Unit 14 Reveal Grade 4

Content Area: **Math**
Course(s):   **Math**
Time Period: **June**
Length: **2 weeks**
Status: **Published**

Unit Overview

UNIT 14 PLANNER
Geometric Figures

PACING: 16 days

LESSON		MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE	LESSON	KEY VOCABULARY
Unit Opener ignite! Repeating Shapes Students explore shapes created by connecting the midpoints of polygons.						
14-1	Understand Lines, Line Segments, and Rays	Students identify and draw points, lines, line segments, and rays.	Students use the term *figure* to discuss points, lines, line segments, and rays.	Students explore taking different perspectives on approaches to problem solving.	14-1	**Math Terms** endpoint line line segment
14-2	Classify Angles	Students recognize that an angle is formed when two rays share a common endpoint and they classify angles as right, acute, or obtuse.	Students use the terms *right, acute,* and *obtuse* to discuss and classify angles.	Students discuss and practice strategies for managing stressful situations.	14-2	acute angle angle endpoint
14-3	Draw and Measure Angles	Students recognize that an angle's measure is the number of degrees one ray rotates about the endpoint. Students measure angles.	Students use the terms *measure* and *degrees* to discuss an angle's measurement.	Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.	14-3	angle degrees endpoint
14-4	Understand Parallel and Perpendicular Lines	Students draw and identify perpendicular and parallel lines.	Students use the terms *perpendicular* and *parallel* to discuss lines.	Students recognize personal strengths through thoughtful self-reflection.	14-4	lines parallel lines perpendicular lines
14-5	Add and Subtract Angle Measures	Students decompose an angle into two or more angles and recognize that the whole angle is the sum of the decomposed angles.	Students discuss decomposing angles using the word *smaller*.	Students use prior knowledge and new understanding of mathematical concepts to complete a task, building stronger self-efficacy.	14-5	angle degrees protractor
14-6	Solve Problems Involving Unknown Angle Measures	Students represent and solve problems involving an unknown angle measure using an equation with a variable.	Students discuss solving problems involving unknown angle measures using the terms *combined* and *unknown*.	Students recognize and work to understand the emotions of others and practice empathetic responses.	14-6	angle degrees
14-7	Classify Polygons	Students identify properties of quadrilaterals and classify them based on these properties.	Students discuss quadrilaterals based on the presence or absence of parallel and perpendicular lines using the term *classify*.	Students break down a situation to identify the problem at hand.	14-7	parallel lines parallelogram
14-8	Classify Triangles	Students use side lengths and angle size to classify triangles.	Students compare triangle types using the term *angles* and *sides*.	Students practice strategies for persisting at a mathematical task, such as setting a small goal or setting timers for remaining focused.	14-8	acute triangle equilateral triangle isosceles triangle
Math Probe Classifying Shapes Gather data on students' understandings of classifying 2-dimensional shapes.						
14-9	Understand Line Symmetry	Students identify lines of symmetry on 2-dimensional figures.	Students identify lines of symmetry on 2-dimensional figures using the expression *line of symmetry*.	Students demonstrate thoughtful reflection through identifying the causes of challenges and successes while completing a mathematical task.	14-9	line of symmetry symmetrical
14-10	Draw Lines of Symmetry	Students draw lines of symmetry on 2-dimensional figures. Students identify attributes of 2-dimensional figures that are symmetrical.	Students use the term *attribute* to identify 2-dimensional figures that are symmetrical.	Students engage in active listening and work collaboratively with a partner to complete mathematical tasks.	14-10	line of symmetry symmetrical
Unit Review Fluency Practice						
Performance Task Unit Assessment						

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Enduring Understandings

See Above

Essential Questions

See Above

Instructional Strategies and Learning Activities

LESSON 14-1
Understand Lines, Line Segments, and Rays

Learning Targets

- I can identify points, lines, line segments, and rays.
- I can draw points, lines, line segments, and rays.

Standards • Major ▲ Supporting • Additional

Content

○ **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Math Practices and Processes

MPP Attend to precision.

Focus

Content Objective	Language Objectives	SEL Objective
• Students identify and draw points, lines, line segments, and rays.	• Students use the term *figure* to discuss points, lines, line segments, and rays. • To support sensemaking, ELs participate in MLR8: Discussion Supports.	• Students explore taking different perspectives on approaches to problem solving.

Coherence

Previous	Now	Next
• Students recognized that shapes share attributes and can be placed in categories (Grade 3).	• Students identify points, lines, line segments, and rays. • Students draw and name geometric figures.	• Students draw and identify parallel and perpendicular lines (Unit 14). • Students use properties to classify 2-dimensional shapes in a hierarchy (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build their understanding of the properties of points, lines, line segments, and rays.	• Students begin to develop proficiency with identifying and drawing geometric figures. *Procedural Skill & Fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of properties of points, line segments, lines, and rays to solve problems. *Application is not a targeted element of rigor for this standard.*

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Classify Angles

Learning Targets

- I can recognize angles as geometric shapes and understand concepts of angle measurement.
- I can classify angles as right, acute, or obtuse.

