

Chapter(s)	8 - Length in Customary Units						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
8.2 Make and Use a Ruler	Make an inch ruler and use it to measure the lengths of objects.	Why is using a ruler similar to using a row of color tiles to measure length?	Inch Inches	Go Math SE. 8.2 Enrich 8.2 Reteach 8.2 Games: How Long	*Mathboard *Color tiles *Color pencils *Paper strip	Practice and Homework 8.2	Teacher generated: *Mini Quiz
8.3 Estimate Lengths in Inches	Estimate the lengths of objects by mentally partitioning the lengths into inches.	How do you estimate the lengths of objects in inches?	Estimate Measure About	Go Math SE. 8.3 Enrich 8.3 Reteach 8.3	*Rulers from 8.2	Practice and Homework 8.3 Bedtime Math	*Think, Pair, Share *Math Talk
8.4 Measure with an Inch Ruler	Measure the lengths of objects to the nearest inch using an inch ruler.	How do you use an inch ruler to measure lengths?	Nearest inch	Bedtime Math Go Math SE. 8.4 Enrich 8.4 Reteach 8.4	*Multimedia eGlossary *Rulers from 8.2	Practice and Homework 8.4	*Essential Questions
8.5 Add and Subtract in Inches	Solve addition and subtraction problems involving the lengths of objects by using the strategy <i>draw a diagram</i> .	How can drawing a diagram help when solving problems about length?	Draw a diagram	Go Math SE. 8.5 Enrich 8.5 Reteach 8.5	*Inch Rulers	Practice and Homework 8.5	*Mid-Chapter Checkpoint
Mid-Chapter Checkpoint 8.1-8.5	Assess understanding of measuring lengths in inches.		Measure Inch Estimate				*Fact Fluency *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer
Fluency Practice/ Reinforce Skills/ Chapter 8 Project (Combine MC and Fluency in 1 day)	Grade 2 Chapter 8 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	What are some of the methods and tools that can be used to estimate and measure length?		Go Math SE. pg. 568 *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on Spot Video *HMH Mega Math *Response to Intervention RTI			*Math on Spot Video *HMH Mega Math *Response to Intervention RTI

Date	Quarter 4
Domain(s)	Measurement and Data
Cluster(s)	Measure and estimate lengths in standard units. (Major Cluster) Represent and interpret data. (Supporting Cluster)
NJSLS	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. 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. 2.MD.A.3 Estimate lengths using units of inches, feet, centimeters and meters. 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. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.

Chapter(s)	8 - Length in Customary Units						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
8.6 Measure in Inches	Measure the lengths of objects in both inches and feet to explore the inverse relationship between size and number of units. Estimate the lengths of objects in feet. Select appropriate tools for measuring different lengths. Measure the lengths of objects and use a line plot to display the measurement data. Assess the ability to use customary units to estimate lengths and to solve problems in data, addition and subtraction. Grade 2 Chapter 8 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	Why is measuring in feet different from measuring in inches?	Foot	Games: How Long Go Math Go Math SE. 8.6 Enrich 8.6 Reteach 8.6 Math Journal see bottom pge. Go Math SE. 8.7 Enrich 8.7 Reteach 8.7	*Mathboard *Paper *Paper clips *Inch rulers	Practice and Homework 8.6	Teacher generated: *Exit Slips *Mini Quiz
8.7 Estimate Lengths in Feet		How do you estimate the lengths of objects in feet?	Estimate		Go Math SE. 8.8 Enrich 8.8 Reteach 8.8	*Math Journal *Multimedia eglossary	Practice and Homework 8.7
8.8 Choose a Tool		How do you choose a measuring tool to use when measuring lengths?	Yardstick Measuring tape	Go Math SE. 8.9 Enrich 8.9 Reteach 8.9	*Yarn *Inch ruler *Yardsticks *Measuring tapes	Practice and Homework 8.8	*Math Talk *Essential Questions
8.9 Display Measurement Data		How can a line plot be used to show measurement data?	Line plot	Chapter Resource Book 8.27-8.31	*Inch rulers	Practice and Homework 8.9	*Performance task *Fluency Practice
Performance Task - Art Class		What are some of the methods and tools that can be used to estimate and measure length and display data?	Measure Inch Estimate Line plot		*Performance task	Teacher Generated Bedtime Math	*Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI

Date	Quarter 4
Domain(s)	Measurement and Data
Cluster(s)	Measure and estimate lengths in standard units. (Major Cluster) Relate addition and subtraction to length. (Major Cluster) Represent and interpret data. (Supporting Cluster)
NJSLS	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. 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. 2.MD.A.3 Estimate lengths using units of inches, feet, centimeters and meters. 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 equation with a symbol for the unknown number to represent the problem. 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 difference within 100 on a number line. 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.

