

## KINDERGARTEN MATH UNIT

Unit 1 – Number Names and Count Sequences		
<p><b>Established Goals:</b> Standards</p> <p><b><u>Counting &amp; Cardinality</u></b></p> <p><b>K.CC.1</b> Count by ones up to 10</p> <p><b>K.CC.3</b> Represent the number of objects by the correct numeral up to 5 (using zero to represent no objects).</p> <p><b>K.CC.4</b></p> <ul style="list-style-type: none"> <li>• Assign an ascending number name for each object in a group.</li> <li>• For objects named in the standard order, identify the last number named as the number of counted objects in the set (regardless of the order they are counted).</li> <li>• Know the next number name in counting is always one greater than the previous number</li> </ul> <p><b>K.CC.5</b> Answer “how many?” questions about groups of objects up to 10 when arranged in a line or up to 5 in a scattered configuration.</p> <p><b><u>Operations &amp; Algebraic Thinking</u></b></p> <p><b>K.OA.1</b> Create addition and subtraction events with objects (or make drawings) to represent a sum (putting together) or a difference (taking from) up to 10.</p> <p><b><u>Mathematical Practice Standards</u></b></p> <p>Use appropriate tools strategically.</p> <p>Attend to precision.</p> <p>Look for and make use of structure.</p> <p>Look for and express regularity in repeated reasoning.</p>	<b>Transfer</b>	
	<p><i>Students will be able to:</i></p> <p>Uses a variety of counting strategies to correctly identify how many are in set and model number stories.</p>	
	<b>Meaning</b>	
	ENDURING UNDERSTANDING	ESSENTIAL QUESTIONS
	<ul style="list-style-type: none"> <li>• Numbers have names and we can use them to count objects.</li> <li>• Number names allow us to count in order and tell us how many objects are in groups.</li> <li>• The last number counted in a sequence represents the number of objects in a set.</li> <li>• Adding is putting together and making more; subtracting is taking groups apart and making less.</li> <li>• Forming numbers correctly is useful in representing the quantity counted.</li> </ul>	<ul style="list-style-type: none"> <li>• Why do we count?</li> <li>• What do the names of numbers mean?</li> <li>• How can we accurately count and keep track of quantities up to 10?</li> <li>• What happens when we combine groups and what happens when we take groups apart?</li> </ul>
	<b>Acquisition</b>	
	KNOWLEDGE	SKILLS
	<i>Students will know how to...</i>	<i>Students will be skilled at...</i>
	<ul style="list-style-type: none"> <li>• Numerals represent numbers and have many uses.</li> <li>• Numbers are in order.</li> <li>• The last number counted in a sequence represents the number of objects in a set.</li> <li>• You can add more or take away from a set of objects.</li> <li>• Count by ones to 10.</li> <li>• Identify the numbers up to 10.</li> <li>• Adding means putting together and making more.</li> <li>• Subtracting is taking apart and making less.</li> <li>• When counting, the next number is always one</li> </ul>	<ul style="list-style-type: none"> <li>• Count a group of objects up to 10 when arranged in a line.</li> <li>• Count a group of objects up to 5 when in a scattered configuration.</li> <li>• Add more objects or draw more objects to a given set and tell me how many are now in the set with the sum not being greater than 10.</li> <li>• Take away objects or cross out objects from a set and tell how many are now in the set.</li> </ul>

	greater than the previous.	<ul style="list-style-type: none"> <li>When given a number or a set of objects, students will be able to tell you the number that is one greater.</li> <li>Write numbers up to 5 correctly.</li> </ul>
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Vocabulary	Instruction and Pacing (suggested order to teach)	
zero, one, two, three, four, five, six, seven, eight, nine, ten, order, count, how many, number, greater, more than, added, less than, take away, left, number story, manipulatives, objects, order, group, set, join, in all	<b>Math Pretest</b>	<b>1-2 Days</b>
	<b>15 Minute Math &amp; Math Routines</b>	<b>3 Days</b>
	<b>Identifying &amp; Counting Numbers 1-5</b>	<b>2 Weeks</b>
	<b>Comparing &amp; Ordering Numbers</b>	<b>2 Weeks</b>
	<b>Working with Numbers 6-10</b>	<b>1 Week</b>
	<b>Benchmark Testing &amp; Reteaching</b>	<b>2 Weeks</b>

