K Math Unit 11: Three Dimensional Shapes

Content Area: **Mathematics**
Course(s):
Time Period: **Marking Period 3**
Length: **10 days**
Status: **Published**

Unit Overview

Three Dimensional Shapes

The focus of this unit is:

- to identify objects as 2-dimensional or 3-dimensional (solid shape)
- make connections between 2-and 30 dimensional shapes (cylinder has a circular base on each end)
- examine attributes of each solid
- identify positions of solid shapes in real world contexts (above, behind, below, beside, in front of and next to)

What Students Are Learning

- Students learn to identify 3-dimensional shapes
- Students learn to describe 3-dimensional shapes
- Students learn to use positional words to talk about 3 dimensional shapes

Number Routines

- Would You Rather?
- Start and Stop
- Notice and Wonder: How are they the same? How are they different?
- Which Doesn't Belong?
- Notice and Wonder: What do you see?

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.A.2	Correctly name shapes regardless of their orientations or overall size.
K.G.A.3	Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

Materials

Core Materials:

Reveal Math

11.1 2-Dimensional and 3-Dimensional Shapes

11.2 Cubes

11.3 Spheres

11.4 Cylinders

11.5 Cones

11.6 Describe Solids

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 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
- 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: Landscape Architect- Students talk about the work of a landscape architect.

Students put plants into categories according to their 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.