

## Grade K

| Key Areas of Focus for Grades K-2: Addition and subtraction-concepts, skills and problem solving  |  |                                  |   |   |   |  |
|---|--|----------------------------------|---|---|---|--|
| Expected Fluency: Add and Subtract within 5   |  |                                  |   |   |   |  |
| Module  | M1:  | M2:                              | M3:   | M4:   | M5:   | M6:  |
|   | Classify and Count Numbers to 10   | Identify and Describe Shapes     | Comparison with Length, Weight, and Numbers to 10 | Number Pairs, Addition and Subtraction of Numbers to 10 | Numbers 10-20, Counting to 100 by 1 and 10                      | Analyze, Compare, Create, and Compose Shapes |
| Duration  | Quarter 1  | Quarter 1                        | Quarter 2   | Quarters 2 and 3  | Quarters 3 and 4  | Quarter 4                                    |
| Common Core   | K.CC.1<br>K.CC.2<br>K.CC.3<br>K.CC.4*<br>K.CC.5*   | K.G.1<br>K.G.2<br>K.G.3          | K.CC.6*<br>K.CC.7<br><br>K.MD.1<br>K.MD.2         | K.OA.1<br>K.OA.2*<br>K.OA.3<br>K.OA.4*<br>K.OA.5        | K.CC.1<br>K.CC.2<br>K.CC.3<br>K.CC.4*<br>K.CC.5*<br><br>K.NBT.1 | K.CC.4<br>K.G.4<br>K.G.5<br>K.G.6            |
| Use the math workshop model and centers. Each module should be approached from by understanding the students' baseline first and then developing and selecting, engaging and hand-on activities to build deep understanding at developmentally appropriate levels. Where possible, provide models and visuals for students. Communicate with students using student friendly iCan statements developed and or adopted by the grade-level team. Include kinesthetic activities to deepen understanding while adding movement and play into the learning. |  |                                  |   |   |   |  |
| Instructional Strategies  | Daily, ongoing formative assessment strategies included in each module (ex. Activities, manipulatives, exit tickets, , etc.). Homework should consist of activities and games that allow parents and children to have fun with learning. |                                  |   |   |   |  |
| Assessment Formative  | Daily, ongoing formative assessment strategies included in each module (ex. Activities, manipulatives, exit tickets, , etc.). Homework should consist of activities and games that allow parents and children to have fun with learning. |                                  |   |   |   |  |
| Assessment Interim  | A Mid-Module assessment Task is provided for each module to address the first half of the student outcomes   |                                  |   |   |   |  |
| Assessment Summative  | An End of the Module Assessment Task is provided to address the student outcomes for the module as a whole   |                                  |   |   |   |  |
|   | Cross-Modular Assessment Tasks are provided periodically after multiple modules to address standards from several modules and to ensure that students are making important connections across major topics within this grade.            |                                  |   |   |   |  |
| GEOMETRY  | NUMBER   | NUMBER AND GEOMETRY, MEASUREMENT | FRACTIONS   |   |   |  |

Major Clusters are denoted with \*

(Areas of intense focus, where students need fluent understanding and application of core concepts)

## Module 1

### Essential Questions

How can numbers from zero to ten be counted, read, and written?

How can numbers from zero to ten be compared and ordered?

### Enduring Understandings

Understand the relationship between number and quantity. With repeated exposure to the numbers 0-10, students will gain fluency in recognizing the numbers and their related quantity. 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. 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. Compare two numbers between 1 and 10 presented as written numerals.

### I Can Use Numbers to Help Me Understand Math - Adopted from [www.thecurriculumcorner.com](http://www.thecurriculumcorner.com)

- I can write numbers from 0 to 20.
- I can write a number for a group of 0 to 20 objects.
- I can put numbers in order.
- I can name a group of objects by using a number.
- I can understand that the last object counted tells the number of objects in a group.
- I can understand that the number of objects in a group can be moved around and the total number will be the same.
- I can understand that adding an object to a group will make the total number one bigger.
- I can count to tell how many.
- I can count out a number of objects between 1 and 20.

### I Can Use Addition and Subtraction to Help Me Understand Math

- I can take apart numbers less than or equal to 10. EX:  $3 = 2 + 1$

### I Can Use Measurement and Data to Help Me Understand Math

BPS Math Year at a Glance (Adapted from “A Story of Units” Curriculum Maps associated with the Eureka math program in Mathematics P-5).

