p>- <i>The Mitten</i> by Jan Brett (calendar & seasons)</p> <p>- <i>Is It Rough? Is It Smooth? Is It Shiny?</i> by Tana Hoban (classify objects)</p> <p>- <i>The Counting Family</i> by Jane Manners (grouping)</p> <p>- <i>The Button Box</i> by Margarett S. Reid (gather information)</p> <p>- <i>Sorting</i> by Margarett S. Reid (sorting information into categories) (Both are available in Spanish)</p>

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Strand V. DATA ANALYSIS AND PROBABILITY

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Essential Questions: In what ways have we used graphs/charts in our classroom this year?

Benchmark 2: Select and use appropriate statistical methods to analyze data.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Analyze simple data:</p> <p>a. Interpret what the graph or other representation shows. (R)</p> <p>b. Determine whether or not the data gathered helps answer the specific question that was posed. (R)</p> <p>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"). (R)</p>	<p>-Student will record and interpret data using a tally table and a bar graph. Teacher will alternate ringing a small bell and tapping a pencil. In math journal have children use tally marks to record each time you ring the bell or tap the pencil. Children will create a bar graph to match the tally table. Share and compare the two graphs. Students can also construct the graph using linking cubes. (Which one has the most? Which one has the Least?, Does the graph tell us how many times the dog barks?, Does it tell us how many times the bell rang?) (Rep, Com, Con)</p> <p>-The students (In partners) will determine whether or not data gathered from the lost tooth chart (or other chart) answers a specific question the teacher asks. Have students verbally answer the question asked.</p> <p>-Student will work with a partner to determine if a given event is equally likely, most likely, or least likely to occur using different objects/ materials/resources (ex., spinners, dice, dominoes, coin toss, & election results). (Com, Rep, Con, PS)</p>	<p>*Students explain answer in journal</p> <p>*Teacher will check Math Journal</p> <p>*Teacher Observation</p> <p>*Harcourt Practice page PW 42 Volume 2</p>	<p style="text-align: center;">Resources</p> <p>Harcourt vol. 2 pages 145-149</p> <p>Harcourt Mega Math CD</p> <p>Country Countdown, White Water Graphing, Levels B,C,F,G (graphs)</p> <p>http://www.internet4classrooms.com/skills_1st_math.htm</p> <p>(Use graphs to Answer Questions)</p> <p style="text-align: center;">Materials</p> <p>- math journals</p> <p>- small bell</p> <p>-pencil</p> <p>-linking cubes</p> <p>-PW page 42</p>	<p><i>-Just a Little Bit</i> by Ann Tompert</p> <p><i>-Is it rough, is it smooth, is it shiny?</i> by T. Hoban (Classify objects to graph)</p>

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Strand V. DATA ANALYSIS AND PROBABILITY

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Essential Questions: Sometimes we just don't have the information we need to answer a question. Please give me some examples/non-examples of questions we can answer using this chart.

Benchmark 3: Develop and evaluate inferences and predictions that are based on data.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Make conclusions based on data (e.g., whether or not other groups would reach similar conclusions based on the same data). (R)</p>	<p>-Students (in small groups) will collect and organize data on the "Lost Tooth Chart" (or another chart) and respond in math journals about how different groups (classes) might or might not reach similar conclusions (based on chart). (Rep, Com)</p> <p>Students will work in small groups to make conclusions based on data given by graphs/charts (tooth chart, birthday chart, weather graph, etc) (Record in math journals for discussions). In groups, discuss whether you think another class would read the graph/chart the same way & come up with the same information. (Con, Rep, Com)</p>	<p>*Students explain answer in journal *Teacher will check Math Journal *Teacher Observation</p>	<p style="text-align: center;"><u>Resources</u></p> <p>-Lost Tooth Chart (other charts) -Other classes (groups) -Harcourt Mega Math <i>Numberopolis - Wash'n Spin</i></p> <p>-Charts, graphs, etc. from the classrooms</p> <p style="text-align: center;"><u>Materials</u></p> <p>-math journal -charts</p>	<p>-<i>The Counting Family</i> by Jane Manners (grouping)</p>

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Essential Questions: What are some activities you are certain to do tonight when you go home. What are some activities you are less likely to do when you go home tonight?

Benchmark 4: Understand and apply basic concepts of probability.

Performance Standard	Activities/Strategies	Assessments	Resources/Materials	Suggested Reading
<p>1. Discuss the likelihood of events (based on student experiences or from books) using terminology such as "more likely", "less likely", "possible" or "certain". (I,R)</p> <p>2. Observe, explore, and discuss whether some events occur more often than others (I,R)</p>	<p>-Students will determine if events are equally likely. Introduce vocabulary: equally likely, more likely, less likely, possible, and certain. (Harcourt-Guided Instruction) (Com) (Harcourt-Guided Instruction) (Rep, Com, PS)</p> <p>-students will work with partners using two dice to explore whether the two dice will result in an equal number of dots. Have students explain results in their math journal & with the class. (Com, PS)</p>	<p>*Students will discuss & write to identify a situation where 2 events are "more likely" using linking cubes (Harcourt: Assess)</p>	<p style="text-align: center;">Resources</p> <p>-Word Wall - vocabulary- Harcourt TE: Vol. 3, pg. 505B Harcourt vol. 3 pg 512 (4 Assess) -Harcourt Mega Math <i>Numberopolis - Wash'n Spin</i></p> <p>http://www.internet4classrooms.com/skills_1st_math.htm (Why Can't I Win?)</p> <p style="text-align: center;">Materials</p> <p>-linking cubes (all colors) -dice -playing cards -color tiles -math journal</p>	<p><i>Cloudy With a Chance of Meatballs</i> by Judi Barrett (expectations/chances)</p>

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