Rigorous Curriculum Design

Unit Planning Organizer

Subject:	Mathematics			Grade:	4
Unit Number:	6	Unit Name:	Angle Measurement and Plane Figures		
Unit Length	Days: 18			Mins / Day: 60	
Unit Synopsis	This unit is an introduction to angles and angle measurement. Students start this unit drawing points, lines, segments, rays and angles since it is foundational to the other standards in this unit. Students classify two-dimensional figures based on the presence or absence of their angles or size. They will be able to classify triangles. Students will also identify a figure's line of symmetry.				

Priority Standards	Math CCSS	Standards for Mathematical Practice
	4.MD.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: **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 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees. **4.G.1** - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. **4.G.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. **4.G.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.	☐Make sense of problems and persevere in solving them ☐Reason abstractly and quantitatively ☒Construct viable arguments and critique the reasoning of others ☒Model with mathematics ☒Use appropriate tools strategically ☐Attend to precision ☒Look for and make use of structure ☐Look for and express regularity in repeated reasoning

	Math CCSS	ELA CCSS	NG ELD Standards
Supporting Standards	**4.MD.6** - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	**RI.4.1** Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. **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*. **RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. **W.4.2.a-e** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **W.4.10** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences. **SL.4.1.a-d** 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. **SL.4.2** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. **SL.4.3** Identify the reasons and evidence a speaker provides to support particular points. **SL.4.6** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See grade 4 Language standards 1 here for specific expectations.) **L.4.3.a,c** Use knowledge of language and its conventions when writing, speaking, reading, or listening. **L.4.4.a-c** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies. **L.4.5.c** Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms). **L.4.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation).	**ELD.4.I.B.6** (RI.4.1, RI.4.4, L.4.3) Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language. **ELD.4.I.B.7** (L.4.3, L.4.5.c) Listening actively to spoken English in a range of social and academic context. **ELD.4.I.A.2** (L.4.6) Interacting with others in writing language in various communicative forms (print, communicative technology, and multi-media). **ELD.4.I.C.10** (W.4.2.d, W.4.10) Writing literary and informational text to present, describe, and explain ideas and information, using appropriate technology. **ELD.4.II.A.1** (W.4.2.d) Understanding Text structure. **ELD.4.II.A.2** (W.4.2.d) Understanding cohesion

Interdisciplinary Standards	

Unwrapped Priority Standards

Standard 1:	**4.MD.5** - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: **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 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.		
Skills	Concepts	Bloom's	DOK
Recognize	angles as geometric shapes that are formed wherever two rays share a common endpoint **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 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	2	1
Understand	concepts of angle measurement: **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 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	2	1

Standard 2:	**4.G.1** - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.		
Skills	Concepts	Bloom's	DOK
Draw	points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	2	1
Identify	points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines in two-dimensional figures.	2	1

Standard 3:	**4.G.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.		
Skills	Concepts	Bloom's	DOK
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.	2	2
Recognize	right triangles as a category.	1	1
Identify	and identify right triangles.	1	1

Standard 4:	**4.G.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.		
Skills	Concepts	Bloom's	DOK
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.	1	1
Identify	Line-symmetric figures	1	1
Draw	Lines of symmetry	2	1

Learning Progressions

Standard 1:	**MD 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.				
Previous Grade n/a		Current Grade		Next Grade n/a	
Skills	Concepts	Skills	Concepts	Skills	Concepts
N/A	N/A	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	N/A	N/A

Standard 2:	**MB 5b:** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.				
Previous Grade n/a		Current Grade		Next Grade n/a	
Skills	Concepts	Skills	Concepts	Skills	Concepts
N/A	N/A	Turns	through *n* one-degree angles is said to have an angle measure of *n* degrees.	N/A	N/A

Standard 3:	**G 1:** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures				
Previous Grade 3G.1		Current Grade		Next Grade 5G.1	
Skills	Concepts	Skills	Concepts	Skills	Concepts
Understand	that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	Draw	Points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures	Use	a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).

Standard 4:	**G 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.				
Previous Grade 3G.2		Current Grade		Next Grade 5G.3	
Skills	Concepts	Skills	Concepts	Skills	Concepts
Partition	shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape*.	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.	Understand	that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

Standard 5:	**G. 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.

Previous Grade 3G.2		Current Grade		Next Grade 5G.4	
Skills	Concepts	Skills	Concepts	Skills	Concepts
Partition	shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*	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.	Classify	two-dimensional figures in a hierarchy based on properties.

