Kindergarten Mathematics Instructional Toolkit

The Kindergarten Mathematics Instructional Toolkit is intended to assist teachers with planning lessons aligned to the Florida Standards. This toolkit is not intended to replace your district's curriculum, but rather it serves to support the teaching and learning of the Kindergarten Mathematics Florida Standards. This toolkit includes a breakdown of the standards, standards aligned resources and information related to mathematics instruction. The resources presented in this document may only cover portions of the aligned standard and represent only a small sample of those available on CPALMS.

CPALMS: Official Source of Florida Standards

This section features information and tools that are found on CPALMS. These resources include course descriptions, formative assessment resources, mathematical practices, depth of knowledge ratings and FloridaStudents.org resources.

Kindergarten Mathematics Course Description

Course descriptions provide an overview for a course and designate which standards are in that course. The kindergarten mathematics course description includes resources for all 37 standards within the kindergarten mathematics course.

Mathematics Formative Assessment System (MFAS)

One resource available on CPALMS that has been designed specifically for mathematics instruction is the Mathematics Formative Assessment System (MFAS). The system includes a task or problem that teachers can implement with their students. It also includes various levels of rubrics that help the teacher interpret students' responses. In addition to using the MFAS tasks as formative assessments, these tasks can be used to plan lessons that are closely aligned to the standards.

Mathematical Practices

The Mathematical Practices are habits of mind that describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. The Mathematical Practices should be infused during the kindergarten mathematics course. More information about each Mathematical Practice can be found by clicking on the links below.

MAFS.K12.MP.1.1 Make sense of problems and persevere in solving them.

MAFS.K12.MP.2.1 Reason abstractly and quantitatively.

MAFS.K12.MP.3.1 Construct viable arguments and critique the reasoning of others.

MAFS.K12.MP.4.1 Model with mathematics.

MAFS.K12.MP.5.1 Use appropriate tools strategically.

MAFS.K12.MP.6.1 Attend to precision.

MAFS.K12.MP.7.1 Look for and make use of structure.

MAFS.K12.MP.8.1 Look for and express regularity in repeated reasoning.

Depth of Knowledge

Florida has adopted Webb's four-level Depth of Knowledge (DOK) model of content complexity as a means of classifying the cognitive demand presented by the Florida Standards. Content complexity increases as the levels progress from Level 1 Recall to Level 4 Extended Thinking. The DOK Levels are identified for each standard throughout this document. Please visit the CPALMS Content Complexity page for more information about the DOK complexity for standards.

Florida Students

Resources specifically designed with students in mind are available on Florida Students. Florida Students is an interactive site that provides educational resources aligned to the Florida Standards.

Kindergarten Mathematics Resources

This section features links to resources and tools for mathematics educators in Florida. There are resources for teachers, parents and students.

Teacher, Student and Parent Resources

- Standards Coding Scheme
- Kindergarten Mathematics Parent Guide
- Kindergarten Mathematics Student Resources

Instructional Resources

- Elementary Mathematics Resources
- Elementary Standards Progressions
- Literacy for Learning in the Content Areas
- English Language Learners Assistance
- Khan Academy Kindergarten Math Mission

Counting and Cardinality

MAFS.K.CC.1 Know number names and the count sequence.

MAFS.K.CC.1.1

DOK Level 1: Recall

Count to 100 by ones and by tens.

Resources:

Counting by Ones
Resource Type: Original Tutorial
Join Thomas and count to twenty by ones.

I Can Count…By Ones to Ten
Resource Type: Original Tutorial
Learn to count to ten by ones. 1, 2, 3.. let's go!

Counting by 10's with Zero the Hero and Little Count
Resource Type: Lesson Plan
In this lesson students will learn to count to 100 by 10's. The relationship between the numbers 1-10 and 10-100 will be made using the 100's chart followed by a power point story about Little Count the Caterpillar.

Curious George Bubble Pop
Resource Type: Educational Game
Count along with George by popping bubbles from his bath while you count along.

Bundles of Ten
Resource Type: MFAS Formative Assessment
Students are asked to count by tens and then use pictures of bundles of tens to demonstrate one to one correspondence when counting by tens.

Count by Ones
Resource Type: MFAS Formative Assessment
Students count by ones to 45.

MAFS.K.CC.1.2

DOK Level 1: Recall

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

Resources:

I Can Count….from Anywhere!
Resource Type: Original Tutorial
By the end of this tutorial you should be able to count on from a given number zero through twenty.

