# **Unit 12 Reveal Grade 1**

Content Area: Math
Course(s): Math
Time Period: May
Length: 3 weeks
Status: Published

## **Unit Overview**

# UNIT 12 PLANNER Measurement and Data

PACII	NG: 16 days			SOCIAL AND EMOTIONAL		
LESSO	N	MATH OBJECTIVE	LANGUAGE OBJECTIVE	LEARNING OBJECTIVE	LESSON	KEY VOCABULAR
Unit O	pener with How Long (	Can You Build It? Build a train with	connecting cubes and determine th	e length of the train.		
12-1	Compare and Order Lengths	Students compare and order objects by length.	Students use is and comparative adjectives to compare and order objects by length.	Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.	12-1	Math Terms compare, length longer, longest shorter, shortest
12-2	More Ways to Compare Lengths	Students compare the lengths of 2 objects by comparing them to a third object.	Students use longer than and sharter than to compare lengths of two objects to a third object.	Students use prior knowledge and new understanding of mathematical concepts to complete a task, building stronger self-efficacy.	12-2	compare longer, longest shorter, shortest
12-3	Strategies to Measure Lengths	Students determine the length of an object using same size length units.	Students use is and long to describe the length of an object as a number of length units.	Students recognize personal strengths through thoughtful self-reflection.	12-3	measure unit
Math P	Probe How Long Is the Ro	ope? Students interpret the measure	of length for a given piece of rope.			
12-4	More Strategies to Measure Lengths	Students determine the length of an object using two different sized units and compare the number of units.	Students use so to explain why different-length units give different measurements.	Students develop and execute a plan, including selecting tools for mathematical problem solving.	12-4	measure unit
12-5	Tell Time to the Hour	Students tell time using analog and digital clocks and write time to the hour.	Students articulate time using analog and digital clocks and write time to the hour using is.	Students exchange ideas for mathematical problem solving with a peer, listening attentively and providing thoughtful and constructive feedback.	12-5	analog / digital clock hour, hour hand minute, minute hand o'clock
12-6	Tell Time to the Half Hour	Students tell time using analog and digital clocks and write time to the half hour.	Students articulate time using analog and digital clocks and write time to the half hour using is.	Students recognize and work to understand the emotions of others and practice empathetic responses.	12-6	analog / digital clock half hour, half past hour / minute hand minute
12-7	Organize Data	Students organize data with up to three categories.	Students use by to describe the ways items are grouped into categories.	Students engage in active listening and work collaboratively with a partner to complete mathematical tasks.	12-7	data
12-8	Represent Data	Students organize data using a tally chart to record the total number of objects in each category.	Students describe recorded data in tally charts using simple past tense verbs.	Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.	12-8	data tally chart tally marks
12-9	Interpret Data	Students organize data using a tally charts and interpret data by answering "how many?" questions.	Students explain organized data in tally charts to answer "how many?" questions using verbs.	Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.	12-9	data tally chart tally mark
12-10	Solve Problems Involving Data	Students solve problems involving comparisons by interpreting data.	Students use simple and past tense verbs to explain data in tally charts to solve comparison problems.	Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.	12-10	data tally chart tally mark
Unit Re	eview y Practice					
	ssessment mance Task					

## **Essential Questions**

See Above

## **Instructional Strategies and Learning Activities**

# LESSON 12-1

## **Compare and Order Lengths**

### **Learning Targets**

- I can compare and order objects by length.
- . I can explain how to compare lengths.

### Standards • Major A Supporting • Additional

♦ 1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.

#### Math Practices and Processes

MPP Look for and express regularity in repeated reasoning.

MPP Construct viable arguments and critique the reasoning of others.

### Focus

### Content Objective

- Students compare and order objects by length.

### Language Objectives

- . Students use is and comparative adjectives to compare and order objects by length.
- To optimize output, ELs participate in MLR3: Critique, Correct, and Clarify.

### SEL Objective

 Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.

#### Coherence

· Students compared the lengths of two objects (Grade K).