Big Idea(s)	Corresponding Essential Question(s)
4.MD.5 An angle is formed whenever two rays share a common endpoint.	**4.MD.5** How is an angle formed?
4.MD.5.a An angle can be measured in degrees using the center point of the circle.	**4.MD**.5.a How is an angle measured in reference to a circle?
4.MD.5.b Angles are measured in degrees.	**4.MD.5.b** What do you do to actually measure when you measure an angle?
4.G.1 Geometry is found in points, lines, line segments, rays, angles, perpendicular and symmetrical lines on buildings, houses, playgrounds, etc.	**4.G.1** Where is geometry found in your everyday world?
4.G.2 You can classify two-dimensional figures based on angles, perpendicular and parallel lines.	**4.G.2** How can one classify two-dimensional figures?
4.G.3 A line of symmetry divides a figure into two matching parts	**4.G.3** What is a line of symmetry?

Unit Vocabulary Words	
Recognize Circle Measurement Center	Angles Endpoint Rays Points Lines Line segments Degree Acute Obtuse Right Circular arc Intersect

Resources for Vocabulary Development (Strategies, Routines and Activities)

21st Century Skills	
☒Creativity and Innovation	☒Initiative and Self-Direction
☐Critical Thinking and Problem Solving	☐Social and Cross-Cultural Skills
☐Communication and Collaboration	☐Productivity and Accountability
☐Flexibility and Adaptability	☐Leadership and Responsibility

Costa & Kallick, 2008

Unit Assessments	
Pre-Assessment	Pre-Assessment
Please see www.alvordschools.org/cfa for the most current ID numbers.	Please see www.alvordschools.org/cfa for the most current ID numbers.
Scoring Guides and Answer Keys	
Embedded within EADMS	Embedded within EADMS

Engaging Scenario Overview (Situation, challenge, role, audience, product or performance)	
Clubhouse- Congratulations on winning the contest to build a clubhouse for the playground you created in unit 2. The clubhouse must meet certain criteria in order for the principal to approve this project. Each task below will help you meet the specifications of the clubhouse.	Suggested Length of Time Days: 18 days Mins/Day: 60

Engaging Learning Experiences Synopsis of Authentic Performance Tasks		
Authentic Performance Tasks	Description	Suggested Length of Time
Task 1: Clubhouse Design Features 4.G.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. 4.G.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. 4.G.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. Big Ideas: 4.G.1 Geometry is found in points, lines, line segments, rays, angles, perpendicular and symmetrical lines on buildings, houses, playgrounds, etc. 4.G.2 You can classify two-dimensional figures based on angles, perpendicular and parallel lines. 4.G.3 A line of symmetry divides a figure into two matching parts Essential Questions: 4.G.1 Where is geometry found in your everyday world? 4.G.2 How can one classify two-dimensional figures? 4.G.3- What is a line of symmetry?	You will draw a sketch of a clubhouse on construction paper or chart paper. The sketch should include common geometric terms such as points, lines, line segments, parallel lines, and perpendicular lines. You should also incorporate three common triangles and four common quadrilaterals. All terms should be labeled. (Suggested ideas could include a sketch of the exterior or interior views of the clubhouse, furniture, play area, garden, etc.) You will use your clubhouse sketch to identify at least three lines of symmetry within your drawing using a different color. You should add and label at least three more design features that contain a minimum of one line of symmetry.	Days: 3-5 Mins/Day: 60
Task 2: Circular Windows 4.MD.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: 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 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees. Big Ideas: 4.MD.5 – An angle is formed whenever two rays share a common endpoint. 4.MD.5.a An angle can be measured in degrees using the center point of the circle. 4.MD.5.b Angles are measured in degrees. Essential Questions: 4.MD.5 How is an angle formed?	Your clubhouse should include three circular windows. You will design the first circular window that includes angles of 450, 450, 900, and 1800 that total 3600. *** Use a protractor if needed. You will design a second circular window with an acute angle, a right angle, and an obtuse angle. Students should appropriately label each angle. You will create a third circular window with approximately four inner angles. Using a protractor, students will measure and label each inner angle of the circle in degrees.	Days: 3-5 Mins/Day: 60