- I can place objects into categories.
- I can count the number of objects in categories.
- I can sort the categories by the number of objects.

## **Module 1: Classify and Count Numbers to 10**

### **Know number names and the count sequence.\***

**K.CC.1** Count to 100 by ones and by tens.

**K.CC.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

**K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

### **Count to tell the number of objects.\***

**K.CC.4** 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.

**K.CC.5** 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.

### **Classify objects and count the number of objects in each category.**

**K.MD.3** Classify objects into given categories; count the numbers of objects in each categories by count. (Limit category counts to be less than or equal to 10.)

## Module 2

### Essential Questions

1. How can 2 dimensional shapes be compared for similarities and differences?
2. How can 3 dimensional shapes be compared for similarities and differences?

### Enduring Understanding

This unit will consist of students working with manipulatives to analyze and compare 2 and 3 dimensional shapes and recognize their similarities and differences at a kindergarten level.

### I Can Use Measurement and Data to Help Me Understand Math - Adopted from [www.thecurriculumcorner.com](http://www.thecurriculumcorner.com)

- I can place objects into categories.
- I can count the number of objects in categories.
- I can sort the categories by the number of objects.

### I Can Use Geometry to Help Me Understand Math

- I can find shapes around me.
- I can tell where shapes are. K.G.1 (above, below, beside, in front of, behind, next to)
- I can tell about shapes.
- I can compare shapes.
- I can name shapes
- I can tell about and compare two-dimensional and three-dimensional shapes.

## Module 2: Identify and Describe Shapes

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

**K.G.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.2** Correctly name shapes regardless of their orientations or overall size.

**K.G.3** Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).

## Module 3

### Essential Questions:

1. Why do I need to know how to measure an object's length, size or weight?
2. Why is it important for me to be able to compare two objects and know which has more or less?

### Enduring Understandings

Students will know how to describe different measurable attributes of objects, how to measure length and which object has more or less of by using concrete objects.

### I Can Use Numbers to Help Me Understand Math - Adopted from [www.thecurriculumcorner.com](http://www.thecurriculumcorner.com)

- I can tell if a group of objects in one group is greater than, less than or equal to a group of objects in another group.
- I can compare two written numbers between 1 and 10.

### I Can Use Measurement and Data to Help Me Understand Math

- I can tell how an object can be measured. (length, weight)
- I can compare how two objects are similar or different. (more of, less of, taller, shorter)

## Module 4

### Essential Questions:

What happens when two numbers are combined?

What happens when one number is taken from another?

Why is it important to know how to add and subtract?

How will addition and subtraction help me solve problems?

### Enduring Understandings

Students will practice with composing and decomposing numbers to 10, leading to an understanding of addition and subtraction. Students will begin to see addition and subtraction equations in use, but their focus will be on finding effective strategies for working with numbers within 10.

### I Can Use Addition and Subtraction to Help Me Understand Math - Adopted from [www.thecurriculumcorner.com](http://www.thecurriculumcorner.com)

- I can use objects, fingers and pictures to help me show addition. K.OA.1
- I can use objects, fingers and pictures to help me show subtraction. K.OA.1
- I can solve addition and subtraction word problems within 10. K.OA.2
- I can take apart numbers less than or equal to 10. K.OA.3 ( $5 = 2 + 3$ )
- I can find the number that is added to 1 through 9 to make 10. I can use objects or drawings to show my answer. K.OA.4
- I can add and subtract within 5. K.OA.5

### **Module 3: Comparison with Length, Weight and Numbers to 10**

#### **Compare numbers. \***

**K.CC.6** 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.

**K.CC.7** Compare two numbers between 1 and 10 presented as written numerals.

#### **Describe and compare measurable attributes.**

**K.MD.1** Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

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

### **Module 4: Number Pairs, Addition and Subtraction of Numbers to 10**

#### **Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. \***

**K.OA.1** Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

**K.OA.2** Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

**K.OA.3** Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ).

**K.OA.4** 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.

**K.OA.5** Fluently add and subtract within 5.



## Module 5

### Essential Questions:

How can I solve problems using addition and subtraction?

When will I need to solve problems using addition and subtraction?

What should I do when I don't have all the information?

