

Grade:	2	Measurement and Data	11 Weeks
Unit:	3		
Progression			
1 st Grade	Students learned to compare lengths by placing them next to each other, measure to the whole unit, time by the hours and half-hour, and compare data.		
2 nd Grade	Students will learn to use of a variety of measurement tools. They will learn to estimate and compare lengths. Students will add and subtract lengths to solve problems and organize data with a line plot. Students will understand why we use numbers to describe lengths. The will use rulers and tiles to measure to the nearest inch or centimeter.		
3 rd Grade	Students will extend their wok by measuring objects more precisely, using half-inches and quarter-inches, when appropriate. They will use what they know about length to solve problems involving perimeter and area. They also extend their use of standard units to measures of liquid volume and mass.		

STUDENT LEARNING GOALS

Mathematics Standards (*Appendices A & B*)

Measure and estimate lengths in standard units.

[CCSS.Math.Content.2.MD.A.1](#)

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

[CCSS.Math.Content.2.MD.A.2](#)

Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

[CCSS.Math.Content.2.MD.A.3](#)

Estimate lengths using units of inches, feet, centimeters, and meters.

[CCSS.Math.Content.2.MD.A.4](#)

Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Relate addition and subtraction to length.

[CCSS.Math.Content.2.MD.B.5](#)

Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

[CCSS.Math.Content.2.MD.B.6](#)

Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Work with time and money.

[CCSS.Math.Content.2.MD.C.7](#)

Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

[CCSS.Math.Content.2.MD.C.8](#)

Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Represent and interpret data.

[CCSS.Math.Content.2.MD.D.9](#)

Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

[CCSS.Math.Content.2.MD.D.10](#)

Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems¹ using information presented in a bar graph.

<i>Interdisciplinary Standards</i>		<i>Key Vocabulary</i>	
Technology Integration <i>(Appendix C)</i>	21st Century Skills <i>(Appendix D)</i>	centimeter estimate foot inch line plot measuring tape	meter meter stick ruler standard unit yardstick
IS1. Information Strategies IS2. Information Use	TCS1. Use of Information TCS5. Problem Solving		

<p>Enduring Understandings</p> <ul style="list-style-type: none"> • I can use a variety of tools to measure lengths • I can measure length to the nearest unit (inches & centimeters). • I can compare lengths using standard and metric measurements. • I can estimate lengths using standard units of measure. • I can use pictures to help me solve word problems about measurement. • I can use a line plot to show length. • I can use graphs to show data and categorize length. • I can tell time to the nearest 5 minutes. • I can solve word problems using dollars, quarters, dimes, nickels, and pennies. 	<p>Essential Questions</p> <ul style="list-style-type: none"> • What tools can I use to measure? • How do I measure to the nearest unit? • How do I compare lengths using standard units? Why might I? • How do I estimate lengths? And why? • How can I use pictures to help me solve word problems? • Why would I use a line plot? • Why would I use a graph? • Why should I know how to tell time to the nearest 5-minutes? • Why should I solve word problems using dollars and coins?
--	--

Assessment Plan

<p>Summative Assessment(s)/Performance Based Assessments including 21st Century Learning</p> <p>RCC Interim Assessment & Performance Task, Student pp. 220-222</p>	<p>Formative and Diagnostic Assessment(s)</p> <p>STAR Math Assessment (Fall) RCC Embedded Tasks and Assessments</p>
--	--

Learning Plan Components

Text	Ready Common Core Mathematics Instruction 2, 2014, Curriculum Associates, ISBN: 978-0-7609-8637-0 (RCC)
Print	Ready Common Core Mathematics Teacher Resource Book 2, 2014, Curriculum Associates, ISBN: 978-0-7609-8644-8
Electronic	<p>Teacher Resources:</p> <ul style="list-style-type: none"> -www.teacher-toolbox.com *Anything from toolbox is available online and printable; such as, the family letter (See Practice & Problem Solving). -Georgia Common Core Math Tasks (GA) -NC Department of Public Instruction (NC) -Common Core Worksheets; http://www.commoncoresheets.com/ (CCS) -**This page provides student friendly measurement activities aligned with the CCSS. You can print them for use in your classroom. http://www.k-5mathteachingresources.com/2nd-grade-measurement-and-data.html -www.stratfordmath.wikispaces.com <p>Student Resources:</p> <ul style="list-style-type: none"> -www.xtramath.org - How Do You Measure Up? http://pbskids.org/martha/stories/truestories/measureup_story.html