Standards • Major ▵ Supporting ● Additional

Content

○ **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

○ **4.MD.C.5** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.

○ **4.MD.C.5.a** An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.

Math Practices and Processes

MPP Use appropriate tools strategically.

Focus

Content Objectives	Language Objectives	SEL Objective
- Students recognize that angles are formed when two rays share a common endpoint. - Students understand concepts of angle measurement and classify angles as right, acute, or obtuse.	- Students use the terms *right*, *acute*, and *obtuse* to discuss and classify angles. - To maximize meta-language, ELs participate in MLR3: Critique, Correct, and Clarify.	- Students discuss and practice strategies for managing stressful situations.

Coherence

Previous	Now	Next
- Students recognized that shapes share attributes and can be placed in categories (Grade 3). - Students identified and drew points, lines, line segments, and rays (Unit 14).	- Students recognize an angle as two rays sharing an endpoint. - Students learn that angles are measured by the amount of rotation and classify angles based on amount of rotation.	- Students draw and measure angles in degrees (Unit 14). - Students use properties to classify 2-dimensional shapes in a hierarchy (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
- Students build understanding of angles and classify angles based on their measure.	- Students begin to develop proficiency with angles. *Procedural Skill & Fluency is not a targeted element of rigor for this standard.*	- Students solve problems with real-world contexts. *Application is not a targeted element of rigor for this standard.*

Draw and Measure Angles

Learning Targets
- I can measure angles in whole-number degrees using a protractor.
- I can draw angles with a given measurement using a protractor.

Standards • Major ▲ Supporting ○ Additional

Content

○ **4.MD.C.5** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.

○ **4.MD.C.5.a** An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles.

○ **4.MD.C.5.b** An angle that turns through n one-degree angles is said to have an angle measure of n degrees.

○ **4.MD.C.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

Math Practices and Processes

MPP Use appropriate tools strategically.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students recognize that an angle's measure depends on the number of degrees one of the rays rotates about the endpoint where the two rays meet. • Students measure angles.	• Students use the terms *measure* and *degrees* to discuss an angle's measurement. • To support sensemaking, ELs participate in MLR2: Collect and Display.	• Students collaborate with peers and contribute to group effort to achieve a collective mathematical goal.

Coherence

Previous	Now	Next
• Students identified angles as geometric figures and related the size of an angle to its rotation (Unit 14).	• Students extend their understanding of angles to draw and measure angles.	• Students classify 2-dimensional figures by angles (Unit 14). • Students classify 2-dimensional shapes in a hierarchy (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build understanding of angles and their measurement. *Conceptual Understanding is not a targeted element of rigor for this standard.*	• Students build proficiency with measuring and drawing angles.	• Students solve problems with real-world contexts. *Application is not a targeted element of rigor for this standard.*

Learning Targets

- I can draw perpendicular and parallel lines.
- I can identify perpendicular and parallel lines in two-dimensional figures.

Standards • Major △ Supporting ⦿ Additional

Content

○ **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Math Practices and Processes

MPP Attend to precision.

Focus

Content Objective	Language Objectives	SEL Objective
• Students draw and identify perpendicular and parallel lines.	• Students use the terms *perpendicular* and *parallel* to discuss lines. • To cultivate conversation, ELs participate in MLR 1: Stronger and Clearer Each Time.	• Students recognize personal strengths through thoughtful self-reflection.

Coherence

Previous	Now	Next
• Students recognized that shapes share attributes and can be placed in categories (Grade 3). • Students identified and drew lines and line segments (Unit 14).	• Students extend their understanding of lines and line segments to draw and identify perpendicular and parallel lines.	• Students use their understanding of parallel and perpendicular lines to classify polygons (Unit 14). • Students use properties of 2-dimensional figures to classify them according to a hierarchy (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of lines. *Conceptual Understanding is not a targeted element of rigor for this standard.*	• Students build proficiency with drawing and identifying perpendicular and parallel lines.	• Students identify real-world examples of parallel and perpendicular lines. *Application is not a targeted element of rigor for this standard.*

Add and Subtract Angle Measures

Learning Targets

- I can decompose an angle into two or more angles.
- I can recognize that when an angle is decomposed into parts, the angle measure of the whole is the sum of the angle measure of the parts.

Standards • Major ▲ Supporting • Additional

Content

○ **4.MD.C.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Math Practices and Processes

MPP Reason abstractly and quantitatively.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students decompose an angle into two or more angles. • Students recognize the measure of the whole angle is the sum of the decomposed angle measurements.	• Students discuss decomposing angles using the word smaller. • To optimize output, ELs participate in MLR5: Co-Craft Questions and Problems.	• Students use prior knowledge and new understanding of mathematical concepts to complete a task, building stronger self-efficacy.