	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.						
Chapter(s)	8 - Length in Customary Units and 9 - Length in Metric Units						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
Chapter 8 Review/Test	Assess the ability to use customary units to estimate lengths, choose measurement tools and to solve problems in data, addition and subtraction.	What are some of the methods and tools that can be used to estimate and measure length?	Measure Inch Tools Estimate	Go Math SE. pgs. 595-598	*Mathboard *Inch rulers	Teacher Generated	Teacher generated: *Exit Slips *Mini Quiz
Online Formative Assessment for Chapter 8	Assess the ability to use customary units to estimate lengths, choose measurement tools and to solve problems in data, addition and subtraction.	What are some of the methods and tools that can be used to estimate and measure length?	Measure Inch Tools Estimate Measure Length Estimate	Games: <i>How Long</i> Go Math Go Math SE. pgs. 599 - 601 Vocabulary Game: <i>Estimating the Length page 602</i> Vocabulary Game: Make a Match 602A	*Think Central Digital Assessment *Poster board *Marker *Color tiles *Paintbrush *Cubes *Paper clips	Practice and Homework 9.1	*Think, Pair, Share *Essential Questions *Diagnostic Interview TE pg 600
Chapter 9 Introduction	Demonstrate prior knowledge of measuring lengths in metric units.	What are some of the methods and tools that can be used to estimate and measure length in metric units?	Centimeter	Go Math SE. 9.1 Enrich 9.1 Reteach 9.1 G&G Lit. Connect <i>Nature Walk</i>	*Mathboard *Base-10 unit cubes	Practice and Homework 9.2 Bedtime Math	PMT Post Chapter Assessment *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer
9.1 Measure with a Centimeter Model	Use a concrete model to measure the lengths of objects in centimeters.	How do you use known lengths to estimate unknown lengths?					*Math on the Spot Video *HMH Mega Math *Response to Intervention RTI
9.2 Estimate Lengths in Centimeters	Estimate lengths of objects in centimeters by comparing them to known lengths.	How do you use known lengths to estimate unknown lengths?		Go Math SE. 9.2 Enrich 9.2 Reteach 9.2 Bedtime Math	*Mathboard *Objects *10-cm strips of paper		

Chapter 9 Content Standards	Critical Knowledge & Skills	Additional Resources and Tasks Links
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.	Students are able to: • measure lengths of objects using rules, yardsticks, meter sticks and measuring tapes.	2.MD.A.1,3,4 Determining Length https://www.illustrativemathematics.org/content-standards/2/MD/A/1/tasks/2069 https://learnzillion.com/lesson_plans/6036 https://learnzillion.com/lesson_plans/5100 https://www.engageny.org/resource/grade-2-mathematics-module-2-topic-b
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.	Students are able to: • measure the length of an object using different units of measure. • compare the measurements and explain how they relate to each unit.	https://www.engageny.org/resource/grade-2-mathematics-module-2-topic-b https://learnzillion.com/lesson_plans/2921
2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.	Students are able to: • estimate lengths of objects.	
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	Students are able to: • add and subtract, within 100, to solve word problems involving lengths (lengths are given in the same units). • use drawings to represent the problem. • use number	2.MD.B.5 High Jump Competition https://www.illustrativemathematics.org/content-standards/2/MD/B/5/tasks/2070

