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

PACING: 16 days

LESSON		MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE	LESSON	KEY VOCABULARY
Unit Opener	How Long Can You Build It?	Build a train with connecting cubes and determine the 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 *shorter 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 Probe	How Long Is the Rope?	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 Review **Fluency Practice**						
Unit Assessment **Performance Task**						

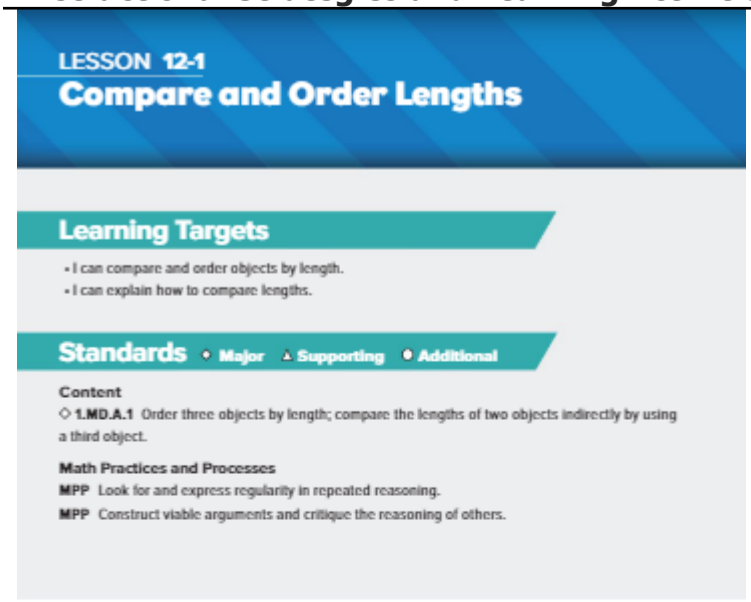
Enduring Understandings

See Above

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 △ Supporting ⬡ Additional

Content

◇ **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	Language Objectives	SEL Objective
• Students compare and order objects by length.	• Students use *is* and comparative adjectives to compare and order objects by length. • To optimize output, ELs participate in MLR3: Critique, Correct, and Clarify.	• Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.

Coherence

Previous	Now	Next
• 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	Procedural Skill & Fluency	Application
• Students build on their understanding of comparing objects by using a measurable attribute, such as length.	• Students build proficiency in comparing and ordering lengths of objects.	• 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 △ Supporting ⬡ Additional

Content

◇ **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	Language Objectives	SEL Objective
• Students compare the lengths of 2 objects by comparing them to a third object.	• 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.	• Students use prior knowledge and new understanding of mathematical concepts to complete a task, building stronger self-efficacy.

Coherence

Previous	Now	Next
• Students compared the lengths of two objects (Grade K). • Students compared and ordered objects by length (Unit 12).	• Students compare lengths of objects indirectly.	• 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	Procedural Skill & Fluency	Application
• Students build on their understanding of measuring and comparing lengths by using indirect measurement to measure and compare.	• Students develop skill and fluency in measuring and comparing lengths of objects indirectly.	• 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.*

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 ▲ 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	Language Objectives	SEL Objective
• 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. • To maximize linguistic and cognitive meta-awareness, ELs participate in MLR2: Collect and Display.	• Students recognize personal strengths through thoughtful self-reflection.

Coherence

Previous	Now	Next
• Students compared the lengths of two objects (Grade K). • Students compared the lengths of two objects by using a third object (Unit 12).	• Students measure the length of an object as a number of length units.	• 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	Procedural Skill & Fluency	Application
• Students build on their understanding of length and comparing lengths by finding the length of an object when using same-size length units.	• Students build proficiency in using same-size units of length to measure length.	• 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.*

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 △ 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 different-sized 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).

Now

- 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 real-world objects.

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

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 ▲ Supporting ● Additional

Content

○ **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	Language Objectives	SEL Objective
• 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*. • To optimize output, ELs participate in MLR8: Discussion Supports.	• Students exchange ideas for mathematical problem-solving with a peer, listening attentively and providing thoughtful and constructive feedback.