Counting on with Splash
Resource Type: Lesson Plan
In this lesson, students will count forward from a given number while manipulating animals in a pond during a read aloud by the teacher.

Goodie Bags: Counting Forward
Resource Type: Lesson Plan
This lesson is designed to provide kindergarten students explicit instruction on counting forward using something they love: Candy! Students will use the candy as a real-world example of a time when counting forward is a useful strategy, in the context of getting goodie bags ready for a birthday party.

Bibliography of Counting Books
Resource Type: Text Resource
A printable list of nine counting book references.

Counting On
Resource Type: MFAS Formative Assessment
Students begin counting at a number other than one.

Count the Dots Game
Resource Type: MFAS Formative Assessment
Students use ten frames to Count On from a number other than one.

MAFS.K.CC.1.3

DOK Level 1: Recall

Read and write numerals from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).

Resources:

I Can Count a Group of 0 to 5 Objects
Resource Type: Original Tutorial
An introductory lesson for kindergarten students on counting a group of 0 to 5 objects.

What if there are None?
Resource Type: Lesson Plan
Students will practice working with the number 0 to develop an understanding of how to represent a set that has no objects. A PowerPoint will be used to help students understand the concept of 0.

1-10 Book
Resource Type: Teaching Idea
This teaching idea describes a project for kindergarten students. Students created a book of numbers 1-10. Each page had the numerical and written form of each number, as well as colorful drawings that corresponded to that number.

Field Trip to the Fire Station
Resource Type: MFAS Formative Assessment
Students write the number of objects counted in sets of objects.

Matching Ten Frames to Numerals
Resource Type: MFAS Formative Assessment
Students are asked to match four ten frames representing different numbers to the correct numerals.

MAFS.K.CC.2 Count to tell the number of objects.

MAFS.K.CC.2.4
DOK Level 1: Recall
Understand the relationship between numbers and quantities; connect counting to cardinality.

a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
c. Understand that each successive number name refers to a quantity that is one larger.

Resources:

Counting with a Caterpillar
Resource Type: Lesson Plan
In this lesson, students will be creating a counting book and placing paper cut-outs of fruit on each page of their book. They will point and count each fruit to show their understanding of one-to-one correspondence.

How Many? Lesson 1
Resource Type: Lesson Plan
The students will show understanding of the conservation of numbers regardless of the order in which objects were counted. The students will be able to tell "how many" without recounting objects and be able to explain that the amount is the same because no objects were added or taken away. The focus is on section b of the standard.

Curious George Flower Garden
Resource Type: Educational Game
Flowers are popping up everywhere! Help George keep track of how many there are by counting with him.

Books and Bookmarks
Resource Type: MFAS Formative Assessment
Students are asked to count eight books and decide how many bookmarks they would need if they gave each book a bookmark.

Is it Still Seven?
Resource Type: MFAS Formative Assessment
Students are asked to count a set of seven cubes, rearrange the cubes, and then determine the number of cubes in the rearranged set.

MAFS.K.CC.2.5

DOK Level 1: Recall

Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Resources:

Let’s Count the Steps
Resource Type: Lesson Plan
Students will count items with numbers ranging from zero to twenty in an outdoor environment (can also be done indoors) and, when given a number up to 20, will count steps, using body movement in the form of "taking steps" to enhance learning.

How Many? Lesson 2
Resource Type: Lesson Plan
In this lesson, students will show understanding of the conservation of numbers regardless of the order in which they were counted. Student will be able to tell "how many" without recounting objects and be able to explain that the amount is the same because no objects were added or taken away.

How Many Cubes Are There?
Resource Type: MFAS Formative Assessment
Students are asked to count sets of cubes and determine how many cubes are in each set. Next, students are given a set of cubes and asked to count out a given number of cubes.

How Many Dots?
Resource Type: MFAS Formative Assessment
Students are shown dot cards and asked to determine how many dots are on each card.

MAFS.K.CC.3 Compare numbers.

MAFS.K.CC.3.6

DOK Level 2: Basic Application of Skills & Concepts

Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies

Resources:

Comparing Numbers Between 1 and 10

Resource Type: Lesson Plan

This lesson will help students be able to compare if numbers of objects in one group are greater than, less than, or equal to the number of objects in another group.

More or Less Mess

Resource Type: Lesson Plan

This lesson will introduce the kindergarten class to the idea of greater than (more), less than, or equal (same) and how to determine which is more or less.