- Students compare lengths of objects.
- Students order objects by lengths.

- · Students compare the lengths of two objects by comparing them to a third object (Unit 12).
- · Students measure and compare lengths in standard and metric units (Grade 2).

#### Rigor

### Conceptual Understanding

- Students build on their understanding of comparing objects by using a measurable attribute, such as length.

### Procedural Skill & Fluency

· Students build proficiency in comparing and ordering lengths of objects.

### Application

 Students apply the concept of comparing and ordering lengths of real-world objects.

Application is not a targeted element of rigor for this standard.

# LESSON 12-2 More Ways to Compare Lengths

### **Learning Targets**

- . I can compare the lengths of two objects by using a third object.
- . I can explain how to use a third object to compare the lengths of two other objects.

### Standards • Major A Supporting • Additional

#### Content

\$\text{0.1.MD.A.1}\$ Order three objects by length; compare the lengths of two objects indirectly by using a third object.

#### Math Practices and Processes

MPP Look for and make use of structure.

MPP Model with mathematics.

### Focus

#### Content Objective

- Students compare the lengths of 2 objects by comparing them to a third object.
- Language Objectives
- Students use longer than and shorter than to compare lengths of 2 objects to a third object.
- To support sense-making, ELs participate in MLR6: Three Reads.

#### SEL Objective

 Students use prior knowledge and new understanding of mathematical concepts to complete a task, building stronger self-efficacy.

#### Coherence

#### Previou

- Students compared the lengths of two objects (Grade K).
- Students compared and ordered objects by length (Unit 12).

 Students compare lengths of objects indirectly.

#### Next

- Students determine the length of an object using same-size length units (Unit 12).
- Students measure and compare lengths in standard and metric units (Grade 2).

### Rigor

### Conceptual Understanding

 Students build on their understanding of measuring and comparing lengths by using indirect measurement to measure and compare.

### Procedural Skill & Fluency

 Students develop skill and fluency in measuring and comparing lengths of objects indirectly.

### Application

 Students apply their understanding of indirect measurement to compare lengths of real-world objects.

Application is not a targeted element of rigor for this standard.

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# LESSON 12-3 Strategies to Measure Lengths

### **Learning Target**

• I can express the length of an object as a number of length units.

Standards • Major A Supporting • Additional

#### Content

• 1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.

#### Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Use appropriate tools strategically.

#### Focus

#### Content Objective

 Students determine the length of an object using same-size length units.

### Language Objectives

- Students use is and long to describe the length of an object as a number of length units.
- To maximize linguistic and cognitive meta-awareness, ELs participate in MLR2: Collect and Display.

#### SEL Objective

 Students recognize personal strengths through thoughtful self-reflection.

#### Coherence

#### Previous

- Students compared the lengths of two objects (Grade K).
- Students compared the lengths of two objects by using a third object (Unit 12).

#### Now

 Students measure the length of an object as a number of length units.

#### Next

- Students measure an object using 2 different sized units and compare the number of units (Unit 12).
- Students measure and compare lengths in standard and metric units (Grade 2).

### Rigor

#### Conceptual Understanding

 Students build on their understanding of length and comparing lengths by finding the length of an object when using same-size length units.

#### Procedural Skill & Fluency

 Students build proficiency in using same-size units of length to measure length.

#### Application

 Students apply understanding of using same-size length units to measure lengths of real-world objects.

Application is not a targeted element of rigor for this standard.

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### LESSON 12-4

### **More Strategies to Measure Lengths**

### **Learning Targets**

- I can determine the length of an object using two different-sized units.
- . I can explain why different length units give different measurements.

### Standards • Major A Supporting • Additional

#### Content

• 1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.

#### Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

MPP Use appropriate tools strategically.

#### Focus

#### Content Objective

 Students determine the length of an object using two differentsized units and compare the number of units.

### Language Objectives

- Students use so to explain why different-length units give different measurements.
- To cultivate conversation, ELs participate in MLR7: Compare and Connect.

