K Math Unit 13: Analyze, Compare, and Compose Shapes

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

Unit Overview

Analyze Shapes

The focus of this unit is:

- Students compare, contrast, and create two-and three-dimensional shapes
- Students distinguish between two- and three-dimensional shapes
- Students draw 2-dimensional shapes and build 3-dimensional shapes
- Students identify three-dimensional shpaes among the real world objects around them
- Students discover that changing the size or orientaton of a shape does not change the name

What Students Are Learning

- Students learn how to compare and contrast 2-and 3-dimensional shapes
- Students learn how to create and draw shapes
- Students learn to relate real world objects to 3-dimensional shapes

Number Routines

- Find the Pattern, Make a Pattern
- Start and Stop
- Notice and Wonder: How are they the same? How are they different?
- Notice and Wonder: Tell me everything you can.
- Notice and Wonder: What question could you ask?

Standards

K.G.A.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
K.G.B.4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
K.G.B.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
K.G.B.6	Compose simple shapes to form larger shapes.

Materials

Core Materials:

Reveal Math

13.1 Compare and Contrast 2-Dimensional Shapes

13.2 Build and Draw 2-Dimensional Shapes

13.3 Compose 2-Dimensional Shapes

13.4 Compare and Contrast 3 Dimensional Shapes

13.5 Build 3-Dimensional Shapes

13.6 Describe 3-Dimensional Shapes in the World

Supplemental Materials:

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

Technology

8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.1.2.AP.1	Model daily processes by creating and following algorithms to complete tasks.
8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
8.1.2.AP.4	Break down a task into a sequence of steps.
8.2.2.ED.2	Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

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 learning	**Recall** • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence • Visual and verbal reminders • Graphic organizers
Assistive Technology • Computer/whiteboard • Tape recorder • Spell-checker • Audio-taped books	**Tests/Quizzes/Grading** • Extended time • Study guides • Focused/chunked tests • Read directions	**Behavior/Attention** • Consistent daily structured routine • Simple and	**Organization** • Individual daily planner • Display a written agenda

	aloud	clear classroom rules • Frequent feedback	• 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
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives

At-risk of Failure

- Additional support during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities

Gifted & Talented

- Independent projects
- Open middle
- Websketch explorations
- Stem projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities

Interdisciplinary Connections

ELA:

RI.2.10. Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.

Science:

K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Climate Change: Students may use sticks and clay to model trees and umbrellas and may then draw shapes (e.g., triangle, rectangle) to model those objects. With prompting and support, they may ask and answer questions about how trees and umbrellas may be used to reduce the warming effect of sunlight.

Career Readiness, Life Literacies & Key Skills

Creativity and Innovation: Brainstorming can create new, innovative ideas.

• 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).

Example: Students will share ideas of multiple strategies and draw models to illustrate the solution path they utilize to solve the word problem.

Critical Thinking and Problem-Solving: Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the

problem.

• 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).

Example: Students will work in small groups and collaborate to identify possible solutions paths to word problems, utilizing the strategies they have learned to solve addition and subtraction operations, such as place value charts, number lines, hundred charts, ten frames, etc. that could best illustrate the solution to the problem.

Digital Citizenship: Individuals should practice safe behaviors when using the Internet.

• 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).

Example: Students will model appropriate use of all digital platforms and share examples of their work that exhibit proper use of various platforms.

Interaction of Technology and Humans: Technology has changed the way people love and work. Various tools can improve daily tasks and quality of life.

• 8.2.2.ITH.3: Identify how technology impacts or improves life.

Example: Students will track their progress using Imagine Math or other math programs often utilized in class. Students will discuss the pros and cons of using the program with the teacher.

Career Ready Practices

STEM Career: Video Game Designer- Students talk about the work of a Video Game Designer.

Students compare shapes.

- 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.