Coherence

Previous	Now	Next
• Students drew and measured angles (Unit 14).	• Students extend their understanding of measuring angles to adding and subtracting angle measures.	• Students solve problems involving unknown angle measures (Unit 14).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of measuring angles to understand that angles can be decomposed into smaller angles.	• Students build proficiency with adding and subtracting angle measures.	• Students apply their understanding of adding and subtracting angle measures to solve real-world problems.

Solve Problems Involving Unknown Angle Measures

Learning Targets

- I can represent problems involving unknown angle measures using an equation.
- I can determine how angles are related to solve mathematical and real-world problems involving an unknown angle measure.

Standards ● Major ▲ Supporting ● Additional

Content

○ **4.MD.C.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Math Practices and Processes

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objective	Language Objectives	SEL Objective
• Students represent and solve problems involving an unknown angle measure using an equation with a variable.	• Students discuss solving problems involving unknown angle measures using the terms *combined* and *unknown*. • To support sensemaking, ELs participate in MLR8: Discussion Supports.	• Students recognize and work to understand the emotions of others and practice empathetic responses.

Coherence

Previous	Now	Next
• Students used addition and subtraction to solve measurement problems (Grade 3). • Students decomposed an angle into two or more angles (Unit 14).	• Students use diagrams and equations to find unknown angle measurements. • Students use angle measurements to solve problems.	• Students classify 2-dimensional figures based on angles and side lengths (Unit 14). • Students solve problems using measurement data and all four operations (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students extend their understanding of angle measures as additive.	• Students build proficiency in finding measures of unknown angles.	• Students apply their understanding of angle measures to solve problems with real-world contexts.

Classify Polygons

Learning Target
- I can classify quadrilaterals by the presence or absence of parallel and perpendicular lines.

Standards • Major ▲ Supporting ■ Additional

Content

○ **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

○ **4.G.A.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Math Practices and Processes

MPP Attend to precision.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students identify properties of quadrilaterals, such as parallel and perpendicular lines. • Students classify quadrilaterals based on the presence or absence of parallel and perpendicular lines.	• Students discuss quadrilaterals based on the presence or absence of parallel and perpendicular lines using the term *classify*. • To maximize meta-awareness, ELs participate in MLR7: Compare and Connect.	• Students break down a situation to identify the problem at hand.

Coherence

Previous	Now	Next
• Students classified polygons by their attributes (Grade 3). • Students drew and identified perpendicular and parallel lines (Unit 14).	• Students classify quadrilaterals based on the presence or absence of parallel or perpendicular lines.	• Students classify triangles by sides and angles (Unit 14). • Students use properties to classify 2-dimensional shapes in a hierarchy (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students extend their understanding of polygons. *Conceptual Understanding is not a targeted element of rigor for this standard.*	• Students build proficiency with using parallel and perpendicular lines to classify polygons.	• Students classify polygons in real-world contexts. *Application is not a targeted element of rigor for this standard.*

Classify Triangles

Learning Target

- I can classify triangles by the length of the sides and the size of the angles.

Standards • Major ▲ Supporting ● Additional

Content

○ **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

○ **4.G.A.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

Focus

Content Objective	Language Objectives	SEL Objective
• Students use side lengths and angle size to classify triangles.	• Students compare triangle types using the term *angles* and *sides*. • To cultivate conversation, ELs participate in MLR4: Information Gap.	• Students practice strategies for persisting at a mathematical task, such as setting a small goal or setting timers for remaining focused.

Coherence

Previous	Now	Next
• Students recognized that shapes share attributes and can be placed in categories (Grade 3). • Students learned to classify, draw, and measure angles (Unit 14).	• Students classify triangles based on side lengths and angle size.	• Students use line symmetry to identify and create symmetric figures (Unit 14). • Students use properties to classify 2-dimensional shapes in a hierarchy (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build understanding of classifying triangles by side lengths and angles. *Conceptual Understanding is not a targeted element of rigor for this standard.*	• Students develop proficiency in classifying triangles according to side lengths and angles.	• Students apply their understanding of classifying triangles to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

Learning Targets

- I can recognize a line of symmetry for a 2-dimensional figure as a line that divides a figure into matching parts.
- I can explain how to find lines of symmetry on 2-dimensional figures.

Standards • **Major** ⌂ **Supporting** ◦ **Additional**

Content

○ **4.G.A.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

Focus

Content Objective	Language Objectives	SEL Objective
• Students identify lines of symmetry on 2-dimensional figures.	• Students identify lines of symmetry on 2-dimensional figures using the expression *line of symmetry*. • To support sensemaking, ELs participate in MLR6: Three Reads.	• Students demonstrate thoughtful reflection through identifying the causes of challenges and successes while completing a mathematical task.