#### SEL Objective

 Students develop and execute a plan, including selecting tools for mathematical problem solving.

#### Coherence

#### Previous

- Students compared the lengths of two objects (Grade K).
- Students measured the length of an object with same sized units (Unit 12).

 Students explain why different length units result in different measurements.

### Next

 Students measure and compare lengths in standard and metric units (Grade 2).

### Rigor

### Conceptual Understanding

 Students build on their understanding of length and comparing lengths by describing why different-length units give different measurements.

### Procedural Skill & Fluency

 Students build proficiency in using different-length units to measure the length of objects with more than one type of length unit.

### Application

 Students apply understanding of using same-size length units to measure lengths of realworld objects.

Application is not a targeted element of rigor for this standard.

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### LESSON 12-5 **Tell Time to the Hour**

### **Learning Targets**

- . I can tell and write time to the hour.
- I can explain how I know what hour it is.

### Standards • Major A Supporting • Additional

#### Content

O 1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.

#### Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Look for and make use of structure.

#### Focus

### Content Objective

· Students tell time using analog and digital clocks and write time to the hour.

### Language Objectives

- · Students articulate time using analog and digital clocks and write time to the hour using is.
- To optimize output, ELs participate in MLR8: Discussion Supports.

### SEL Objective

 Students exchange ideas for mathematical problem-solving with a peer, listening attentively and providing thoughtful and constructive feedback.

#### Coherence

- . Students counted by ones to 100 and wrote numbers 0-20 (Grade K).
- Students identified patterns on a Students use digital clocks to tell number line (Unit 2).

- · Students use patterns on an analog clock to tell time to the hour.
- and write time to the hour.

- · Students tell time using analog and digital clocks and write time to the half hour (Unit 12).
- . Students tell and write time from analog and digital clocks to the nearest five minutes (Grade 2).

### Rigor

### Conceptual Understanding

 Students learn about the parts of a clock and how to tell time to the nearest hour.

### Procedural Skill & Fluency

 Students develop skill and fluency in telling time to the hour.

### Application

Students read and write time in relation to real-world situations.

Application is not a targeted element of rigor for this standard.

# LESSON 12-6

## **Tell Time to the Half Hour**

## **Learning Targets**

- I can tell and write time to the half hour.
- . I can explain what it means to be half past the hour.

### Standards • Major A Supporting • Additional

#### Content

O 1.MD.B.3 Tell and write time in hours and half-hours using analog and digital clocks.

#### Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Use appropriate tools strategically.

#### Focus

#### Content Objective

 Students tell time using analog and digital clocks and write time to the half hour.

### Language Objectives

- . Students articulate time using analog and digital clocks and write time to the half hour using is.
- To optimize output, ELs participate in MLR1: Stronger and Clearer Each Time.

#### SEL Objective

 Students recognize and work to understand the emotions of others and practice empathetic responses.

### Coherence

- Students counted by ones to 100 and wrote numbers 0-20 (Grade K).
- number line (Unit 2).

- Students use patterns on an analog clock to tell time to the half hour.
- Students identified patterns on a 
   Students use digital clocks to tell and write time to the half hour.

#### Next

· Students tell and write time from analog and digital clocks to the nearest five minutes (Grade 2).

### Rigor

### Conceptual Understanding

 Students build on their understanding of telling time to the hour by telling time to the

#### Procedural Skill & Fluency

· Students develop skill and fluency in telling time to the half hour.

· Students read and write time in relation to real-world situations.

Application is not a targeted element of rigor for this standard.

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# LESSON 12-7 Organize Data

### **Learning Targets**

- I can organize data into categories.
- I can explain how to organize data.

## Standards • Major A Supporting • Additional

#### Content

Δ 1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

#### Math Practices and Processes

MPP Model with mathematics.

MPP Attend to precision.

### Focus

#### Content Objective

 Students organize data with up to three categories.

#### Language Objectives

- Students use by to describe the ways items are grouped into categories.
- To maximize linguistic and cognitive meta-awareness, ELs participate in MLR5: Co-Craft Questions and Problems.