Week 1	Students will: <ul style="list-style-type: none"> • Understand that objects can be measured using different units. • Understand that measuring with standard units makes comparing lengths easier. • Represent and measure the length of an object using tiles and rulers. 		
Lessons	Tasks / Activities	Worksheets	Technology
<p><u>RCC Lesson 16:</u> Understand Length and Measurement Tools</p> <p><i>Teacher Edition pp. 164-177</i></p> <p><i>Student Pages pp. 138-143</i></p> <p><i>Differentiation Pages: PP. 176</i></p>	<p>-RCC Toolbox-Center Activities "Measurement" www.teacher-toolbox.com</p> <p>-RCC Toolbox–Tools for Instruction "Measuring Length" www.teacher-toolbox.com</p>	<p>SF 9-2 Inches & Feet SF 9-3 Inches, Ft., & Yards SF 9-4 Centimeters & Meters RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com RCC Guided Instruction pp. 140-141 RCC Practice p. 142 RCC/Perf. Task p.143</p>	<p>Toolbox 16 - Understand Length and Measurement Tools www.teacher-toolbox.com</p> <p><u>How Do You Measure Up?</u> http://pbskids.org/martha/stories/truestories/measureup_story.html</p>

Week 2	Students will: <ul style="list-style-type: none"> • Learn about rulers, yardsticks, meter sticks, and tape measures. • Measure lengths using different tools. • Learn how to use a ruler repeatedly to measure a length. • Choose a tool for measuring the length of a given object. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 17:</u> Measure Length <i>Teacher Edition pp. 178-187</i> <i>Student Pages pp. 144-153</i> Differentiated on p. 187	-RCC Toolbox-Center "Measure Length" -RCC Toolbox–Tools for Instruction "Measuring Length"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC Guided Practice pp. 150-151 -RCC Practice pp. 152-153	Toolbox 17 – Measure Length www.teacher-toolbox.com
Week 3	Students will: <ul style="list-style-type: none"> • Compare lengths measured in different units. • Understand the relationship between feet and inches. • Understand the relationship between centimeters and meters. • Explore how the number of units used to measure is related to the size of the units used. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 18:</u> Measurement with Different Units <i>Teacher Edition pp. 188-196</i> <i>Student Pages pp. 154-159</i> Differentiated on p. 196	-RCC Toolbox-Center Activities "Measurement with Different Units" -RCC Toolbox–Tools for Instruction "Measurement with Different Units"	-CCS "Comparing Two Measurements" p.10 & 3 -CCS "Measurement Estimating" pp. 1-2 -RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC Guided Instruction pp. 156-157 -RCC Practice p. 158 -RCC Performance Task p.159	Toolbox 18 - Understand Measurement with Different Units www.teacher-toolbox.com

Week 4	Students will: <ul style="list-style-type: none"> Estimate lengths in inches, centimeters, feet, and meters. Use benchmark objects when estimating. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 19</u> Estimating length <i>Teacher Edition pp. 197-205</i> <i>Student Pages pp. 160-165</i> Differentiation on p. 205	-RCC T.E. p. 201 "Hands-On Activity" -GA "Measurement Scavenger Hunt" -RCC Toolbox-Center Activities "Estimating Lengths" -RCC Toolbox–Tools for Instruction "Estimating Lengths"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC Guided Instruction pp. 162-163 -RCC Practice p. 164 -RCC Performance Task p.165	Toolbox 19 – Estimating Length www.teacher-toolbox.com
Week 5	Students will: <ul style="list-style-type: none"> Compare the lengths of objects by determining which measure is greater than or less than the other. Use addition and subtraction to compare lengths finding how much greater or less the measure of one object is than the other. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 20:</u> Compare Lengths <i>Teacher Edition pp. 206-216</i> <i>Student Pages pp. 166-175</i> Differentiation on p. 216	-RCC T.E. p. 212-213 "Hands-On Activities" -NC "It's Lengthy" -RCC Toolbox-Center Activities "Compare Lengths" -RCC Toolbox–Tools for Instruction "Compare Lengths"	-CCS "Comparing Two Measurements" -CCS "Measurement Estimating" -RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC "Guided Instruction" p.171 -RCC "Guided Practice" pp.172-173 -RCC "Practice" pp. 174-175	Toolbox 20 – Compare Lengths www.teacher-toolbox.com

Week 6	Students will: <ul style="list-style-type: none"> • Use addition and subtraction to solve problems involving lengths. • Recognize the importance of working within a single unit when adding or subtracting • Interpret and apply models that represent measurement problems involving addition and subtraction 		
Lessons	Tasks / Activities	Worksheets	Technology
RCC <u>Lesson 21:</u> Add and Subtract Lengths <i>Teacher Edition pp. 217-227</i> <i>Student Pages pp. 176-185</i> Differentiated on p. 227	-RCC Toolbox-Center Activities "Add & Subtract Lengths" -RCC Toolbox–Tools for Instruction "Add & Subtract Lengths" -NC "Arm Span Problems" -NC "Creating a Number Line" -GA "Solving Problems on Number Line" -GA "Measurement Olympics"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC Guided Practice pp. 182-183 -RCC "Practice" pp.184-185	Toolbox 21-Add & Subtract Lengths www.teacher-toolbox.com
Week 7	Students will: <ul style="list-style-type: none"> • Represent data on a line plot • Understand that the numbers on a ruler or number line can be used to represent a given length. • Interpret marks on a line plot as groups of data. 		
Lessons	Tasks / Activities	Worksheets	Technology
RCC <u>Lesson 22:</u> Reading and Making Line Plots <i>Teacher Edition pp. 228-236</i> <i>Student Pages pp. 186-191</i> Differentiated on p. 236	-RCC T.E. "Hands-On Activities" pp. 231 & 232 -RCC Toolbox-Center Activities "Line Plots" -RCC Toolbox–Tools for Instruction "Line Plots" -GA "Measurement Line Plot" -GA "Kangaroo Jumps" -NC "Measuring Things in Our Classroom" -GA "Lizards, Lizards, Everywhere!"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC Guided Practice pp. 189-190 -RCC "Practice" pp.191	Toolbox 22-Line Plots www.teacher-toolbox.com