Common Misconceptions	Proper Conceptions
Students lose track of what they are counting	Mark or separate items being counted
Students have difficulty identifying the correct numeral after counting a set	Continually say and write numbers 1-5 when counting objects
The same number can look different depending on the manipulative	Larger or smaller manipulatives can show the same amount
Students recite and count going beyond the actual number	Count and recite out loud one object at a time
Zero means nothing	Zero is an empty set

Resources
<p>Common Core Standards, New Jersey Model Curriculum</p> <p>Envisions Math Program Suggested Topics</p> <p>Topic 1 One to Five</p> <p>Topic 2 Comparing &amp; Ordering 1-5</p> <p>Topic 3 Six to Ten</p> <p><a href="https://gradecommoncoremath.wikispaces.hcpss.org/Kindergarten+Home">https://gradecommoncoremath.wikispaces.hcpss.org/Kindergarten+Home</a></p> <p><a href="http://illuminations.nctm.org">http://illuminations.nctm.org</a>, <a href="https://www.illustrativemathematics.org">https://www.illustrativemathematics.org</a></p> <p><b>Additional Resources for ELL Learners</b></p> <p><b>Envisions Spanish Version Digital Path and Printable Resources</b></p> <p><a href="http://www.teach-this.com/esl-games/counting-games">http://www.teach-this.com/esl-games/counting-games</a></p> <p><a href="http://www.njctl.org/courses/math/kindergarten-math/daily-routines/">http://www.njctl.org/courses/math/kindergarten-math/daily-routines/</a></p> <p><a href="http://www.njctl.org/courses/math/kindergarten-math/counting-and-cardinality/">http://www.njctl.org/courses/math/kindergarten-math/counting-and-cardinality/</a></p>

<http://www.state.nj.us/education/modelcurriculum/math/ellscaffolding/ku1.pdf>

### Differentiation and Accommodations

Provide graphic organizers  
Provide additional examples and opportunities for additional problems for repetition  
Provide tutoring opportunities  
Provide retesting opportunities after remediation (up to teacher and district discretion)  
Teach for mastery not test  
Teaching concepts in different modalities  
Adjust pace and homework assignments

### ELL Modifications

- Assess/teach prerequisite skills
- Allow students to count in their native language.
- Write the number words and corresponding numerals. Have children draw objects to illustrate each word.
- Provide students with a variety of materials of various textures to increase tactile learning while counting.
- Children should move objects in a set as they recite the counting sequence.
- Allow students to act out word problems, moving around room as necessary.
- Utilize Envision Spanish Version/Interactive Path and Printable Resources

### **21<sup>st</sup> Century Skills**

Critical Thinking, Creative Thinking, Collaborating, Communicating, and Technology Literacy

### **Instructional Strategies**

Fairfield Township School recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:

- Communicating with students
- Using questioning and discussion techniques
- Engaging students in learning
- Using assessment in instruction
- Demonstrating Flexibility and Responsiveness

### **Interdisciplinary Connections**

ELA, Science, and Technology

## Performance Task

Small group-Teacher uses dot cards from 0 to 10. Teacher can prepare number lines by writing 1 to 10 on sentence strips.

Part 1- Put cards face down. Students will flip over cards and say the number.

Part 2- Students will place numbers in order on the sentence strip from 0 to 10.

Instruct students- Your friend mixed up all the cards. Your goal is to put them in order. Your job as a Math Master is to say the number and put the number correctly on the number line. The challenge involves you to make sure your numbers are in order from 0 to 10. You will create a number line in order from 0 to 10 and glue them down so your friend will not lose their cards again.

### Rubric

3-Students will have all numbers correct in order from 0 to 10.

2-Students will have 6, 7, or 8 numbers in the correct spot.

1-Students will have 3, 4, or 5 numbers in the correct spot.

0-Students will have 0, 1, or 2 numbers in the correct spot.

# ASSESSMENTS

## Suggested Formative Assessment

Problem of the Day

Lesson Quizzes

Exit Ticket

Anecdotal Records (Topic Observation Checklist)

**Suggested Summative Assessment** - Grade Level developed Unit/Envisions Topic Tests/ Ed Connect Tests/ State Unit Benchmark/Performance Task