4.MD.5.a How is an angle measured in reference to a circle? 4.MD.5.b What do you do to actually measure when you measure and angle?		
Task 3: Angle Measurement **Supporting Standards -** **4.MD.6** - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	In this task, you will be required to draw three separate figures. These figures should be drawn using a protractor. You are encouraged to take these three figures and incorporate them into your clubhouse design. **Figure 1 is a fourth window that is a 180^0 angle**. You will divide this into four acute angles. You will need to measure and label each angle and write an equation that shows the relationship between the four acute angles and the 180^0 angle. (Example~ $45^0+45^0+45^0+45^0=180^0$ or $45^0+45^0+45^0+?=180^0$) **Figure 2 is a door. On the door, draw a 150^0 angle to decorate the door.** You will divide this angle into one obtuse and two acute angles. You need to measure and label each angle and write an equation that shows the relationship between the three smaller angles and the150^0 angle. (Example – $100^0+30^0+20^0 = 150^0$ or $20^0+30^0+? = 150^0$) **Figure 3 is a close figured that has a 90^0 angle.** You will divide this angle into three acute angles. . You need to measure and label each angle and write an equation that shows the relationship between the three smaller angles and the 90^0 angle. (Example – $30^0+40^0+20^0 =90^0$ or $20^0+30^0+? = 90^0$)	Days: 3-5 Mins/Day: 60
Task 4: Clubhouse Blueprint	Using large graph paper, chart paper, or construction paper; create your clubhouse blueprint. Make sure to include and label all geometric terms. This will be the blueprint you submit to your principal.	Days: 2 Mins/Day: 60

Authentic Performance Task 1

Name:	Circular Windows	Suggested Length	Days: 3-5 Mins/Day: 60

Standards Addressed

Priority Standards

CCSS Math	Standards for Mathematical Practice
4.MD.5 - Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: **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 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.	☐Make sense of problems and persevere in solving them ☐Reason abstractly and quantitatively ☒Construct viable arguments and critique the reasoning of others ☒Model with mathematics ☒Use appropriate tools strategically ☐Attend to precision ☒Look for and make use of structure ☐Look for and express regularity in repeated reasoning

Supporting Standards

CCSS Math	CCSS ELA	NG ELD
4.MD.6 - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	**RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. **W.4.2.a-e** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **SL.4.1.a-d** 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. **SL.4.2** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. **SL.4.3** Identify the reasons and evidence a speaker provides to support particular points. **L.4.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation).	**ELD.4.I.B.6** (RI.4.1, RI.4.4, L.4.3) Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language. **ELD.4.I.B.7** (L.4.3, L.4.5.c) Listening actively to spoken English in a range of social and academic context. **ELD.4.I.A.2** (L.4.6) Interacting with others in writing language in various communicative forms (print, communicative technology, and multi-media). **ELD.4.I.C.10** (W.4.2.d, W.4.10) Writing literary and informational text to present, describe, and explain ideas and information, using appropriate technology. **ELD.4.II.A.1** (W.4.2.d) Understanding Text structure. **ELD.4.II.A.2** (W.4.2.d) Understanding cohesion

Teaching and Learning Progression	**Suggestions**: Review angles. **Resources**: Engage New York Common Core Georgia Performance Standards (CCGPS) www.learnzillions.com www.commoncoresheets.com 4th Grade Math Framework: http://www.cde.ca.gov/ci/ma/cf/documents/aug2013gradefour.pdf http://www-k6.thinkcentral.com/ Students will design the first circular window that includes angles of 45^0, 45^0, 90^0, and 180^0 that total 360^0. Students will design a second circular window with an acute angle, a right angle, and an obtuse angle. Students should appropriately label each angle. Students will create a third circular window with approximately four inner angles. Using a protractor, students will measure and label each inner angle of the circle in degrees.	Bloom's: 2 DOK: 1 Scoring Rubric 4-Thorough 3-Adequate 2-Partial 1-Minimal	

Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Cooperative Grouping with assigned roles • Study Buddy • Think-Pair-Share • Clear expectations and examples • Addressing learning modalities/Accommodating learning style preferences.	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives • Modified curriculum • Additional time www.alvordusdrcd.org	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives	• Cooperative Grouping with assigned roles. • More challenging work above and beyond grade level. • Tiered assignments.

Authentic Performance Task 2

<table>
<tr><td>Name:</td><td colspan="3">Clubhouse Features</td><td>Suggested Length</td><td>Days: 3-5
Mins/Day: 60</td></tr>
<tr><td rowspan="5">Standards Addressed</td><td colspan="5">Priority Standards</td></tr>
<tr><td colspan="3">CCSS Math</td><td colspan="2">Standards for Mathematical Practice</td></tr>
<tr><td colspan="3">4.G.1 - Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

4.G.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.</td><td colspan="2">☐Make sense of problems and persevere in solving them
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☒Look for and make use of structure
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<tr><td colspan="5">Supporting Standards</td></tr>
<tr><td>CCSS Math</td><td>CCSS ELA</td><td colspan="3">NG ELD</td></tr>
</table>