#### SEL Objective

 Students engage in active listening and work collaboratively with a partner to complete mathematical tasks.

#### Coherence

#### Previous

 Students classified objects and counted the number of objects in categories (Grade K).

#### Now

 Students identify ways to group items and name the categories created.

#### Next

 Students represent and interpret data in picture graphs and bar graphs (Grade 2).

### Rigor

### Conceptual Understanding

 Students learn how to organize data by identifying attributes and arranging the data into categories.

### Procedural Skill & Fluency

 Students develop skill and fluency in organizing, representing, and interpreting data.

### Application

 Students organize real-world data into categories and use pictures and charts to represent the data.

# LESSON 12-8 Represent Data

## **Learning Targets**

- I can organize data and show it in a tally chart.
- . I can explain how to show data in a tally chart.

### Standards • Major A Supporting • Additional

#### Content

Δ 1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

### Math Practices and Processes

MPP Model with mathematics.

MPP Reason abstractly and quantitatively.

### Focus

### Content Objective

- Students organize data using a tally chart to record the total number of objects in each category.
- Language Objectives
- Students describe recorded data in tally charts using simple past tense verbs.
- To optimize output,
   ELs participate in MLR4:
   Information Gap.

### SEL Objective

 Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.

#### Coherence

#### Previous

- Students classified objects and counted the number of objects in categories (Grade K).
- Students used charts to represent categories of organized data (Unit 12).

#### Now

 Students record data in tally charts.

#### Next

- Students use picture graphs to organize and interpret data (Unit 12).
- Students represent and interpret data in picture graphs and bar graphs (Grade 2).

#### Rigor

## Conceptual Understanding

 Students understand how to organize data by using tally charts.

### Procedural Skill & Fluency

 Students develop skill and fluency in sorting data into tally charts.

### Application

 Students organize real-world data into categories and use tally charts to represent the data.

## LESSON 12-9 **Interpret Data**

### **Learning Targets**

- · I can organize data in a tally chart.
- . I can explain how to interpret and answer questions about data in a tally chart.

### Standards • Major A Supporting • Additional

#### Content

 $\triangle$  1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

#### Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Model with mathematics.

### Focus

#### Content Objective

 Students organize data using a tally chart and interpret data by answering "how many?" questions.

### Language Objectives

- Students explain organized data in tally charts to answer "how many?" questions using verbs.
- · To cultivate conversation, ELs participate in MLR6: Three Reads.

### SEL Objective

· Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.

#### Coherence

#### Previous

- · Students classified objects and counted the number of objects in categories (Grade K).
- · Students organized data using a tally chart (Unit 12).

- Students organize data with a tally chart.
- Students interpret tally charts by answering "how many?" questions in each category.

#### Next

- · Students solve problems involving comparisons by interpreting data (Unit 12).
- · Students represent and interpret data in picture graphs and bar graphs (Grade 2).

### Rigor

### Conceptual Understanding

· Students understand how to organize and interpret data by using tally charts.

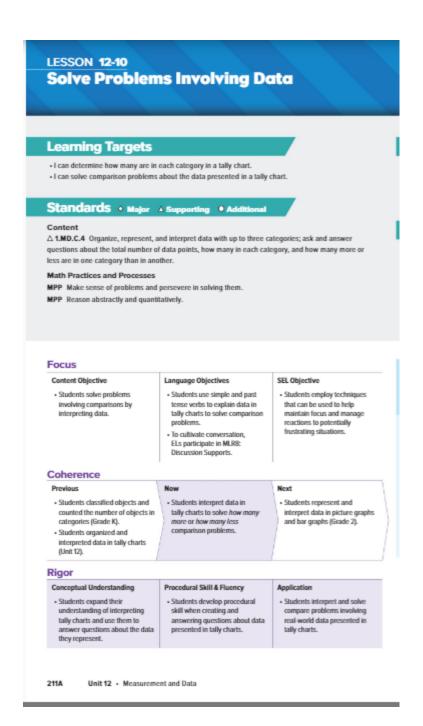
### Procedural Skill & Fluency

- Students develop fluency in interpreting data by using tally charts to answer "how many?" questions.