Coherence

Previous	Now	Next
• Students counted by ones to 100 and wrote numbers 0–20 (Grade K). • Students identified patterns on a number line (Unit 2).	• Students use patterns on an analog clock to tell time to the hour. • Students use digital clocks to tell 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	Procedural Skill & Fluency	Application
• Students learn about the parts of a clock and how to tell time to the nearest hour.	• Students develop skill and fluency in telling time to the hour.	• 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 ▲ Supporting ○ Additional

Content

○ **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	Language Objectives	SEL Objective
• 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*. • To optimize output, ELs participate in MLR1: Stronger and Clearer Each Time.	• Students recognize and work to understand the emotions of others and practice empathetic responses.

Coherence

Previous	Now	Next
• Students counted by ones to 100 and wrote numbers 0–20 (Grade K). • Students identified patterns on a number line (Unit 2).	• Students use patterns on an analog clock to tell time to the half hour. • Students use digital clocks to tell and write time to the half hour.	• Students tell and write time from analog and digital clocks to the nearest five minutes (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of telling time to the hour by telling time to the half hour.	• 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.*

LESSON 12-7

Organize Data

Learning Targets

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

Standards ◆ Major △ Supporting ⬟ Additional

Content

△ **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	Language Objectives	SEL Objective
• Students organize data with up to three categories.	• 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.	• Students engage in active listening and work collaboratively with a partner to complete mathematical tasks.

Coherence

Previous	Now	Next
• Students classified objects and counted the number of objects in categories (Grade K).	• Students identify ways to group items and name the categories created.	• Students represent and interpret data in picture graphs and bar graphs (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students learn how to organize data by identifying attributes and arranging the data into categories.	• Students develop skill and fluency in organizing, representing, and interpreting data.	• 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 △ Supporting ⬟ Additional

Content

△ **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	Language Objectives	SEL Objective
• 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. • To optimize output, ELs participate in MLR4: Information Gap.	• Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.

Coherence

Previous	Now	Next
• Students classified objects and counted the number of objects in categories (Grade K). • Students used charts to represent categories of organized data (Unit 12).	• Students record data in tally charts.	• 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	Procedural Skill & Fluency	Application
• Students understand how to organize data by using tally charts.	• Students develop skill and fluency in sorting data into tally charts.	• 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 △ Supporting ○ Additional