### Essential Understandings:

Kindergarten students should understand common situations Solved with Addition and Subtraction –

- Add to with result unknown;  $(1+2= \_)$
- Take From with result unknown;  $(2-1 = \_)$

### I Can Use Number Sense and Place Value to Help Me Understand Math- Adopted from [www.thecurriculumcorner.com](http://www.thecurriculumcorner.com)

- I can put together and take apart numbers from 11 to 19 by naming the tens and ones. K.NBT.1
- I can use objects, drawings or equations to show tens and ones. K.NBT.1

### I Can Use Numbers to Help Me Understand Math

- I can count to 100 by ones and tens. K.CC.1
- I can count forward starting at a given number. K.CC.2
- I can write numbers from 0 to 20. K.CC.3
- I can write a number for a group of 0 to 20 objects. K.CC.3
- I can put numbers in order. K.CC.4
- I can name a group of objects by using a number. K.CC.4
- I can understand that the last object counted tells the number of objects in a group. K.CC.4
- I can understand that the number of objects in a group can be rearranged and the total number will be the same. K.CC.4
- I can understand that adding an object to a group will make the total number one bigger. K.CC.4
- I can count to tell how many. K.CC.5
- I can count out a number of objects between 1 and 20. K.CC.5

## Module 5: Numbers 10-20, Counting to 100 by 1 and 10

### Know number names and the count sequence. \*

**K.CC.1** Count to 100 by ones and by tens.

**K.CC.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

**K.CC.3** Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

### Count to tell the number of objects.\*

**K.CC.4** 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.

**K.CC.5** 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.

### Work with numbers 11-19 to gain foundations for place value. \*

**K.NBT.1** 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 (such as  $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two three, four, five, six, seven, eight or nine ones.

## Module 6

### Essential Questions

1. How are shapes alike and different?
2. How can shapes be created and then changed to make new shapes?
3. How can simple shapes be used to create larger, more complex shapes?

### Enduring Understandings

This unit will consist of students working with manipulatives to analyze and continue their comparison 2 and 3 dimensional shapes and recognizing their similarities and differences at a kindergarten level. Students will also understand how to construct and change shapes using manipulatives and hands-on materials.

### I Can Use Geometry to Help Me Understand Math - Adopted from [www.thecurriculumcorner.com](http://www.thecurriculumcorner.com)

- I can tell about and compare two-dimensional and three-dimensional shapes. K.G.4
- I can make shapes using materials like sticks and clay. K.G.5
- I can use simple shapes to make larger shapes. K.G.6

### I Can Use Numbers to Help Me Understand Math

- I can put numbers in order. K.CC.4
- I can name a group of objects by using a number. K.CC.4
- I can understand that the last object counted tells the number of objects in a group. K.CC.4
- I can understand that the number of objects in a group can be rearranged and the total number will be the same. K.CC.4
- I can understand that adding an object to a group will make the total number one bigger. K.CC.4

## Module 6: Analyze, Compare, Create, and Compose Shapes

### Count to tell the number of things.\*

**K.CC.4** Understand the relationship between numbers and quantities: connect counting to cardinality.

d. Develop understanding of ordinal numbers (first through tenth) to describe the relative position and magnitude of whole numbers.

### Analyze, compare, create and compose shapes.

**K.G.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.5** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

**K.G.6** Compose simple shapes to form larger shapes. *For example, “Can you join these two triangles with full sides touching to make a rectangle?”*

### Primary Resources

1. Eureka Math Program
2. Context for Learning
3. Math Workshop Model
4. Do the Math
5. TenMarks

**Essential Questions Defined:** Essential questions are broad concepts asked in question form. They help guide the teacher in teaching the unit and designing their lesson plan. **We use the following five essential questions with all of our units**, in all of our grades, across all of our subjects (Adapted from Rick DuFour)

BPS Math Year at a Glance (Adapted from “A Story of Units” Curriculum Maps associated with the Eureka math program in Mathematics P-5).

1. What do students need to know and be able to do?
2. How will we teach them?
3. How will we know if they know and are able to do?
4. What will we do if they don't?
5. What will we do if they already know and are able to do prior to a lesson or unit beginning?

**Enduring Understandings Defined:** Enduring understandings are statements that capture the important ideas that can be transferred to learning and doing beyond the classroom (Adapted from Grant Wiggins and JayMcTighe, *Understanding by Design*).

**I Can Statements Defined:**

What students should know and be able to do in student friendly language. These statements help empower students and engage students, allowing them to own their learning.