<p>equations with a symbol for the unknown number to represent the problem.</p> <p>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.</p> <p>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.</p>	<p>sentences with a symbol for the unknown to represent the problem.</p> <p>Students are able to: • Measure objects, comparing to determine how much longer one object is than another. • Express the difference in length in terms of a standard unit of measure.</p> <p>Students are able to: • use equally spaced points of a number line to represent whole numbers as lengths from 0. • represent whole number sums within 100 on a number line diagram. • represent whole number differences within 100 on a number line diagram.</p>	<p>https://learnzillion.com/lesson_plans/3771</p> <p>https://learnzillion.com/lesson_plans/2928</p> <p>2.MD.B.6 Frog and Toad on the Number Line https://www.illustrativemathematics.org/content-standards/2/M/D/B/6/tasks/1081</p>
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Cross-Content Connection: In Chapter 9, children develop their understanding of length in metric units, by measuring with a centimeter ruler. These same topics are used often in the development of various science concepts and process skills, such as finding the actual length of a desk. Help children make the connection between math and science through the S.T.E.M. activities and activity worksheets found at www.thinkcentral.com. In Chapter 9, children connect math and science with the S.T.E.M. Activity **Units to Know** and the accompanying worksheets (pages 107 and 108). Through this S.T.E.M. Activity, children will connect the GO Math! Chapter 9 concepts and skills with various lengths of different objects, including finding the length of a paperclip. It is recommended that this S.T.E.M. Activity be used after Lesson 9.5.

Chapter 9 Project Metric Measurement Olympics



<http://classroommagic.blogspot.com/2012/03/math-olympics.html>

Revisit the Math Measurement Olympics in your classroom with the metric twist. Students can participate in events set up as stations that they rotate through. These stations include a javelin throw (straw), discus throw (paper plate), shot put (cotton ball), high jump, and long jump. Students work in pairs to help each other with the measuring in metric units and recording. This can take place in one day or over the course of a week. At the end of the competition, you can have an award ceremony.

Date	Quarter 4
Domain(s)	Measurement and Data
Cluster(s)	Measure and estimate lengths in standard units. (Major Cluster) Relate addition and subtraction to length. (Major Cluster)
NJSLS	<p>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.</p> <p>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.</p> <p>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 equation with a symbol for the unknown number to represent the problem.</p> <p>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 difference within 100 on a number line.</p> <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>
Chapter(s)	9 - Length in Metric Units

Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
9.3 Measure with a Centimeter Ruler 9.4 Add and Subtract Lengths Mid-Chapter Checkpoint 9.1-9.4 Fluency Practice/ Reinforce Skills? Chapter 9 Project (Combine MC and fluency in 1 day) 9.5 Centimeters and Meters (2 days)	Measure lengths of objects to the nearest centimeter using a centimeter. Solve problems involving adding and subtracting lengths by using the strategy <i>draw a diagram</i> . Assess understanding of measurement of objects to the nearest centimeter. Grade 2 Chapter 9 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents Measure the lengths of objects in both centimeters and meters to explore the inverse relationship between size and number of units.	How do you use a centimeter ruler to measure lengths? How can drawing a diagram help when solving problems about lengths? What are some of the methods and tools that can be used to estimate and measure length in metric units? How is measuring in meters different from measuring in centimeters?	Centimeters Draw a diagram Lengths Number sentence Measure Centimeters Measure Length Meter	G&G Lit. Connect <i>A Trip to the Pond</i> Go Math SE. 9.3 Enrich 9.3 Reteach 9.3 Bedtime Math Go Math SE. 9.4 Enrich 9.4 Reteach 9.4 Go Math SE. 624 Math Journal: <i>Choose 2-3 math Journal questions The Write Way or bottom of chapter pages</i> Go Math SE. 9.5 Enrich 9.5 Reteach 9.5	*Mathboard *Classroom Objects *Base-10 units *Cm rulers *Mathboard *Base-10 unit *Cm rulers *Mathboard *Yarn *Paper *Cm ruler *Meter sticks *Masking tape *iTools - number lines	Practice and Homework 9.3 Bedtime Math Practice and Homework 9.4 Teacher Generated Practice and Homework 9.5	Teacher generated: *Exit Slips *Mini Quiz *Think, Pair, Share *Mid-Chapter Checkpoint *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI

Date	Quarter 4
Domain(s)	Measurement and Data
Cluster(s)	Measure and estimate lengths in standard units. (Major Cluster) Relate addition and subtraction to length. (Major Cluster)
NJSLS	<p>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.</p> <p>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.</p> <p>2.MD. A.3 Estimate lengths using units of inches, feet, centimeters and meters.</p> <p>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.</p> <p>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 equation with a symbol for the unknown number to represent the problem.</p> <p>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 difference within 100 on a number line.</p> <p>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.</p>

