5 Math Unit 13: Geometry

Content Area: **Mathematics**
Course(s):
Time Period: **Marking Period 4**
Length: **10 Days**
Status: **Published**

Unit Overview

Coordinate Plane & Polygons

In this unit, students will be introduced to the first quadrant of the coordinate plane. Students graph ordered pairs, interprest coordinate values of points in the cotext of a situation, and draw a line to connect points.students make predictions about data points that are not specifcially graphed on a line. Students build on their knowledge of 2D figures to classify these figures in a hierarchy. Student classify triangles and quadrilaterals based on length and congruency of sides and types of angle.

What Students Are Learning

- Students understand hierarchies and how the attributes of a category also apply to subcategories.
- Students classify triangles and quadrilaterals based on properties.
- Students graph points in the first quadrant of the coordinate plane.

Number Routines

- Problem Strings
- Would you rather?
- Which one doesn't belong?
- What's another way to write it?
- Where does it go?
- Notice & Wonder
- About how much?
- Numberless Word Problem

9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).

Standards

5.G.A.1	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).
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the

	situation.
5.G.B.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.
5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties.

Materials

Core Materials:

Reveal Math

13.1 Understand the Coordinate Plane

13.2 Plot Ordered Pairs on the Coordinate Plane

13.3 Represent Problems on a Coordinate Plane

13.4 Classify Triangles by Properties

13.5 Properties of Quadrilaterals

13.6 Classify Quadrilaterals by Properties

Supplemental Materials:

- ST Math
- Happy Numbers
- 3 Act Lessons
- Building Fact Fluency Kit
- Brainingcamp Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Online Resources

Technology

DA	Data & Analysis
	Data can be organized, displayed, and presented to highlight relationships.
8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
	Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.
8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate

	all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Assessment

Formative Assessment

- Unit Readiness Diagnostics
- Lesson Checks
- Exit Tickets
- Teacher Observation

Summative Assessment

- Unit Assessment Performance Task
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

Accommodations & Modifications

Special Education

Differentiated Instruction			
Accommodate Based on Students Individual Needs: Strategies			
Time/General • Extra time for assigned tasks • Adjust length of assignment • Timeline with due dates for reports and projects • Communication system between home and school • Provide lecture notes/outline	**Processing** • Extra response time • Have students verbalize steps • Repeat, clarify, or reword directions • Mini-breaks between tasks • Provide a warning for transitions • Reading partners	**Comprehension** • Precise step-by-step directions • Short manageable tasks • Brief and concrete directions • Provide immediate feedback • Small group instruction • Emphasize multi-sensory	**Recall** • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence • Visual and verbal reminders • Graphic

		learning • Manipulatives	organizers
Assistive Technology • Computer/whiteboard • Calculator • Screen reader	**Tests/Quizzes/Grading** • Extended time • Study guides • Focused/chunked tests • Read directions aloud	**Behavior/Attention** • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback	**Organization** • Individual daily planner • Display a written agenda • Note-taking assistance • Color code materials

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Anchor Charts
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives

At-risk of Failure

- Additional time during intervention period
- Questions read aloud
- Graphic organizers

- Anchor Charts
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Fluency Kits
- Bridges Intervention Kit

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities

Interdisciplinary Connections

3-5-ETS1-1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
RI.MF.5.6	Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.
SL.PE.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

Career Readiness, Life Literacies, and Key Skills

Climate Change:

Climate Change Example: Students may represent real world problems about the reduced yields of staple crops by graphing points in the first quadrant of the coordinate plane; Students may interpret coordinate values of points in the agricultural context.

9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.

9.4.5.CT	Critical Thinking and Problem-solving
	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).
	People can choose to save money in many places such as home in a piggy bank, bank, or credit union.
9.1.5.FI.1	Identify various types of financial institutions and the services they offer including banks, credit unions, and credit card companies.
9.1.5.PB.1	Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.

Career Ready Practices

STEM CAREER: Architectural Drafter Student will discuss his aspiration to be an architect. Student designs windows. Students watch to see how Sam uses 2-dimension figures to sketch a window.

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.