Greater? Less? Let's Guess!

Resource Type: Lesson Plan

This lesson is designed to give the students a hands on opportunity to count small numbers of objects and decide which is greater or less than the other when compared.

Animal Line Up

Resource Type: MFAS Formative Assessment

Students are shown two cards with pictures of animals and asked to compare the number of animals on the two cards.

Take and Compare

Resource Type: MFAS Formative Assessment

Students take handfuls of counters, count them, and use the terms greater than, less than, or equal to compare the sets.

MAFS.K.CC.3.7

DOK Level 2: Basic Application of Skills & Concepts

Compare two numbers between 1 and 10 presented as written numerals.

Resources:

Which is Greater?

Resource Type: MFAS Formative Assessment

Students are asked to compare two numbers between 1 and 10 during a game of "Which is Greater?"

Comparing Numbers

Resource Type: MFAS Formative Assessment

Students are asked to compare pairs of numbers between 1 and 10.

Operations and Algebraic Thinking

MAFS.K.OA.1 Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

MAFS.K.OA.1.1

DOK Level 2: Basic Application of Skills & Concepts

Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

Resources:

All Together Now, Part 1
Resource Type: Lesson Plan
All Together Now teaches the idea of bringing together two smaller groups to make one large group using manipulatives. This is part one of a two part series. Part 2 is titled "All Together Now- or NOT".

All Together Now or NOT, Part 2
Resource Type: Lesson Plan
All Together Now or NOT teaches the idea of beginning with a whole and taking away a smaller amount using manipulatives.

Comparing Connecting Cubes: Balancing
Resource Type: Teaching Idea
In this lesson students will explore subtraction through another model, the balance. The balance model leads naturally to recording equations. Students will write out in equation form the subtraction modeled on a pan balance, and then write out addition sentences that are from the same fact family.

Carly's Sleepover Party
Resource Type: MFAS Formative Assessment
Students model the action in a subtraction problem.

Modeling Addition and Subtraction
Resource Type: MFAS Formative Assessment
Students model an addition and a subtraction problem with manipulatives, drawings, fingers, or by acting out the story in the problem.

MAFS.K.OA.1.2

DOK Level 2: Basic Application of Skills & Concepts

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem (Students are not required to independently read the word problems.)

Resources:

Adding Circus Animals

Resource Type: Lesson Plan

In this lesson, students learn to solve addition word problems within 10 using the engaging book by Jill Anderson *Adding with Sebastian Pig and Friends at the Circus*. This is the first in a series of four lessons on adding and subtracting within 10.

Button Subtraction

Resource Type: Lesson Plan

In this lesson, students learn to solve subtraction word problems within 10 using the engaging book by Eric Litwin *Pete the Cat and His Four Groovy Buttons*. This is the second in a series of four lessons on adding and subtracting within 10.

SPLASH! Jumping In and Out of the Pond

Resource Type: Lesson Plan

In this lesson, students will solve addition and subtraction word problems using manipulatives.

Lizards on a Rock

Resource Type: MFAS Formative Assessment

Students solve an addition word problem using manipulatives or pencil and paper.

Cats and Dogs Word Problem

Resource Type: MFAS Formative Assessment

Students are given a subtraction word problem and asked to solve the problem by drawing a picture or using manipulatives.

MAFS.K.OA.1.4

DOK Level 2: Basic Application of Skills & Concepts

For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Resources:

Go Fish! And other ways to make 10.

Resource Type: Lesson Plan

This version of Go Fish is a really fun and interactive way to teach kindergartners about the number pairs that equal ten. This lesson will give students practice to not only build number bonds to ten but also to find the missing addend and count up to ten.

10 Little Rubber Duckies

Resource Type: Lesson Plan

In this fun and interactive lesson, students create groups of 10 using ten-frames and small rubber duck cut-outs. When given a number from 1-9, the students will find the number that makes 10 when added to the given number.

Filling Crayon Boxes
Resource Type: Lesson Plan
In this lesson, students are presented with a problem that requires them to add crayons to a partially filled box to make a ten. Students use ten frames and dot stickers of two colors to represent the problem situation and solve.

Making Ten
Resource Type: MFAS Formative Assessment
Students use ten frames to find the missing number to make ten.

Bags of Apples
Resource Type: MFAS Formative Assessment
Students are asked to solve a problem in which they have to compose 10.

MAFS.K.OA.1.5

DOK Level 1: Recall

Fluently add and subtract within 5.