	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 problems using information presented in a bar graph. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.						
Chapter(s)	9 - Length in Metric Units and 10 - Data						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
9.6 Estimate Lengths in Meters	Estimate the lengths of objects in meters?	How do you estimate the lengths of objects in meters?	Estimate Meter About	Go Math SE. 9.6 Enrich 9.6 Reteach 9.6	*Mathboard *Meter stick	Practice and Homework 9.6	Teacher generated *Mini Quiz
9.7 Measure and Compare Lengths	Measure and then find the difference in the lengths of two objects.	How do you find the difference between the lengths of two objects?	Measure Record Compare	Math Journal see bottom of page Go Math SE. 9.7 Enrich 9.7 Reteach 9.7	Multimedia eGlossary *Mathboard *Cm rulers	Practice and Homework 9.7	*Think, Pair, Share *Essential Questions
Performance Task - Making a Birdhouse	Assess the ability to estimate , measure and compare lengths in metric units.	What are some of the methods and tools that can be used to estimate and measure length in metric units?	Centimeter Meter Length	Chapter Resource Book 9.23-9.27 Go Math SE pgs. 645-648	*Performance Task *Cm rulers	Teacher Generated	*Performance Task
Chapter 9 Review/Test (Combine PT and Review in 1 day)	Assess understanding of measurement of objects to the nearest centimeter.	What are some of the methods and tools that can be used to estimate and measure length in metric units?	Centimeter Meter Length Estimate	Go Math SE pgs. 649-651 Vocabulary Game: <i>Making Tens</i> *Grab-and-Go Diff. *Personal Math Trainer	*Mathboard *Cm rulers *Think Central Digital Assessment	Teacher Generated	*Think Central Digital Chapter Test PMT Post Chapter Assessment *Diagnostic Interview SE pg 650
Online Formative Assessment for Chapter 9	Assess understanding of measurement of objects to the nearest centimeter.	What are some of the methods and tools that can be used to estimate and measure length in metric units?	Tally marks More than Fewer than	*Math on the Spot Video *HMH Mega Math *Response to Intervention RTI Bedtime Math	*Connecting cubes *iTools - number lines	Bedtime Math	PMT Post Chapter Assessment
Chapter 10 Introduction	Demonstrate prior knowledge of graphs and charts.	How do tally charts, picture graphs and bar graphs help you solve problems.					

Chapter 10 Content Standards	Critical Knowledge & Skills	Additional Resources and Tasks Links
<p>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 problems using information presented in a bar graph.</p>	<p>Students are able to: • draw a picture graph to represent a data set with up to four categories. • draw a bar graph to represent a data set with up to four categories. • use information in a bar graph to solve simple put together, take apart, and compare problems.</p>	<p>2.MD.D.10 Favorite Ice Cream Flavor_ https://www.illustrativemathematics.org/content-standards/2/MD/D/10/tasks/506 https://www.engageny.org/resource/grade-2-mathematics-module-7-topic https://learnzillion.com/lesson_plans/2891</p>

Cross-Content Connection: In Chapter 10, children extend their understanding of data, by creating picture and bar graphs. These same topics are often used in the development of various science concepts and process skills, such as determining the number of students who chose a particular fruit as their favorite. Help children make the connection between math and science through the S.T.E.M. activities and activity worksheets found at www.thinkcentral.com. In Chapter 10, children connect math and science with the S.T.E.M. Activity **Plant Start-Ups** and the accompanying worksheets (pages 109 and 110). Through this S.T.E.M. Activity, students will connect the GO Math! Chapter 10 concepts and skills with various types of plants, including comparing the heights of different types of plants. It is recommended that this S.T.E.M. Activity be used after Lesson 10.6.

Chapter 10 Graphing Project



<https://www.teacherspayteachers.com/Product/FREE-Graphing-Project-1817088>

By actively exploring and analyzing data using, bar graphs, picture graphs and tally charts to interpret information and draw conclusions, students develop data literacy. Data literacy allows the learner to ask and answer meaningful questions by collecting, analyzing and making sense of the data encountered in real life. This fun graphing project is perfect for collaborative work groups and performance based learning! Students work together to design a survey, make graphs to show their data and organize it on a poster.