### Application

· Students refer to real-world situations as they interpret real-world data by using tally charts to answer "how many?" questions.

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# **Integration of Career Readiness, Life Literacies and Key Skills**

PFL.9.1.2. FI.1	Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards).
PFL.9.1.2.CR.1	Recognize ways to volunteer in the classroom, school and community.
TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT.1	Gather information about an issue, such as climate change, and collaboratively brainstorm

	ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
TECH.9.4.2.DC.3	Explain how to be safe online and follow safe practices when using the internet (e.g., 8.1.2.NI.3, 8.1.2.NI.4).
TECH.9.4.2.DC.7	Describe actions peers can take to positively impact climate change (e.g., 6.3.2.CivicsPD.1).
TECH.9.4.2.TL.1	Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
TECH.9.4.2.TL.2	Create a document using a word processing application.
TECH.9.4.2.TL.5	Describe the difference between real and virtual experiences.
TECH.9.4.2.TL.6	Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).
TECH.9.4.2.GCA.1	Articulate the role of culture in everyday life by describing one's own culture and comparing it to the cultures of other individuals (e.g., 1.5.2.C2a, 7.1.NL.IPERS.5, 7.1.NL.IPERS.6).
TECH.9.4.2.IML.2	Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10).

# **Technology and Design Integration**

CS.K-2.8.1.2.AP.1	Model daily processes by creating and following algorithms to complete tasks.
CS.K-2.8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
CS.K-2.8.1.2.AP.4	Break down a task into a sequence of steps.
CS.K-2.8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
CS.K-2.8.1.2.DA.3	Identify and describe patterns in data visualizations.
CS.K-2.8.1.2.DA.4	Make predictions based on data using charts or graphs.
CS.K-2.8.1.2.NI.3	Create a password that secures access to a device. Explain why it is important to create unique passwords that are not shared with others.
CS.K-2.8.2.2.ED.2	Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

# **Interdisciplinary Connections**

LA.L.1.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.RI.1	Reading Informational Text
LA.RI.1.1	Ask and answer questions about key details in a text.
LA.RI.1.2	Identify the main topic and retell key details of a text.
LA.RI.1.4	Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
LA.RI.1.5	Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.
LA.RI.1.6	Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.
LA.RI.1.7	Use the illustrations and details in a text to describe its key ideas.

LA.SL.1.1	Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
LA.SL.1.1.B	Build on others' talk in conversations by responding to the comments of others through multiple exchanges.
LA.SL.1.1.C	Ask questions to clear up any confusion about the topics and texts under discussion.
	Key Ideas and Details
	Craft and Structure

### **Differentiation**

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

### • Definitions of Differentiation Components:

- o Content the specific information that is to be taught in the lesson/unit/course of instruction.
- o Process how the student will acquire the content information.
- o Product how the student will demonstrate understanding of the content.
- Learning Environment the environment where learning is taking place including physical location and/or student grouping

### **Differentiation occurring in this unit:**

### **Modifications and Accommodations**

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

### Modifications and Accommodations used in this unit:

### **Benchmark Assessments**

**Benchmark Assessments** are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

### **Schoolwide Benchmark assessments:**

Aimsweb benchmarks 3X a year Linkit Benchmarks 3X a year

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### **Additional Benchmarks used in this unit:**

### **Formative Assessments**

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

### **Formative Assessments used in this unit:**

Teacher Observation

Checklists

Questions and discussions

Quizzes

### **Summative Assessments**

**summative assessments** evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

### **Summative assessments for this unit:**

# **Instructional Materials**

See Above

# **Standards**

MA.1.MD.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
MA.1.MD.A.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.
MA.1.MD.B.3	Tell and write time in hours and half-hours using analog and digital clocks.
MA.1.MD.C.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.