Resources:

Add it or Take it Away
Resource Type: Lesson Plan
In this lesson students experience multiple strategies to add and subtract within 5 to develop fluency.

Counting Fingers
Resource Type: Lesson Plan
In this lesson, students will use their fingers and manipulatives to help solve simple addition problems within 5.

Five Frame
Resource Type: Virtual Manipulative
This applet contains four games (How Many, Build, Fill, and Add) that utilize a frame with five slots for students to place objects, which helps students develop fluency within five.

Fluency within 5
Resource Type: MFAS Formative Assessment
Students are asked to orally provide answers to a mixed probe of addition and subtraction (within five) problems.

Fluency within Five- Subtraction Only
Resource Type: MFAS Formative Assessment
Students are asked to orally provide answers to subtraction (within five) problems.

MAFS.K.OA.1.a

DOK Level 2: Basic Application of Skills & Concepts

Use addition and subtraction within 10 to solve word problems involving both addends unknown, e.g., by using objects, drawings, and equations with symbols for the unknown numbers to represent the problem. (Students are not required to independently read the word problems.)

Resources:

Planting Rose Bushes

Resource Type: MFAS Formative Assessment

Students are asked to find all possible pairs of numbers that sum to nine in the context of a word problem.

Vanilla and Chocolate Cupcakes

Resource Type: MFAS Formative Assessment

Students are asked to find all possible pairs of numbers that sum to six in the context of a word problem.

Number and Operations in Base Ten

MAFS.K.NBT.1 Work with numbers 11-19 to gain foundations for place value.

MAFS.K.NBT.1.1

DOK Level 2: Basic Application of Skills & Concepts

Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Resources:

Decompose That Teen Number

Resource Type: Lesson Plan

The students will receive explicit instruction from the teacher on the definition of decomposing a number and how to represent a decomposition with manipulatives, drawings, and equations. The students will use linking cubes to reflect numbers from 11-19, and to show their understanding of how to decompose a number. Students will record decompositions as an equation.

How Many More Ones than Ten

Resource Type: Lesson Plan

Students will review the procedure for using a ten-frame. Students will be introduced to the important foundational concept for place value that numbers are composed of tens and some more ones. Students will practice subitizing skills (the ability to "instantly see how many") using a ten-frame and counters.

Working with Teen Numbers
Resource Type: Lesson Plan
This lesson uses manipulatives and drawings to provide understanding of the composition of teen numbers.

Where Do I Go?
Resource Type: Problem-Solving Task
This activity is designed to be a short, repeatable activity to build student flexibility with the number sequence. Begin by randomly giving each student in the classroom one card from one of the sets you have made. Challenge the students to get themselves into order as quickly as they can.

Basket of Apples
Resource Type: MFAS Formative Assessment
Students count 57 apples grouped in tens, and write the numeral that represents how many apples they counted. Students also read and write three-digit numbers.

Composing 13
Resource Type: MFAS Formative Assessment
Students are asked to compose 13 by using a group of 10 and some other ones.

Make Tens and Ones
Resource Type: MFAS Formative Assessment
Students use a ten frame to decompose 12 into tens and ones.

Measurement and Data

MAFS.K.MD.1 Describe and compare measurable attributes.

MAFS.K.MD.1.1

DOK Level 2: Basic Application of Skills & Concepts

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

Resources:

Attributes of a Car
Resource Type: MFAS Formative Assessment
Students are asked to name at least three measurable attributes of a car and what could be measured for each object, length or weight.

Measurable Attributes of a Paper Clip
Resource Type: MFAS Formative Assessment
Students describe a paper clip in terms of weight and length.

Measurable Attributes of an Elephant
Resource Type: MFAS Formative Assessment
Students describe an elephant in terms of weight and length.

MAFS.1.MD.1.2

DOK Level 2: Basic Application of Skills & Concepts

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. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Resources:

Magnificent Measurement: The Weight of Things
Resource Type: Lesson Plan
This lesson introduces students to weight. Students are encouraged to explain how they determined which object was heavier, while being guided to use mathematical terms.

Short or Tall? Compare Them All!
Resource Type: Lesson Plan
This lesson asks students to compare and describe height. The students will use math terms 'taller' and 'shorter' to compare their height with another classmate and items in the classroom.

Comparing Objects
Resource Type: Virtual Manipulative
Clifford, the big red dog, hosts a game where students click on the object that Clifford describes. The objects are in sets and students click on the smallest, tallest, shortest, etc.