Coherence

Previous	Now	Next
• Students partitioned shapes into equal parts (Grade 2). • Students identified geometric figures including points, lines, and line segments (Unit 14).	• Students identify shapes with symmetry and draw lines of symmetry.	• Students draw multiple lines of symmetry (Unit 14). • Students classify 2-dimensional figures based on their properties (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students gain understanding of line symmetry by drawing a line that divides a 2-dimensional shape to make matching parts.	• Students develop proficiency with identifying lines of symmetry and symmetric figures.	• Students apply their understanding of line symmetry to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

Learning Targets

- I can recognize figures that are symmetrical.
- I can draw multiple lines of symmetry on 2-dimensional figures.

Standards   • Major   △ Supporting   ○ Additional

Content

○ **4.G.A.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry

Math Practices and Processes

MPP Look for and make use of structure.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students draw multiple lines of symmetry on 2-dimensional figures. • Students identify attributes of 2-dimensional figures that are symmetrical.	• Students use the term attribute to identify 2-dimensional figures that are symmetrical. • To maximize meta-language, ELs participate in MLR7: Compare and Connect.	• Students engage in active listening and work collaboratively with a partner to complete mathematical tasks.

Coherence

Previous	Now	Next
• Students described quadrilaterals by their attributes (Grade 3). • Students identified lines of symmetry on 2-dimensional figures (Unit 14).	• Students draw multiple lines of symmetry on 2-dimensional figures. • Students identify attributes of 2-dimensional figures that are symmetrical.	• Students classify 2-dimensional figures based on their properties (Grade 5).

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build understanding that there can be multiple lines of symmetry on 2-dimensional figures.	• Students develop proficiency in drawing multiple lines of symmetry.	• Students apply their understanding of symmetrical figures to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

Integration of Career Readiness, Life Literacies and Key Skills

PFL.9.1.2.CR.1	Recognize ways to volunteer in the classroom, school and community.
PFL.9.1.2.CR.2	List ways to give back, including making donations, volunteering, and starting a business.
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.FP.1	Explain how emotions influence whether a person spends or saves.
PFL.9.1.2.FP.3	Identify the factors that influence people to spend or save (e.g., commercials, family, culture, society).

PFL.9.1.2.PB.1	Determine various ways to save and places in the local community that help people save and accumulate money over time.
PFL.9.1.2.PB.2	Explain why an individual would choose to save money.
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.2	Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
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.6	Identify respectful and responsible ways to communicate in digital environments.
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.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.TL.7	Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).

Technology and Design Integration

CS.K-2.8.1.2.AP.4	Break down a task into a sequence of steps.
CS.K-2.8.1.2.AP.5	Describe a program's sequence of events, goals, and expected outcomes.
CS.K-2.8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
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-2.8.2.2.ITH.4	Identify how various tools reduce work and improve daily tasks.

Interdisciplinary Connections

LA.RI.4	Reading Informational Text
LA.RI.4.1	Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
LA.RI.4.3	Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
LA.RI.4.4	Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
LA.RI.4.5	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
LA.RI.4.6	Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

LA.RI.4.8	Explain how an author uses reasons and evidence to support particular points in a text.
LA.RI.4.9	Integrate and reflect on (e.g., practical knowledge, historical/cultural context, and background knowledge) information from two texts on the same topic in order to write or speak about the subject knowledgeably.
LA.SL.4	Speaking and Listening
LA.SL.4.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
LA.SL.4.2	Paraphrase portions of a text read aloud or information presented in diverse media and formats (e.g., visually, quantitatively, and orally).
LA.SL.4.3	Identify the reasons and evidence a speaker provides to support particular points.
LA.SL.4.4	Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

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.
  o Learning Environment – the environment where learning is taking place including physical location and/or student grouping

  Differentiation occurring in this unit:

  Exit Ticket: Use Data
  to Inform Differentiation

  Every lesson closes with an Exit Ticket. Differentiation recommendations
  reside in the Teacher Edition to make the Exit Ticket data actionable.

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Modifications and Accommodations

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

<u>Modifications and Accommodations used in this unit:</u>

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.

<u>Schoolwide Benchmark assessments:</u>

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

<u>Additional Benchmarks used in this unit:</u>

Reveal Unit assessments

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).

<u>Formative Assessments used in this unit:</u>

Teacher observation

Checklists

Questioning and Discussion

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.

<u>Summative assessments for this unit:</u>

End of Unit assessments

Instructional Materials

See above

Standards

MA.4.MD.C.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
MA.4.MD.C.5a	An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.
MA.4.MD.C.5b	An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
MA.4.MD.C.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
MA.4.MD.C.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
MA.4.G.A.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

MA.4.G.A.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
MA.4.G.A.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.