



BOE Approved 8/18

# Cliffside Park Public Schools

# Kindergarten

## Mathematics

**Topic Name: Topic 2: Compare Numbers 0 to 5**  
**Topic 3: Numbers 6 to 10**

**Resource: enVision Math 2.0, Pearson, 2016**

**Duration: October**

**Topic 2 (8 days)**

**Topic 3 (10 days)**

## Enduring Understandings

### Topic 2

- Two groups of object are equal in number is they can be directly matched, one-to-one, with no extras in either group.
- Two groups of objects can be directly compared using a match process.
- Two sets of objects can be compared by number using a counting strategies, which is a more efficient method than matching.
- Two number can be compared by using the number sequence. A number represents a greater quantity than another if it is later in the sequence.
- Good math thinkers you math they know to show and solve problems.

### Topic 3

- Counting tell how many are in a group, regardless of their arrangement or the order in which they were counted. The last number said when counting the group is the total.
- Counting it cumulative.
- There is a unique symbol that goes with each number word.
- There is more than one way to show a number.



- Good math thinkers look for patterns in math to help them solve problems.

**Essential Questions**

**Topic 2**

- How can you tell that two groups of objects are equal in number?
- How can you tell that one group is greater in number than another?
- How can you tell that one group is less in number than another?
- How can counting help you compare two groups of objects?
- How can you compare two numbers using the counting sequence?
- How can you show that is group is greater/less in number than another?

**Topic 3**

- Why do we count?
- Is there another way to show how many besides drawing pictures of the objects?
- How does counting tell how many are in a group?
- Why does every number look different?
- How do you count?
- How can you tell how many without drawing a picture or using objects?
- How can you show a number in more than one way?
- How does finding the pattern help you find all the ways to show a number?

**Focus of Standards**

| Student Outcomes  | Skills   | Assessments   | Resources  |
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| <p><b>Topic 2</b></p> <ul style="list-style-type: none"> <li>• I can compare groups to see whether they are equal by matching.</li> <li>• I can tell whether one group is greater in</li> </ul> | <ul style="list-style-type: none"> <li>• Solving problems</li> <li>• Understanding concepts</li> </ul> | <p><b>Formative</b></p> <ul style="list-style-type: none"> <li>• Diagnostic assessment</li> <li>• Exit tickets</li> </ul> | <p><b>Envision Math 2.0</b></p> <p><b>Digital</b></p> <ul style="list-style-type: none"> <li>• <i>Student and</i></li> </ul> |



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| <p>number than another group.</p> <ul style="list-style-type: none"><li>• I can tell whether one group is less in number than another group.</li><li>• I can compare groups by counting.</li><li>• I can compare numbers.</li><li>• I can use objects drawings and numbers to compare numbers.</li></ul> <p><b>Topic 3</b></p> <ul style="list-style-type: none"><li>• I can count to the numbers 6 and 7.</li><li>• I can read and write the numbers 6 and 7.</li><li>• I can count to the numbers 8 and 9.</li><li>• I can read and write the numbers 8 and 9.</li><li>• I can count to the number 10.</li><li>• I can read and write the number 10.</li><li>• I can show how to make a group of 10.</li><li>• I can use counting patterns to solve a problem.</li></ul> | <ul style="list-style-type: none"><li>• Reasoning</li></ul> | <ul style="list-style-type: none"><li>• Round robin group work</li><li>• Analysis of homework</li><li>• Class polls<ul style="list-style-type: none"><li>○ Show of hands: 1 for all set, 2 for just ok, 3 for help</li></ul></li><li>• One thing I learned/One thing I need work on</li></ul> <p><b>Summative</b></p> <ul style="list-style-type: none"><li>• End topic tests</li><li>• Post group topic</li><li>• EOY tests</li><li>• SGO tests</li></ul> <p><b>Benchmark</b></p> <ul style="list-style-type: none"><li>• Diagnostic Assessment</li><li>• Pearson benchmark tests</li></ul> <p><b>Alternative</b></p> <ul style="list-style-type: none"><li>• Math diagnosis and intervention system 2.0</li><li>• Reteaching Set</li><li>• Online Learning<ul style="list-style-type: none"><li>○ Games</li></ul></li><li>• Higher Order</li></ul> | <p><i>Teacher eTexts</i></p> <ul style="list-style-type: none"><li>• <i>Interactive Math story</i></li><li>• <i>Home-School Connection</i></li></ul> <p><b>Classroom Math Materials</b></p> <ul style="list-style-type: none"><li>• Counters</li><li>• Small blocks</li><li>• Connecting cubes</li><li>• Piece of string</li><li>• Number cards 0 - 10</li></ul> |
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|  |  | Thinking Problems <ul style="list-style-type: none"> <li>• Leveled homework and practice</li> <li>• Center games</li> <li>• One on one conferencing</li> </ul> |  |
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| <p><b>Vocabulary</b><br/> <b>Topic 2</b><br/>         Compare, equal, group, same number as, greater than, less than, model</p> <p><b>Topic 3</b><br/>         Six, seven, eight, nine, ten</p> |
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| <p><b>NJ Student Learning Standards: Math</b></p> <p><b>Topic 2</b><br/> <b>Counting and Cardinality</b><br/> <b>K.CC.C.6</b> 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.<br/> <b>K.CC.C.7</b> Compare two numbers between 1 and 10 presented as written numerals.</p> <p><b>Topic 3</b><br/> <b>Counting and Cardinality</b><br/> <b>K.CC.B.4a</b> Understand the relationship between numbers and quantities; connect counting to cardinality. 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.<br/> <b>K.CC.A.3</b> 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).<br/> <b>K.CC.B.4</b> Understand the relationship between numbers and quantities; connect counting to cardinality<br/> <b>K.CC.B.4a</b> Understand the relationship between numbers and quantities; connect counting to cardinality. 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.<br/> <b>K.CC.B.4b</b> Understand the relationship between numbers and quantities; connect counting to cardinality. 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.</p> |
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**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.