A-Weigh We Go!
Resource Type: Teaching Idea
Using different items available at home (e.g., bag of flour, box of detergent) students are estimating, measuring and comparing the weight of these items. They examine if "bigger" also means "heavier" and try to find out how to weigh an object that is too big for a bathroom scale.

Compare Lengths of Cubes
Resource Type: MFAS Formative Assessment
Students compare the lengths of two trains of cubes and are assessed in order to determine if they understand conservation of length.

Taller or Shorter
Resource Type: MFAS Formative Assessment
Students compare their heights to that of a partner and describe the difference in their heights.

MAFS.1.MD.1.a

DOK Level 2: Basic Application of Skills & Concepts

Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps*.

Resources:

Measuring Length with No Gaps or Overlaps

Resource Type: Tutorial

In this video tutorial from Khan Academy, called, "Measuring a golden statue", we see an example of how to solve a problem in which we measure an object with same-size length units that span it with no gaps or overlaps.

Determining Differences in Length Using Non-Standard Units of Measure

Resource Type: Tutorial

This tutorial will assist students in understanding how to compare the lengths of two different objects using paper clips and cubes. The tutorial provides visual models of examples for how to line the non-standard unit of measurement up properly to take an accurate measurement and how to compare one objects length to another.

How Long is Your Train?

Resource Type: Problem-Solving Task

This lesson is intended to allow students to gain insight into the importance of measurement. The focus is on using non-standard units to measure the length of a "train" they create. Students are then required to compare the length of their train with a buddy's train.

Using Paper Clips to Measure

Resource Type: MFAS Formative Assessment

Students use paper clips to measure the length of two pictured items.

Measure with Color Tiles

Resource Type: MFAS Formative Assessment

Students use color tiles to measure the length of rectangles.

MAFS.K.MD.2 Classify objects and count the number of objects in each category.

MAFS.K.MD.2.3

DOK Level 2: Basic Application of Skills & Concepts

Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Resources:

Sorting It All Out

Resource Type: Lesson Plan

In this lesson, kindergarten students will learn to sort objects familiar to them by different attributes. They will justify their decisions for classification when objects have more than one similar characteristic.

Calculating Patterns: What's My Rule for Sorting?

Resource Type: Lesson Plan

This lesson focuses on sorting and classifying objects. They will identify multiple properties, and come up with sorting rules in order to find different ways to sort objects. Student should be able to discern between defining attributes (the objects have three sides, the objects are triangles) and non-defining attributes (the objects are blue).

Amazing Attributes: Grandma's Button Box

Resource Type: Teaching Idea

Students will develop their ability to identify properties using buttons. After listening to the story, *The Button Box*, students will begin sorting buttons by color, size, type, and shape.

Sort Objects

Resource Type: MFAS Formative Assessment

Students sort objects by type and then identify which group of objects has the most and the least.

Sorting Buttons

Resource Type: MFAS Formative Assessment

Students sort illustrations of buttons, explain the how and why, and count the number in each group.

Geometry

MAFS.K.G.1 Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

MAFS.K.G.1.1

DOK Level 2: Basic Application of Skills & Concepts

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.*

Resources:

Listen to a Shape

Resource Type: Lesson Plan

The student identifies basic shapes (circle, square, rectangle, triangle) and describes the attributes of each shape.

Changing Position
Resource Type: MFAS Formative Assessment
Students move a linking cube to different positions based on teacher instructions.

Where is the Sphere?
Resource Type: MFAS Formative Assessment
Students describe the position of a sphere in relationship to other objects.

MAFS.K.G.1.2

DOK Level 1: Recall

Correctly name shapes regardless of their orientations or overall size.

Resources:

Rectangles Rock!
Resource Type: Lesson Plan
Using the book Mouse Shapes as a springboard text, students will identify the main idea of the story and locate specific details to support the story. They will then use information in the story, attribute blocks, and discussion to identify a rectangle, its name, and its attributes.

Shape Detective
Resource Type: Lesson Plan
The students will identify and describe shapes (squares, circles, triangles, rectangles, and hexagons). The students will also be able to correctly name shapes regardless of their orientations or overall size by becoming detectives and going in a "hunt" to find the needed shapes.

Dinosaur Train- Buddy's Gem Hunt
Resource Type: Educational Game
Help Buddy find a present for the Conductor! Dive deep into a cave to collect crystals of different size, shape, and color. Once all the crystals have been collected, players must sort them before giving them to the Conductor.

