HOWELL TOWNSHIP PUBLIC SCHOOLS

MATHEMATICS CURRICULUM FRAMEWORK

KINDERGARTEN

BOARD APPROVED: August 23, 2017

HT Board Approved: August 23, 2017

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

acing	September	October	November	December	January	February	March	April	May	June
	Topic 1: Numbers 0-5 **Topic 2: Compare Numbers 0-5**	**Topic 3: Numbers 6-10** **Topic 4:Compare Numbers 0-10**	**Topic 5: Classify and Count Data**	**Topic 6:** Understand Addition	**Topic 7: Understand Subtraction** **Topic 8: More Addition and Subtraction**	**Topic 9: Count Numbers to 20** **Topic 10: Compose and Decompose Numbers 11 to 19**	**Topic 11: Count Numbers to 100**	**Topic 12: Identify and Describe Shapes** **Topic 13: Analyze, Compare, and Create Shapes**	**Topic 14: Describe and Compare Measurable Attributes**	Step Up to Grade 5
Calendar Math	**September**	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
NJSLS Domain	Counting and Cardinality	Counting and Cardinality	Measurement and Data	Operations and Algebraic Thinking	Operations and Algebraic Thinking	Counting and Cardinality Number and Operations in Base Ten	Counting and Cardinality	Geometry	Measurement and Data	
District Assessments	End of Year Assessment									End of Year Assessment
Mathematical Practices	**Construct Arguments MP.3** *(Also, MP.1, MP.2, MP.5, MP.6)* **Model with Math** MP.4 *(Also, MP.1, MP.3)*	**Look For and Use Structure** MP.7 (Also, MP.1, MP.2, MP.5, MP.8 **Repeated Reasoning** MP.8 (Also,	**Critique Reasoning** MP.3 (Also, MP.2, MP.4, MP.6)	**Model with Math** MP.4 (Also, MP.2, MP.3)	**Use Appropriate Tools** MP.5 (Also, MP.1, MP.6) **Reasoning** MP.2 (Also, MP.4, MP.5, MP.8)	**Reasoning** MP.2 (Also, MP.1, MP.3, MP.4) **Look For and Use Structure** MP.7 (Also, MP.3, MP.4, MP.5, MP.8)	**Look For and Use Structure** MP.7 (Also, MP.6, MP.8)	**Precision** MP.6 (Also, MP.2, MP.3) **Make Sense and Persevere** MP.1 (Also, MP.3, MP.5,	**Precision** MP.6 (Also, MP.3, MP.4, MP.5	

		MP.1, MP.5)						MP.6)		
NJSLS – Technology	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	8.1.2.A.1, 8.1.2.A.4, 8.1.5.A.1, 8.2.5.C.4 8.2.5.D.3	
NJSLS - Career Ready Practices	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	CRP2, CRP4, CRP6, CRP8, CRP11, CRP12	

Unit Summary	NJSLS Standards	Essential Questions
Unit 1: In this unit, students will learn to	**K.CC.A.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)	How can numbers from 0 to 5 be counted, read, and written?

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

cou t grou of objects and the write the amount. Students will compare groups of objects as well as their corresponding numbers. (Topics 1-4).	**K.CC.B.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.B.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. **K.CC.C.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.[1] **K.CC.C.7** Compare two numbers between 1 and 10 presented as written numerals. **K.OA.A.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.CC.A.3** Write numbers from 0 to 20. Represent a number of	How can numbers from 0 to 5 be compared and ordered? How does counting tell how many? How can objects help with counting?

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

	objects with a written numeral 0-20 (with 0 representing a count of no objects)	

Learning Goals:

- Students will be able to know number names, count sequence, and count to tell the number of objects.
- Students will be able to compare and order the numbers from zero to five.
- Students will be able to know number names, count in sequence, and tell the number of objects six to ten.
- Students will be able to compare and order numbers zero through 10.

Vocabulary: count, one, two, three, number, four, five, none, zero, part, whole, order, compare, equal, group, same number as, greater than, less than, model, six, seven, eight, nine, ten

Unit Summary	NJSLS Standards	Essential Questions
Unit 2: In this unit, students will classify up to 10 objects into two categories. The students will count the number of objects in each of those categories and then sort the categories by count. In addition to sorting, the students will be able to explain why they sorted the objects into those categories. (Topic 5)	**K.MD.B.3** Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.[3] **K.CC.B.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. **K.CC.C.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.[1] **K.CC.C.7** Compare two numbers between 1 and 10 presented as write ten numerals.	How can classifying data help answer questions?