Date	Quarter 4						
Domain(s)	Measurement and Data						
Cluster(s)	Represent and interpret data. (Supporting Cluster)						
NJSLS	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 problems using information presented in a bar graph. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.6 Attend to precision.						
Chapter(s)	10 - Data						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
10.1 Collect Data	Collect data in a survey and record that data in a tally chart.	How do you use a tally chart to record data from a survey?	Survey Data Tally chart	Vocabulary Game: <i>Making Tens</i>	*Mathboard *Connecting cubes	Practice and Homework 10.1	Teacher generated:

10.2 Read Picture Graphs	Interpret data in picture graphs and use that information to solve problems.	How do you use a picture graph to show data?	Tally marks Picture graph Key	Go Math SE. 10.1 Enrich 10.1 Reteach 10.1 G&G Lit. Connect - <i>Wow! Fluffo Sure Can Eat</i>	*Bags *Multimedia eGlossary	Bedtime Math Practice and Homework 10.2	*Exit Slips *Fact Fluency *Mini Quiz *Think, Pair, Share
10.3 Make Picture Graphs	Make picture graphs to represent data.	How do you make a picture graph to show data in a tally chart?	Picture graph Tally chart Data	Go Math SE. 10.2 Enrich 10.2 Reteach 10.2 Bedtime Math	*Mathboard *Connecting cubes *Bags	Practice and Homework 10.3 Teacher Generated	*Math Talk *Mid-Chapter Checkpoint
Mid-Chapter Checkpoint 10.1-10.3 Fluency Practice / Reinforce Skills/ Chapter 10 Project (Combine MC and Fluency in 1 day)	Assess understanding of data and graphs. Grade 2 Chapter 10 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	How do you interpret a picture graph?	Picture graph Key	Go Math SE. 10.3 Enrich 10.3 Reteach 10.3 Math Vocabulary: Picture It. page 652A Go Math SE pg. 668	*iTools Graphs		*Essential Questions
10.4 Read Bar Graphs	Interpret data in bar graphs and use that information to solve problems.	How is a bar graph used to show data?	Bar graph Data	Game: Race to Finish Go Math SE. 10.4 Enrich 10.4 Reteach 10.4 G&G Lit. Connect- <i>What Do You Like?</i> *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI		Practice and Homework 10.4	

Date	Quarter 4
Domain(s)	Measurement and Data
Cluster(s)	MD - Represent and interpret data. (Supporting Cluster) G - Reason with shapes and their attributes (Additional Cluster)
NJSLS	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 problems using information presented in a bar graph. 2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. MP.1 Make sense of problems and persevere in solving them. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.
Chapter(s)	10 - Data and 11 - Geometry and Fractions

Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
10.5 Make Bar Graphs 10.6 Display Data Performance Task - <i>Our Favorites</i> Chapter 10 Review/Test (Combine PT and Review in 1 day) Online Formative Assessment for Chapter 10 Chapter 11 Introduction Fluency Practice/ Reinforce Skills/ Chapter 10 Project (Combine Chapter 11 Intro and Fluency in 1 day)	Make bar graphs to represent data. Solve problems involving data by using the strategy <i>make a graph</i> . Assess the ability to record, represent and use data. Assess understanding of recording and analyzing data. Assess understanding of recording and analyzing data. Demonstrate prior knowledge of geometry and showing equal parts. Grade 2 Chapter 10 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	How do you make a bar graph to show data? How does making a bar graph help when solving problems about data? How do you record data? How do tally charts, picture graphs and bar graphs help you solve problems? How do tally charts, picture graphs and bar graphs help you solve problems? What are some two-dimensional and three-dimensional shapes and how can you show equal parts of shapes?	Bar graph Data Favorite Make a graph Favorite Picture graph Tally chart Bar graph Data Picture graph Tally chart Bar graph Equal parts Shape Rectangle Triangle Square	Math Journal <i>Choose at least 3 Question to write about bottom of TE.</i> Go Math SE. 10.5 Enrich 10.5 Reteach 10.5 Go Math SE. 10.6 Enrich 10.6 Reteach 10.6 Bedtime Math Chapter Resource Book 10.21-10..25 Go Math SE. pgs. 689-692 Vocabulary Game: <i>Count the Sides</i> Go Math SE. pgs. 701-703 *Multimedia *eGlossary	*Mathboard *Mathboard *Performance Task *Crayons *Laptop *Think Central Digital Assessment *Plane shapes *Objects *Sphere *Rectangular prism	Practice and Homework 10.5 Practice and Homework 10.6 Teacher Generated Practice and Homework 11.5 Bedtime Math Teacher Generated Teacher Generated	Teacher generated: *Mini Quiz *Think, Pair, Share *Performance Task *Think Central Digital Chapter Test PMT: Post Chapter Assessment *Diagnostic Interview TE pg 702 *Fact Fluency PMT Post Chapter Assessment Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI

Chapter 11 Content Standards	Critical Knowledge & Skills	Additional Resources and Tasks Links
<p>2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> • draw shapes having specified attributes (e.g. number of equal faces, number of angles) • identify triangles, quadrilaterals, pentagons, hexagons, and cubes. 	<p>2.G.A.1 https://www.engageny.org/resource/grade-2-mathematics-module-8-topic-lesson-1 https://www.engageny.org/resource/grade-2-mathematics-module-8-topic-lesson-3</p>
<p>2.G.A.2 Partition a rectangle into rows and columns of</p>	<p>Students are able to: • partition a rectangle into rows and</p>	<p>2.G.A.2 Partitioning a Rectangle into Unit Squares</p>

<p>same-size squares and count to find the total number of them.</p> <p>2.G.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p>	<p>columns of same-size squares and count to find the total number.</p> <p>Concept(s): • Equal shares of identical wholes need not have the same shape.</p> <p>Students are able to:</p> <ul style="list-style-type: none"> • partition rectangles into two, three, or four equal shares. • partition two same-sized rectangles to show that equal shares of identical wholes need not have the same shape. • describe the shares using the words halves, thirds, fourths, half of, a third of, a fourth of, etc. • recognize and then describe the whole as two halves, three thirds, four fourths. 	<p>https://www.illustrativemathematics.org/content-standards/2/OA/C/4/tasks/2063</p> <p>https://www.engageny.org/resource/grade-2-mathematics-module-8-topic-b-lesson-7</p>
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Cross-Content Connection: In Chapter 11, children extend their understanding of geometry and fraction concepts, by understanding fractions as distances. These same topics are often used in the development of various science concepts and process skills, such as finding the strength of different types of magnets. Help children make the connection between math and science through the S.T.E.M. activities and activity worksheets found at www.thinkcentral.com. In Chapter 11, children connect math and science with the S.T.E.M. Activity **Attract Attention** and the accompanying worksheets (pages 111 and 112). Through this S.T.E.M. Activity, children will connect the GO Math! Chapter 11 concepts and skills with various types of magnets, including finding the strength of a magnet. It is recommended that this S.T.E.M. Activity be used after Lesson 11.11.

Chapter 11 Fraction Fish Project



- <https://wpesart.wordpress.com/2011/04/14/fraction-fish-collage/>
- <https://www.youtube.com/watch?v=8M19wrCJeOI>
- <https://www.pinterest.com/pin/23925441744437533/>

Throughout the chapter students will learn about various shapes and their attributes as well as partitioning those shapes. Incorporate these elements into the Fish Project. The fish should be partitioned into halves, thirds and fourths to enhance second graders knowledge of fractions. There are a few different fraction fish project ideas in the links.

Date	Quarter 4
Domain(s)	Geometry Operations and Algebraic Thinking
Cluster(s)	G - Reason with shapes and their attributes. (Additional Cluster) OA - Work with equal groups of objects to gain foundations for multiplication. (Supporting Cluster)
NJSLs	2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons and cubes. 2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. 2.OA.C.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 – Model with mathematics. MP.5 Use appropriate tools strategically.

MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 -Look for and express regularity in repeated reasoning.							
Chapter(s)	11- Geometry and Fraction Concepts						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
11.1 Three-Dimensional Shapes 11.2 Attributes of Three-Dimensional Shapes (Combine lessons 11.1 & 11.2) 11.3 Build Three-Dimensional Shapes 11.4 Two-Dimensional Shapes (Combine lessons 11.3 & 11.4) 11.5 Angles in Two-Dimensional Shapes 11.6 Sort Two-Dimensional Shapes (Combine lessons 11.5 & 11.6) 11.7 Partition Rectangles Fluency Practice / Reinforce Skills/ Chapter 11 Project	Identify three-dimensional shapes. Identify and describe three-dimensional shapes according to the number of faces, edges and vertices. Build three-dimensional shapes using cubes and other objects. Name 3-, 4-, 5- and 6- sides shapes according to the number of sides and vertices. Identify angles in two-dimensional shapes. Sort two-dimensional shapes according to their attributes. Partition rectangles into equal-size squares and find the total number of these squares. Grade 2 Chapter 11 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	What objects match three-dimensional shapes? How would you describe the faces of a rectangular prism and the faces of a cube? How can you build a rectangular prism? What shapes can you name just by knowing the number of sides and vertices? How do you find and count angles in two-dimensional shapes? How do you use the number of sides and angles to sort two-dimensional shapes? How do you find the total number of same-size squares that will cover rectangle?	Cube, Cone Rectangular prism Sphere, Cylinder Edge, Face Vertex Vertices Curved surface Rectangular prism, Side Vertex, Vertices Quadrilateral Pentagon Hexagon Angle Quadrilateral Pentagon Triangle Rectangle Sides Angles Rectangle Rows Columns	Go Math SE. 11.1/11.2 Enrich 11.1/11.2 Reteach 11.1/11.2 G&G Lit. Connect - <i>Building a Mini-Park</i> Vocabulary Words: <i>Going to a Balloon Race</i> Game: <i>Hidden Figures</i> Go Math SE. 11.3/11.4 Enrich 11.3/11.4 Reteach 11.3/11.4 G&G Lit. Connect - <i>Square Fair</i> Go Math SE. 11.5/11.6 Enrich 11.5/11.6 Reteach 11.5/11.6 Game: <i>Hidden Figures</i> Math Journal: <i>Choose at least 3 questions journaling writing bottom of TE.</i> Go Math SE. 11.7 Enrich 11.7 Reteach 11.7 G&G Lit. Connect - <i>Taking Shape</i> Bedtime Math	*Mathboard *3D Shapes *Ruler *Dot paper *Connecting cubes *Rulers *Mathboard *Rulers *Pattern blocks *Crayons *Mathboard *Color tiles *iTools counters *iTools geometry	Practice and Homework 11.1/11.2 Practice and Homework 11.3/11.4 Practice and Homework 11.5/11.6 Practice and Homework 11.7 Bedtime Math	PMT Post Chapter Assessment *Exit Slips *Mini Quiz *Think, Pair, Share *Math Talk *Essential Questions *Fact Fluency *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI PMT

Date	Quarter 4
Domain(s)	Geometry
Cluster(s)	Reason with shapes and their attributes. (Additional Cluster)
NJSLS	2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons and cubes. 2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. 2.G.A.3 Partition circles and rectangles into two, three or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 – Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.8 -Look for and express regularity in repeated reasoning.						
Chapter(s)	11- Geometry and Fraction Concepts						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
Mid-Chapter Checkpoint 11.1-11.7	Assess understanding of two-dimensional and three-dimensional shapes and their attributes.	What are some two-dimensional and three-dimensional shapes and how can you show equal parts of shapes?	Cube, Cylinder Quadrilateral Pentagon Hexagon Angles, Halves Thirds, Fourths Equal parts	Go Math SE. 744 Vocabulary Game: <i>Hidden Figures</i>	*Mathboard *Pattern blocks *Crayons	Teacher Generated	Teacher generated: *Mid-Chapter Checkpoint
11.8 Equal Parts (Combine MC and 11.8 in 1 day)	Identify and name equal parts of circles and rectangles as halves, thirds or fourths.	What are halves, thirds and fourths of a whole?	Halves , Thirds Fourths, Half of Third of Fourth of Quarter of	Go Math SE. 11.8 Enrich 11.8 Reteach 11.8 Bedtime Math	*Mathboard	Practice and Homework 11.8	*Exit Slips *Mini Quiz *Think, Pair, Share
11.9 Show Equal Parts of a Whole	Partition shapes to show halves, thirds or fourths.	How do you know if a shape shows halves, thirds or fourths?	Equal parts Whole, Halves Thirds, Fourths	Go Math SE. 11.9/11.10 Enrich 11.9/11.10 Reteach 11.9/11.10 Game: Hidden Figures	*Mathboard *Crayons	Practice and Homework 11.9/11.10 Bedtime Math	*Math Talk *Essential Questions *Fact Fluency
11.10 Describe Equal Parts (Combine lessons 11.9 & 11.10)	Identify and describe one equal part as a half of, a third of or a fourth of a whole.	How do you find a half of, a third of or a fourth of a whole?	Half of Third of Fourth of Quarter of	Go Math SE. 11.11 Enrich 11.11 Reteach 11.11		Practice and Homework 11.11	PMT Post Chapter Assessment *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI
11.11 Equal Shapes	Solve problems involving wholes divided into equal shares by using the strategy <i>draw a diagram</i> . Display effective understanding of the standards covered in chapters seven through eleven.	How can drawing a diagram help when solving problems about equal shares? How can you utilize math standards and math practices to show your math reasoning and understanding?	Halves Thirds Fourths Teacher Generated	Go Math SE. Ch. 7- 533 - 536 Ch. 8 - 595 - 598 Ch. 9 - 645 - 648 Ch. 10 - 689 - 692 Ch. 11 - 771 - 774		Teacher Generated	