Identify the Shapes
Resource Type: MFAS Formative Assessment
Students determine whether a shape is a circle, triangle, rectangle, hexagon, or square.

Is it Still a Triangle?
Resource Type: MFAS Formative Assessment
Students are asked to identify a triangle shown in two different orientations.

MAFS.K.G.1.3

DOK Level 1: Recall

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

Resources:

Shape Safari 2-D and 3-D Shapes

Resource Type: Lesson Plan

The students will use sorting and searching to investigate the ways that shapes are alike and different. The students will also work whole group to collaborate and expand their understanding of the subject. This lesson is a great way to get students involved in their learning and to help foster a love of math. Included in the lesson is a Formative and Summative assessment to help monitor students' progress and understanding of the lesson.

Hide and Seek Those Shapes

Resource Type: Lesson Plan

In this lesson, students will discover the names of different two-dimensional and three-dimensional shapes and their attributes through activities such as singing shape songs, playing "Hide and Seek" with shapes, and playing "Hot and Cold" to find shapes in the classroom.

Is it Plane or Solid?

Resource Type: MFAS Formative Assessment

Students examine a rectangle and a rectangular prism to discuss the similarities and differences.

Spheres and Circles

Resource Type: MFAS Formative Assessment

Students determine if a globe and a circle are two-dimensional or three-dimensional and explain their reasoning.

MAFS.K.G.2 Analyze, compare, create, and compose shapes.

MAFS.K.G.2.4

DOK Level 3: Strategic Thinking & Complex Reasoning

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).

Resources:

Briana’s Shape Playground

Resource Type: Original Tutorial

Learn how to identify the similarities and differences in the number of sides of two-dimensional shapes.

Shape Up!
Resource Type: Lesson Plan
In this lesson students will compare two and three dimensional shapes (circle, square, triangle, rectangle, cone, cylinder, sphere, cube) by differentiating them according to attributes. Students explain attributes of shapes by exploring real world objects.

Shape Tool
Resource Type: Virtual Manipulative
This virtual manipulative allows you to create, color, enlarge, shrink, rotate, reflect, slice, and glue geometric shapes, such as: squares, triangles, rhombi, trapezoids and hexagons.

Compare Rectangles and Triangles
Resource Type: MFAS Formative Assessment
Students compare a triangle to a rectangle based on attributes of these figures.

Cubes and Prisms
Resource Type: MFAS Formative Assessment
Students compare a cube to a rectangular prism and discuss the similarities and differences.

MAFS.K.G.2.5

DOK Level 2: Basic Application of Skills & Concepts

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

Resources:

Building Shapes with Becca
Resource Type: Original Tutorial
In this tutorial, you will learn to build shapes that you see in the world around you.

Creating Shapes in Our World
Resource Type: Lesson Plan
In this lesson, students will work with 3-Dimensional shapes identifying attributes of the shapes and recreating them. Students will create, identify and describe 3-Dimensional shapes as part of the assessment process.

Understanding Polygons
Resource Type: Lesson Plan
This is a simple and fun activity that is great to incorporate into your geometry unit. As you read "The Greedy Triangle" aloud, the students "create" each shape with marshmallows and pretzel sticks - as you are reading the story, they complete a sheet in which they write the name of each shape, draw the shape, and record the number of sides and vertices each shape has.

Draw a Triangle
Resource Type: MFAS Formative Assessment
Students draw a triangle and explain their reasoning in drawing the shape.

Model the Shapes
Resource Type: MFAS Formative Assessment
Students look at two photographs taken at a school and choose a shape from one of the photographs to model or draw.

MAFS.K.G.2.6

DOK Level 2: Basic Application of Skills & Concepts

Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

Resources:

The Shape Factory with Robbie Robot
Resource Type: Original Tutorial
By the end of this tutorial, you should be able to compose simple shapes to form larger shapes.

ShapeBot
Resource Type: Lesson Plan
In this hands-on lesson, students will be challenged to demonstrate their understanding of shapes to compose smaller shapes into larger shapes. The lesson culminates with students building and describing a "robot" that includes larger shapes composed of smaller shapes.

Compose a Hexagon
Resource Type: MFAS Formative Assessment
Students use triangles to compose a hexagon.

Draw Triangles
Resource Type: MFAS Formative Assessment
Students draw two triangles and are prompted to describe the triangles in terms of defining attributes.