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> Kari Everett Kari.everett@wku.edu Joy Curtis Joy.curtis@wku.edu Western Kentucky University

Connection to the Common Core State Standards

- Kindergarten: Geometry
 - Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
 - Analyze, compare, create, and compose shapes.
- Grade 1: Geometry
 - > Reason with shapes and their attributes.
- Grade 2: Geometry
 - > Reason with shapes and their attributes.
- Grade 3: Geometry & Geometric Measurement
 - > Reason with shapes and their attributes.
 - Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
- Grade 4: Geometry
 - > Draw and identify lines and angles, and classify shapes by properties of their lines and angles.
- Grade 5: Geometric measurement
 - > Convert like measurement units within a given measurement system.
 - > Understand concepts of volume and relate volume to multiplication and to addition.
- Grade 6: Geometry
 - Solve real-world and mathematical problems involving area, surface area, and volume.
- Grade 7: Geometry
 - Draw, construct, and describe geometrical figures and describe the relationships between them.
 - Solve real-life and mathematical problems involving angle measures, area, surface area, and volume.

Connection to Mathematical Practices • MP4: Model with mathematics "Mathematically proficient students" can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace."

Eye Spy Shapes by Debbie MacKinnon

- Have students identify objects in the classroom
- Bring something from home or picture of object that is one of the shapes discussed
- Kindergarten level

Cubes, Cones, Cylinders, and Spheres by Tana Hoban Like Eye Spy Shapes Have students build shapes from materials like paper, blocks, newspaper rods

K-1 grade level

The Greedy Triangle by Marilyn Burns

- Use popsicle sticks, pipe cleaners, cardboard/cardstock rectangles to show shapes as you are reading the story
- Have a student help with adding sides to the shape
- Extension: vocabulary for the students
 1-3 grade level

The Secret Birthday Message by Eric Carle

Have students write realistic messages to friends or family using shapes appropriate for words
Have students make a shape book
K-3 grade level

Secret Message for audience

Sir Cumference and the First Round Table by Cindy Neuschwander

- Different ways to make tables with pattern blocks, patty paper, or grid paper
- Great play on words in the book2-4 grade level

Spaghetti and Meatballs for All
A Mathematical Story by
Marilyn Burns

- How to arrange tables in different settings
- Use building cubes to illustrate different arrangements
- Talk about similar shapes, perimeter

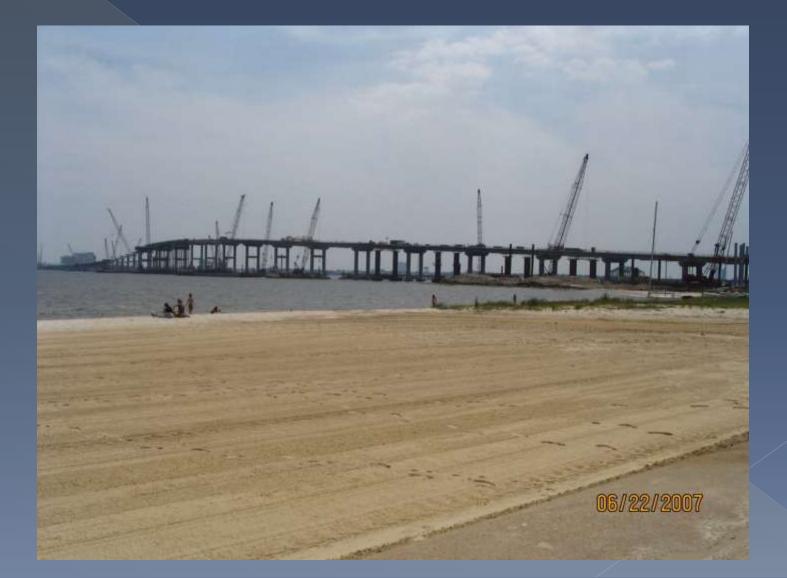
 Have worksheet to guide students through story stopping at different places to talk about table arrangements