Content

△ **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

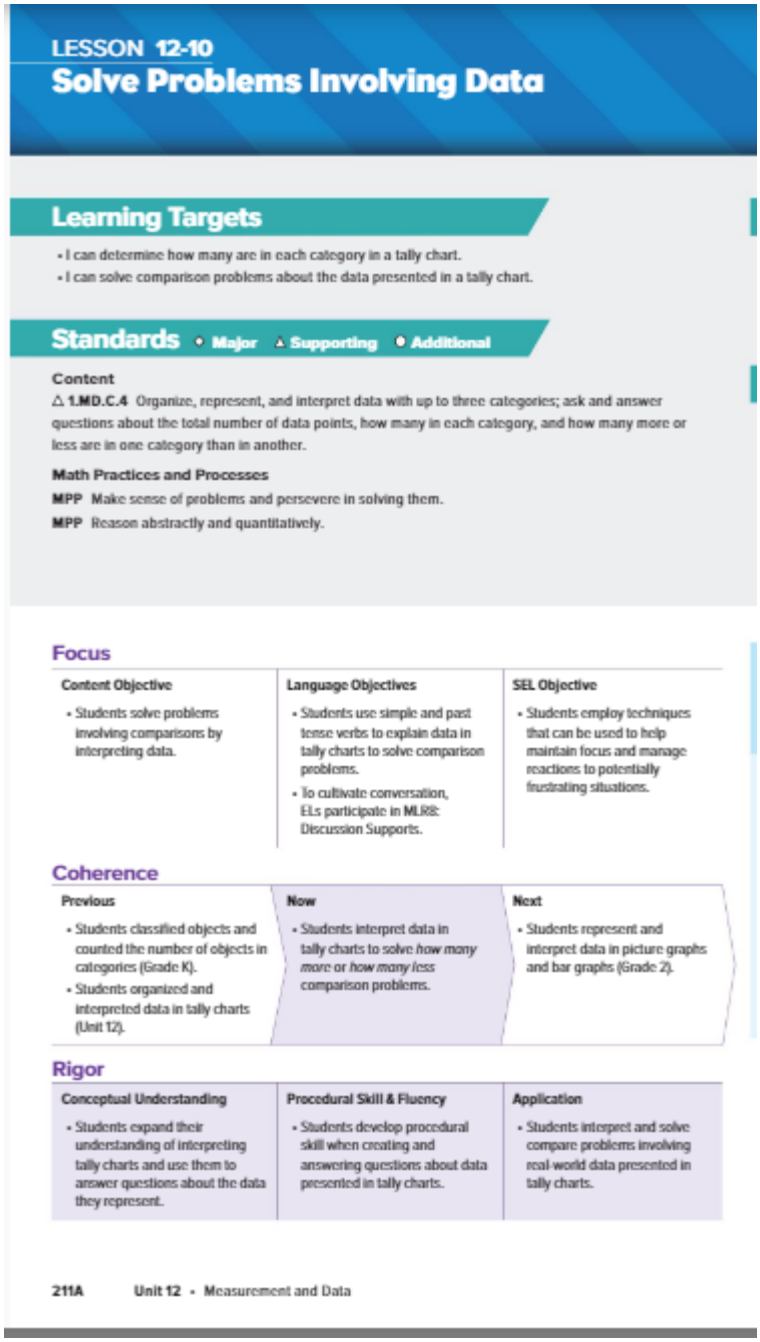
Content Objective	Language Objectives	SEL Objective
• Students organize data using a tally chart and interpret data by answering "how many?" questions.	• Students explain organized data in tally charts to answer "how many?" questions using verbs. • To cultivate conversation, ELs participate in MLR6: Three Reads.	• Students determine the strategies and analyses necessary to make informed decisions when engaging in mathematical practices.

Coherence

Previous	Now	Next
• 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.	• 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	Procedural Skill & Fluency	Application
• Students understand how to organize and interpret data by using tally charts.	• Students develop fluency in interpreting data by using tally charts to answer "how many?" questions.	• Students refer to real-world situations as they interpret real-world data by using tally charts to answer "how many?" questions.



LESSON 12-10

Solve Problems Involving Data

Learning Targets

- I can determine how many are in each category in a tally chart.
- I can solve comparison problems about the data presented in a tally chart.

Standards ◆ Major ▲ Supporting ● Additional

Content

▲ **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 Make sense of problems and persevere in solving them.

MPP Reason abstractly and quantitatively.

Focus

Content Objective	Language Objectives	SEL Objective
• 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. • To cultivate conversation, ELs participate in MLR8: Discussion Supports.	• Students employ techniques that can be used to help maintain focus and manage reactions to potentially frustrating situations.

Coherence

Previous	Now	Next
• Students classified objects and counted the number of objects in categories (Grade K). • Students organized and interpreted data in tally charts (Unit 12).	• Students interpret data in tally charts to solve *how many more* or *how many less* comparison problems.	• Students represent and interpret data in picture graphs and bar graphs (Grade 2).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students expand their understanding of interpreting tally charts and use them to answer questions about the data they represent.	• Students develop procedural skill when creating and answering questions about data presented in tally charts.	• Students interpret and solve compare problems involving real-world data presented in tally charts.

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**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - 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

DRA

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:

End of Unit Assessments

Instructional Materials

See Above

MATH.1.M.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.
MATH.1.M.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. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.
MATH.1.M.B.3	Tell and write time in hours and half-hours using analog and digital clocks.
MATH.1.M.C.4	Know the comparative values of coins and all dollar bills (e.g., a dime is of greater value than a nickel). Use appropriate notation (e.g., 69¢, $10).