Date	Quarter 4
Domain(s)	Measurement and Data
Cluster(s)	MD - Measure and estimate lengths in standard units.(Major Cluster) MD - Relate addition and subtraction to length. (Major Cluster) MD - Work with time and money. (Supporting Cluster) MD - Represent and interpret data. (Supporting Cluster) G - Reason with shapes and their attributes. (Additional Cluster)
NJSLS	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.

	<p>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.</p> <p>2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</p> <p>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?</p> <p>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.</p> <p>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 problems * using information presented in a bar graph.</p> <p>2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p> <p>2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p> <p>2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p> <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 -Look for and express regularity in repeated reasoning.</p>
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Chapter(s) 7 -11

Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
Fluency Practice/ Reinforce Skills/ Chapter 11 Project Grade 2 Chapter 11 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	Display effective understanding of the standards covered in chapters seven through eleven. Assess effective understanding of the Measurement and Data and Geometry standards. NJSLS that will be assessed : 2.MD.A.1 2.MD.A.2 2.MD.A.3 2.MD.A.4 2.MD.B.5 2.MD.B.6	How can you utilize math standards and math practices to show your math reasoning and understanding? How can you utilize math standards and math practices to show your math reasoning and understanding? 2.MD.C.7 2.MD.C.8 2.MD.D.9 2.MD.D.10	Teacher Generated Teacher generated based on data. 2.G.A.1 2.G.A.2 2.G.A.3	Go Math SE. Ch. 7- 533 - 536 Ch. 8 - 595 - 598 Ch. 9 - 645 - 648 Ch. 10 - 689 - 692 Ch. 11 - 771 - 774 *Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI Bedtime Math	*Mathboard	Teacher Generated Bedtime Math	Teacher generated: *Exit Slips *Mini Quiz *Think, Pair, Share *Math Talk *Essential Questions PMT

Date	Quarter 4						
Domain(s)	Geometry						
Cluster(s)	Reason with shapes and their attributes. (Additional Cluster)						
NJSLS	<p>2.G.A.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.5 Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p> <p>2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</p> <p>2.G.A.3 Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p> <p>MP.1 Make sense of problems and persevere in solving them. MP.4 – Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>						
Chapter(s)	11- Geometry and Fraction Concepts						
Lesson(s)	Objective SWBAT	Essential Question	Vocabulary	Resources	Materials	Suggested Homework	Formative Assessment
Fluency Practice/ Reinforce Skills/ Chapter 11 Project	Grade 2 Chapter 11 Fluency Resources http://achievethecore.org/page/2853/go-math-k-5-guidance-documents	What are some two-dimensional and three-dimensional shapes and how can you show equal parts of shapes?	Teacher Generated	*Grab-and-Go Diff. Centers Kit *Interactive SE *Animated Models *Tenmarks.com *Personal Math Trainer *Math on the Spot Video *HMH Mega Math *Response to Intervention RTI Bedtime Math	*Mathboard	Teacher Generated Bedtime Math	Teacher generated: *Exit Slips *Mini Quiz *Think, Pair, Share *Math Talk *Essential Questions *Fact Fluency