• 3-4 grade level

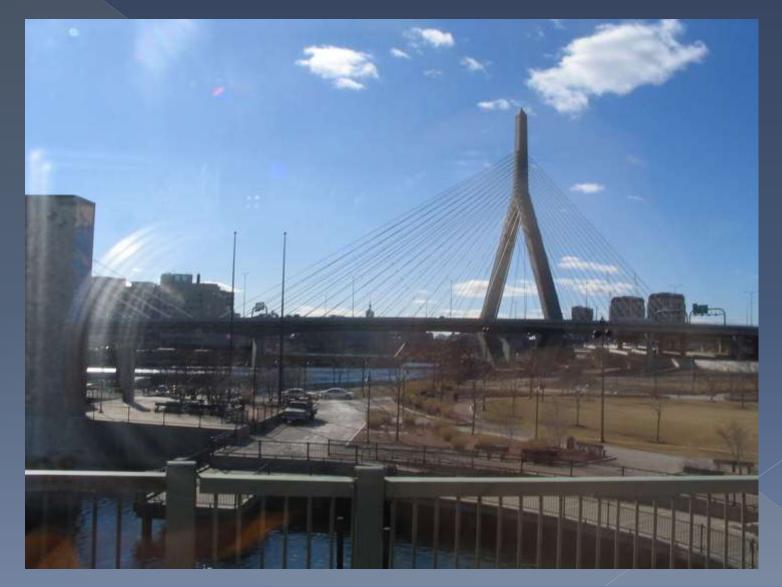
Bridges are to Cross by Philemon Sturges

- From what shapes are bridges made?
- Make own bridge from newspaper dowels in class
- Activity extension for students:
 - > connect to STEM and history of bridges
 - Have students make own bridge from popsicles sticks or pasta
- 4-5 grade level

New Biloxi-Ocean Springs Bridge



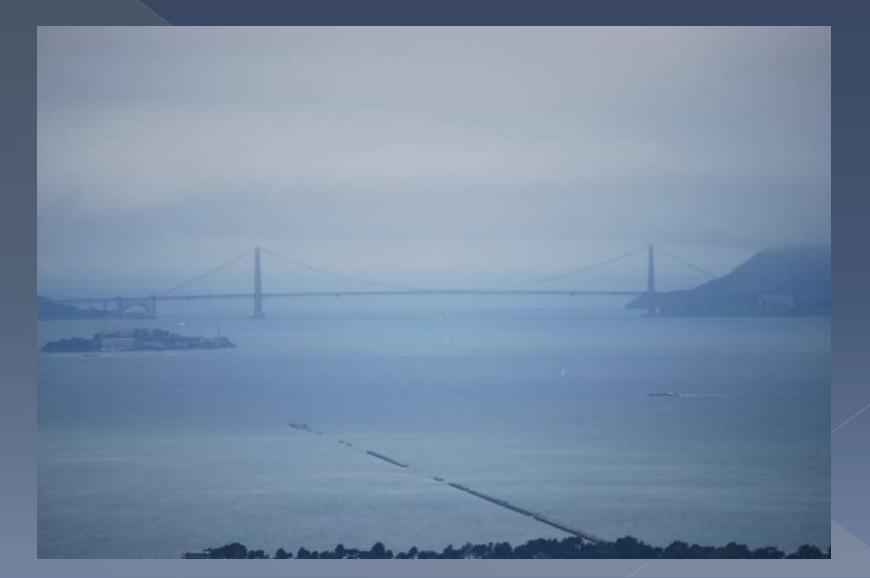




Golden Gate Bridge



Golden Gate Bridge



Nashville



Nashville



Charleston, SC



Monster Movers by George Ancona

- Connections to STEM and bridges
 Finding size of ships, front loaders, buckets for cranes based on volume
- able to hold
- Using various measurements for load time
- 4-7 grade level

Shuttle mover

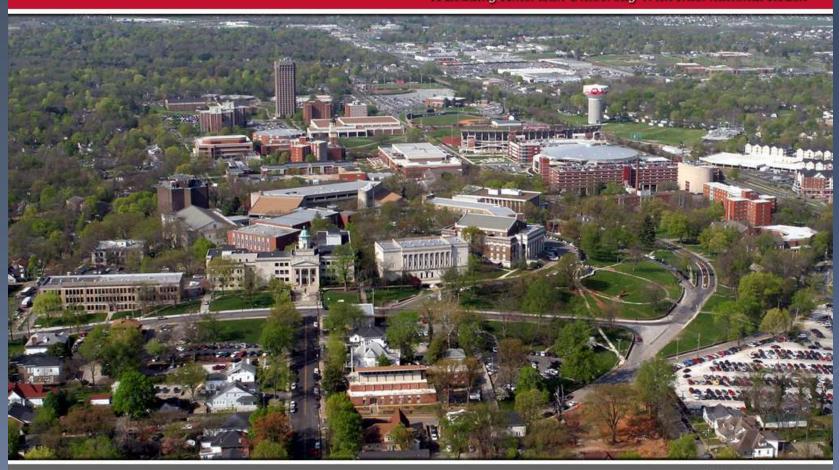


The Phantom Tollbooth by Norton Juster

- Milo encounters amusing situations that involve numbers, geometry, measurements, and problem solving
- The chapters take Milo on various adventures
- Could assign activities for different chapters, but not necessarily all of them
- Cross-curriculum with history
- 2-8 grade level

Questions???

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