	4.MD.6 - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	**RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. **W.4.2.a-e** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **SL.4.1.a-d** 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. **SL.4.2** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. **SL.4.3** Identify the reasons and evidence a speaker provides to support particular points. **L.4.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation).	**ELD.4.I.B.6** (RI.4.1, RI.4.4, L.4.3) Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language. **ELD.4.I.B.7** (L.4.3, L.4.5.c) Listening actively to spoken English in a range of social and academic context. **ELD.4.I.A.2** (L.4.6) Interacting with others in writing language in various communicative forms (print, communicative technology, and multi-media). **ELD.4.I.C.10** (W.4.2.d, W.4.10) Writing literary and informational text to present, describe, and explain ideas and information, using appropriate technology. **ELD.4.II.A.1** (W.4.2.d) Understanding Text structure. **ELD.4.II.A.2** (W.4.2.d) Understanding cohesion
Teaching and Learning Progression	Suggestions: Review geometric shapes, lines, points, symmetry, etc. Resources: Engage New York Common Core Georgia Performance Standards (CCGPS) www.learnzillions.com www.commoncoresheets.com 4th Grade Math Framework: http://www.cde.ca.gov/ci/ma/cf/documents/aug2013gradefour.pdf http://www-k6.thinkcentral.com/ Students will draw a sketch of a clubhouse on construction paper or chart paper. The sketch should include common geometric terms such as points, lines, line segments, parallel lines, and perpendicular lines. Students should also incorporate three common triangles and four common quadrilaterals. All terms should be labeled. (Suggested ideas could include a sketch of the exterior or interior views of the	Bloom's: 2 DOK: 1 Scoring Rubric 4-Thorough 3-Adequate 2-Partial 1-Minimal	

	clubhouse, furniture, play area, garden, etc.) Students will use clubhouse sketch to identify at least three lines of symmetry within their drawing using a different color. Students should add and label at least three more design features that contain a minimum of one line of symmetry.	

Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Cooperative Grouping with assigned roles • Study Buddy • Think-Pair-Share • Clear expectations and examples • Addressing learning modalities/Accommodating learning style preferences.	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives • Modified curriculum • Additional time www.alvordusdrcd.org	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives	• Cooperative Grouping with assigned roles. • More challenging work above and beyond grade level. • Tiered assignments.

Authentic Performance Task 3

Name:	Angle Measurement	Suggested Length	Days: 3-5 Mins/Day: 60

Standards Addressed

Priority Standards

CCSS Math	Standards for Mathematical Practice
4.G.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.	☐Make sense of problems and persevere in solving them ☐Reason abstractly and quantitatively ☒Construct viable arguments and critique the reasoning of others ☒Model with mathematics ☒Use appropriate tools strategically ☐Attend to precision ☒Look for and make use of structure ☐Look for and express regularity in repeated reasoning

Supporting Standards

CCSS Math	CCSS ELA	NG ELD
4.MD.6 - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	**RI.4.7** Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. **SL.4.1.a-d** 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. **SL.4.2** Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. **SL.4.3** Identify the reasons and evidence a speaker provides to support particular points. **L.4.6** Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation).	**ELD.4.I.B.6** (RI.4.1, RI.4.4, L.4.3) Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language. **ELD.4.I.B.7** (L.4.3, L.4.5.c) Listening actively to spoken English in a range of social and academic context. **ELD.4.I.A.2** (L.4.6) Interacting with others in writing language in various communicative forms (print, communicative technology, and multi-media). **ELD.4.I.C.10** (W.4.2.d, W.4.10) Writing literary and informational text to present, describe, and explain ideas and information, using appropriate technology. **ELD.4.II.A.1** (W.4.2.d) Understanding Text structure. **ELD.4.II.A.2** (W.4.2.d) Understanding cohesion

Teaching and Learning Progression

Suggestions:

Review angles and protractors.