Week 8	Students will: <ul style="list-style-type: none"> • Compare data in a tally chart, table, picture graph and bar graph. • Interpret graphs by reading the data shown in the graph. • Analyze bar graphs by comparing data in each category. • Create a bar graph from a given set of data. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 23:</u> Draw & Use Bar Graphs and Picture Graphs <i>Teacher Edition pp. 237-247</i> <i>Student Pages pp. 192-201</i> Differentiated on p. 247	-RCC T.E. "Hands-On Activities" p. 242 -RCC Toolbox-Center Activities "Draw & Use Graphs" -RCC Toolbox–Tools for Instruction "Draw & Use Graphs"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -RCC Guided Instruction pp. 197-199 -RCC Practice pp. 200-201	Toolbox 23-Bar Graphs & Picture Graphs www.teacher-toolbox.com
Week 9	Students will: <ul style="list-style-type: none"> • Read time to the nearest 5-minute interval. • Write time using proper notation. • Show time on an analog clock using proper hand placement • Determine when a digital clock should read AM or PM 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 24:</u> Tell Time and Write <i>Teacher Edition pp. 248-256</i> <i>Student Pages pp. 202-209</i> Differentiated on p. 256	-RCC T.E. "Hands-On Activity" p. 250 -RCC Toolbox-Center Activities "Tell Time & Write" -RCC Toolbox–Tools for Instruction "Tell Time & Write" -GA "Building a Number Line Clock"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -SF 8-1 Telling Time to Five Minutes -SF 8-2 Telling Time After the Hour -SF 8-6 A.M. and P.M. -GA "Missed Bedtime" -RCC Guided Instruction pp. 205-207 -RCC Practice pp. 208-209	Toolbox 24-Tell Time & Write www.teacher-toolbox.com

Week 10	Students will: <ul style="list-style-type: none"> • Recognize and name the coins penny nickel, dime, and quarter. • Know the value of coins and paper denominations. • Count the amount of money represented by a set of coins or bills. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 25:</u> Solve Word Problems Involving Money <i>Teacher Edition pp. 257-267</i> <i>Student Pages pp. 210-219</i> Differentiated on p. 267	-RCC T.E. "Hands-On Activity" p. 261 & 263 -RCC Toolbox-Center Activities "Word Problems & Money" -RCC Toolbox–Tools for Instruction "Word Problems & Money" -GA "Story Problems" -GA "Sale Flyer Shopping" -GA "Grocery Store Math" -GA "Menu Math" -GA "Tokens to Spend" -GA "What I Have & What I Need" -GA "Shopping for School Supplies"	-RCC Toolbox-Practice & Problem Solving www.teacher-toolbox.com -SF 3-12 Dime, Nickel, and Penny -RCC Guided Instruction pp. 216-217 -RCC Practice pp. 218-219	Toolbox 25-Word Problems Involving Money www.teacher-toolbox.com
Week 11	Students will: <ul style="list-style-type: none"> • demonstrate mastery of unit objectives. 		
Summative Assessment & Performance Task			
RCC Unit 1 Interim Assessment/Performance Task -Student p. 220-222 -Scoring Guide RCC T.E. p. 269			

Enduring Understandings

- I can use a variety of tools to measure lengths
- I can measure length to the nearest unit (inches & centimeters).
- I can compare lengths using standard and metric measurements.
- I can estimate lengths using standard units of measure.
- I can use pictures to help me solve word problems about measurement.
- I can use a line plot to show length.
- I can use graphs to show data and categorize length.
- I can tell time to the nearest 5 minutes.
- I can solve word problems using dollars, quarters, dimes, nickels, and pennies.

Essential Questions

- What tools can I use to measure?
- How do I measure to the nearest unit?
- How do I compare lengths using standard units? Why might I?
- How do I estimate lengths? And why?
- How can I use pictures to help me solve word problems?
- Why would I use a line plot?
- Why would I use a graph?
- Why should I know how to tell time to the nearest 5-minutes?
- Why should I solve word problems using dollars and coins?