Unit 4 - Identification, Analysis and Creation of Geometric Shapes

Content Area: **Mathematics**
Course(s): **Mathematics 1, Mathematics K**
Time Period: **April**
Length: **10 weeks**
Status: **Published**

Enduring Understandings

● Know number names and the count sequence to 100
● Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)
● Analyze, compare, create, and compose shapes
● Describe and compare measurable attributes

Essential Questions

What are some ways I can measure objects?

How can I compare measurements of objects to see which is more or less than the other.

How can I classify objects into categories?

How can I count singe objects and then count the categories they are in?

What is a: square, circle, triangle, rectangle, hexagon, cube, cone, cylinder and sphere?

What is orientation of a shape?

What is a two dimensional object?

What is a three dimensional object?

What is a plane?

What is a solid?

How can I compare and contrast 2 and 3 dimensional shapes?

What are vertices?

How can I make model shapes?

What can happen when I join shapes?

Content

Key Vocabulary

Topic 11: columns, ones, pattern, tens, decade, hundred chart
Topic 12: sort, two-dimensional shape (flat), three-dimensional shape (solid), circle, side, triangle, vertex/vertices (corner), rectangle, square, hexagon, cone, cube, cylinder, sphere, above, behind, below, beside, in front of, next to
Topic 13: roll, slide, stack, flat surface
Topic 14: height, length, longer, shorter, taller, capacity, balance scale, heavier, lighter, weighs, weight, attribute

Count to 100 by ones and by tens. *(benchmarked)

Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

Directly compare two objects with a measurable attribute in common, to see which object has “more of” “less of” the attribute, and describe the differences.

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, and next to.

Correctly name shapes regardless of their orientation or overall size.

Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”)

Analyze and compare twoand 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).

Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

Compose simple shapes to form larger shapes.

Skills

Students will be able to:
- count orally by ones up to 100.
- count orally by tens up to 100.

- count orally by ones up to 50 , beginning at any number.

- identify measurable attributes.
- describe the measurable attributes of multiple objects.

● describe multiple measurable attributes of a single object.

● directly compare and describe two objects with measurable attribute in common using more of or less of .

● name shapes in order to describe objects in the environment.
● use terms such as above , below , beside , in front of , behind , and next to in order to describe relative positions of objects.

● correctly names shapes regardless of their orientation or overall size.

● identify shapes as two-dimensional (lying in a plane, flat) or three-dimensional (not flat, solid).
● compare two- and three- dimensional shapes, in different sizes, and orientations.

● compare two- and three- dimensional shapes in different sizes and in different orientations and identify similarities and differences.
● compare parts of two- and three-dimensional shapes [e.g. number of sides, number of vertices (corners)].
● compare attributes of two- and three-dimensional shapes [e.g. sides have equal length.

● compose simple shapes to form larger shapes.

● recognize basic shapes in the real world.
● use objects (clay, sticks, etc) to model shapes.
● model shapes in the world by drawing shapes.

● use informal language to describe similarities, differences, parts, and other attributes when comparing two- and three-dimensional shapes, in different sizes and orientations.

Resources

EnVision Materials for Topic 11, 12, 13, and 14 including student edition worksheets, problem solving mat, interactive math story, vocabulary cards, and center ideas which are listed in each topic

www.illustrativemathematics.org

Assessing Counting Sequences Part 1

Choral Counting

Counting by Tens

Counting Circles

Start-Stop Counting

Which is Heavier?

Which is Longer?

Alike or Different Games

Addition and Subtraction within 20 ideas and activities

Paper Plate Addition

Kindergarten Math Printabkes for Review/Centers

70 Math Games/Activities for the Classroom

Literature Connection:
Interactive Math Stories for each Topic from Pearson 2.0
100 Days of Cool by Stuart J. Murphy
100 School Days by Anne Rockwell
100th Day Worries by Margery Cuyler
Miss Bindergarten Celebrates the 100th Day of Kindergarten by Joseph Slate
Curious George Learns to Count from 1 to 100 by H. A. Rey
From One to One Hundred by Teri Sloat
One Hundred Hungry Ants By Elinor J. Pinczes
The Mission of Addition By Brian P. Cleary
The Action of Subtraction By Brian P. Cleary
Heavy and Light by Joan Chapman
Is it Larger? Is It Smaller? by Tana Hoban
The Long and Short of It by Cheryl Nathan
Math Counts: Weight by Henry Arthur Pluckrose
Mighty Maddie by Stuart J. Murphy
Who's Short? Who's Tall? by Kailee Herbst
Size (Math Counts) by Henry Pluckrose
The Giant Carrot by Jan Peck
The Enormous Potato by Aubrey Davis
Block City by Robert Louis Stevenson
Each Peach Pear Plum by Janet and Allan Ahlberg
Jump, Frog, Jump! by Robert Kalan
Math Counts: Sorting by Henry Arthur Pluckrose
Rosie's Walk by Pat Hutchins
3 Little Firefighters by Stuart J. Murphy
More or Less by Rebecca Fjelland Davis

Technology Connection

Animated Glossary

Brain Pop

Brain Pop Jr

Educreations

enVisions 2.0

Google Classroom

i-Ready

ixl.xom

Kahoot

Khan Academy

Learn Zillion

Math Playground

Poppet

Scholastic Study Jams

SeeSaw

ThatQuiz

XtraMath

IPAD APPS

Flash to Pass

Animal Math

123 My Connect Dots Animal

Number Frames

Park Math

Geoboard

Pattern Shapes

Standards

MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K.CC.A.1	Count to 100 by ones and by tens.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K.CC.A.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.K-12.8	Look for and express regularity in repeated reasoning.
MA.K.MD.A.1	Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
MA.K.MD.A.2	Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference.
MA.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.
MA.K.G.A.2	Correctly name shapes regardless of their orientations or overall size.
MA.K.G.A.3	Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).
MA.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).
MA.K.G.B.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
MA.K.G.B.6	Compose simple shapes to form larger shapes.