Resources:

Engage New York
Common Core Georgia Performance Standards (CCGPS)
www.learnzillions.com
www.commoncoresheets.com

Bloom's	DOK
2	1

Scoring Rubric

4-Thorough
3-Adequate
2-Partial
1-Minimal

	4th Grade Math Framework: http://www.cde.ca.gov/ci/ma/cf/documents/aug2013gradefour.pdf http://www-k6.thinkcentral.com/ In this task, students will be required to draw three separate figures. These figures should be at least a half a page in size and drawn using a protractor. Students are encouraged to take these three figures and incorporate them into their clubhouse design. **Figure 1 is a 180^0 angle**. Students will divide this into four acute angles. They need to measure and label each angle and write an equation that shows the relationship between the four acute angles and the 180^0 angle. (Example~ $45^0+45^0+45^0+45^0=180^0$ or $45^0+45^0+45^0+?=180^0$) **Figure 2 is a 150^0 angle**. Students will divide this angle into one obtuse and two acute angles. . They need to measure and label each angle and write an equation that shows the relationship between the three smaller angles and the150^0 angle. (Example – $100^0+30^0+20^0 = 150^0$ or $20^0+30^0+? = 150^0$) **Figure 3 is a 90^0 angle.** Students will divide this angle into three acute angles. . They need to measure and label each angle and write an equation that shows the relationship between the three smaller angles and the 90^0 angle. (Example – $30^0+40^0+20^0 =90^0$ or $20^0+30^0+? = 90^0$)	

Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Cooperative Grouping with assigned roles • Study Buddy • Think-Pair-Share • Clear expectations and examples • Addressing learning modalities/Accommodating learning style preferences.	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives • Modified curriculum • Additional time www.alvordusdrcd.org	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives	• Cooperative Grouping with assigned roles. • More challenging work above and beyond grade level. • Tiered assignments.

Authentic Performance Task 4

Name:	Clubhouse Blueprint	Suggested Length	Days: 3-5 Mins/Day: 60

Standards Addressed

Priority Standards

CCSS Math	Standards for Mathematical Practice
4.MD.6 - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	☐Make sense of problems and persevere in solving them ☐Reason abstractly and quantitatively ☒Construct viable arguments and critique the reasoning of others ☒Model with mathematics ☒Use appropriate tools strategically ☐Attend to precision ☒Look for and make use of structure ☐Look for and express regularity in repeated reasoning

Supporting Standards

CCSS Math	CCSS ELA	NG ELD
4.MD.6 - Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4.MD.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.	**RI.4.7**Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. **W.4.2.a-e**Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **SL.4.1.a-d**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. **SL.4.2**Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. **SL.4.3**Identify the reasons and evidence a speaker provides to support particular points. **L.4.6**Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., *wildlife, conservation,* and *endangered* when discussing animal preservation).	**ELD.4.I.B.6** (RI.4.1, RI.4.4, L.4.3) Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language. **ELD.4.I.B.7** (L.4.3, L.4.5.c) Listening actively to spoken English in a range of social and academic context. **ELD.4.I.A.2** (L.4.6) Interacting with others in writing language in various communicative forms (print, communicative technology, and multi-media). **ELD.4.I.C.10** (W.4.2.d, W.4.10) Writing literary and informational text to present, describe, and explain ideas and information, using appropriate technology.

Teaching and Learning Progression

Suggestions:

Review angles, geometric shapes, protractors.

Resources:

Engage New York
Common Core Georgia Performance Standards (CCGPS)
www.learnzillions.com
www.commoncoresheets.com
4th Grade Math Framework:
http://www.cde.ca.gov/ci/ma/cf/documents/aug2013gradefour.pdf
http://www-k6.thinkcentral.com/

Using large graph paper, chart paper, or construction paper; create your clubhouse blueprint. Make sure to include and label all geometric terms. This will be the blueprint you submit to your principal.

Bloom's	DOK
2	1

Scoring Rubric

4-Thorough
3-Adequate
2-Partial
1-Minimal

Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Cooperative Grouping with assigned roles • Study Buddy • Think-Pair-Share • Clear expectations and examples • Addressing learning modalities/Accommodating learning style preferences.	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives • Modified curriculum • Additional time www.alvordusdrcd.org	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives	• Cooperative Grouping with assigned roles. • More challenging work above and beyond grade level. • Tiered assignments.

Engaging Scenario

Detailed Description (situation, challenge, role, audience, product or performance)			
Clubhouse- Congratulations on winning the contest to build a clubhouse for the playground you created in unit 2. The clubhouse must meet certain criteria in order for the principal to approve this project. Each task below will help you meet the specifications of the clubhouse. Take your clubhouse design and split into groups. Decide with your group which clubhouse to use. Using a graph paper, use this clubhouse to design to create, label, and color your clubhouse to present to the class.			
Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Cooperative Grouping with assigned roles • Study Buddy • Think-Pair-Share • Clear expectations and examples • Addressing learning modalities/Accommodating learning style preferences.	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives • Modified curriculum • Additional time www.alvordusdrcd.org	• Graphic organizers • Differentiated instruction • Repetition • Manipulatives	• Cooperative Grouping with assigned roles. • More challenging work above and beyond grade level. • Tiered assignments.