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

Learning Goals: • Students will be able to classify objects and count the number of objects in each category.		
Vocabulary: category, classify, chart, tally mark		
Unit Summary	NJSLS Standards	Essential Questions
Unit 3: In this unit, students will focus on deepening their understanding of addition as "put together" and "add to", and subtraction as "take apart" and take from". Students will learn to represent and solve addition and subtraction word problems, decompose numbers through 10, and fluently add and subtract within 5. (Topics 6-8)	**K.OA.A.1** Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings[2], sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. **K.OA.A.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.A.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.A.5** Demonstrate fluency for addition and subtraction within 5 **K.CC.A.2** 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).	How can representing taking apart and taking from in different ways help you learn about subtraction? How can decomposing numbers in more than one way help you learn about addition and subtraction?

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

Learning Goals:

- Students will be able to understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
- Students will be able to understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
- Students will be able to understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

Vocabulary: in all, join, addition sentence, add, plus sign (+), equal sign (=), equation, sum, left, separate, subtraction sentence, take away, minus sign (-), subtract, difference, break apart, operation,

Unit Summary	NJSLS Standards	Essential Questions
Unit 4: In this unit, students will continue to count in sequence with a focus on numbers 11 to 20. The use of ten frames will help the student visualize the numbers, as well as recognize one more. (Topic 9)	**K.CC.A.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1). **K.CC.A.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). **K.CC.B.4c** Understand that each successive number name refers to a quantity that is one larger. **K.CC.B.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.	How can numbers to 20 be counted, read, written, and pictured to tell how many?

Learning Goals:

- Students will be able to know the number names, the count sequence, and count to tell the number of objects to 20.

Vocabulary: eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, row

Fluency Expectations: K.OA.A.5 Demonstrate fluency for addition and subtraction within 5.

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

Unit 4 Student Goals: I will be able to add sums to 5. I will be able to subtract with differences up to 5.

Unit Summary	NJSLS Standards	Essential Questions
Unit 5: In this unit, students will build a foundation for understanding place value by focusing on the composition and decomposition of numbers 11 to 19 into one group of 10 ones and the remaining ones. The operations of composition and decomposition of numbers is learned through visualizing with objects, drawings, and equations. (Topic 10)	**K.NBT.A.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 (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.	How can composing and decomposing numbers from 11 to 19 into ten ones and some further ones help you understand place value?

Learning Goals:

- Students will be able to work with numbers 11-19 to gain foundations for place value.

Vocabulary: How many more?

Fluency Expectations: K.OA.A.5 Demonstrate fluency for addition and subtraction within 5.

Unit 5 Student Goals: I will be able to add sums to 5. I will be able to subtract with differences up to 5.

Unit Summary	NJSLS Standards	Essential Questions
Unit 6: In this unit, students will focus on extending the number names and counting to 100. The students will learn about verbal and written patterns in the counting sequence, and they count by ones, by tens, and both tens and ones beginning from any	**K.CC.A.1** Count to 100 by ones and by tens. **K.CC.A.2** Count forward beginning from a given number within the known sequence (instead of having to begin at 1)	How can numbers to 100 be counted using a hundred chart?

number. (Topics 11)		
Learning Goals: • Students will be able to know number names and the count sequence.		
Vocabulary: column, ones, pattern, tens, decade, hundred chart		
Fluency Expectations: K.OA.A.5 Demonstrate fluency for addition and subtraction within 5. Unit 6 Student Goals: I will be able to add sums to 5. I will be able to subtract with differences up to 5.		
Unit Summary	NJSLS Standards	Essential Questions
Unit 7: In this unit, students will begin exploring geometric shapes by identifying the names of the shapes, recognizing the difference between two and three-dimensional, and proximity to the relative position to their environment. Students will analyze and compare attributes of shapes such as size and orientations. Students will be introduced to measurement by exploring length, height, capacity, and weight. Students will describe objects by the measureable attribute and that objects can have more than one measurable attribute. (Topics 12-14)	**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"). **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). **K.G.B.5** Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and	How can solid figures be named, described, compared, and composed? How can objects be compared by length, height, capacity, and weight?

Howell Township Public Schools
Kindergarten Curriculum Map 2017-2018

	drawing shapes. **K.G.B.6** Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	
Learning Goals: • Students will be able to identify and describe shapes. • Students will be able to analyze, compare, create, and compose shapes. • Students will be able to describe and compare measurable attributes.		
Vocabulary: sort, two-dimensional shape, three-dimensional, circle, side, triangle, vertex, vertices, rectangle, square, hexagon, cone, cube, cylinder, sphere, above, behind, below, beside, in front of, next to, roll, slide, stack, flat surface,		
Fluency Expectations: K.OA.A.5 Demonstrate fluency for addition and subtraction within 5. Unit 7 Student Goals: I will be able to add sums to 5. I will be able to subtract with differences up to 5.		
Step-up to 1st Grade		