### **Operations and Algebraic Thinking**

**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  $5 = 4 + 1$ ).

### **Standards for Mathematical Practice**

**MP1. Make sense of problems and persevere in solving them.**

**MP2. Reason abstractly and quantitatively.**

**MP3. Construct viable arguments and critique the reasoning of others.**

**MP4. Model with mathematics.**

**MP5. Use appropriate tools strategically.**

**MP6. Attend to precision.**

**MP7. Look for and make use of structure.**

**MP8. Look for and express regularity in repeated reasoning.**

### **Career Ready Practices**

**CRP1.** Act as a responsible and contributing citizen and employee.

**CRP2.** Apply appropriate academic and technical skills.

**CRP3.** Attend to personal health and financial well-being.

**CRP4. Communicate clearly and effectively and with reason.**

**CRP5.** Consider the environmental, social and economic impacts of decisions.

**CRP6.** Demonstrate creativity and innovation.

**CRP7.** Employ valid and reliable research strategies.

**CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.**

**CRP9.** Model integrity, ethical leadership and effective management.

**CRP10.** Plan education and career paths aligned to personal goals.

**CRP11.** Use technology to enhance productivity.

**CRP12.** Work productively in teams while using cultural global competence.

### **NJSLS Technology Standards**

#### **8.1 Educational Technology**



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**E: Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.**

8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.

**8.2 Technology Education, Engineering, Design, and Computational Thinking**

**E. Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.**

8.2.2.E.1 List and demonstrate the steps to an everyday task.

## Interdisciplinary Connections

NJSLS for ELA and Science are introduced, developed, and practiced in the context of learning math content and engaging in mathematical practices.

### ELA

- RI.K.3. With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
- NJSLSA.SL2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
- L.K.6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

### Science

- K-PS2-1 Scientists use different ways to study the world.
- K-LS1-1 Scientists look for patterns and order when making observations about the world.

## NJSLS: 21st Century Life and Careers

**Key Subjects and 21st Century:** Themes Mastery of key subjects and 21st century themes is essential to student success. Key subjects include English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government and civics. In addition, schools must promote an understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into key subjects:

- Relate the following standards to careers that involve mathematics

9.2.4.A.1 Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals

9.2.4.A.4 Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.



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| <b>Integrated Differentiation/Accommodations/Modifications</b><br><i>(Alternate Modes of Instruction and Support)</i>   |   |  |
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| <b>Modifications to Support Gifted and Talented Students</b>  | <b>Modifications to Support English Language Learners</b>   | <b>Modifications to Support Our Learners (Students with IEPs/504s and At-Risk Learners)</b>  |
| <p>Provide appropriate challenge for wide ranging skills and development areas.</p> <p>Participate in inquiry and project-based learning units of study</p> <p>Assigning roles within partnerships</p> <p>Differentiated supports: content, process, product, environment</p> | <p>Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)</p> <p>Pair visual prompts with verbal presentations</p> <p>Front load and immerse students in literacy and language experiences related to content</p> <p>Provide students with visual models, sentence stems, concrete objects, and hands-on materials.</p> <p>Model procedures for life skills.</p> <p>Collaboration between ELL and general education teacher to maximize learning</p> | <p>Review student individual educational plan and/or 504 plan.</p> <p>Establish procedures for accommodations and modifications for assessments as per IEP/504.</p> <p>Establish procedures for modification of classwork and homework as per IEP/504.</p> <p>Modify classroom environment to support academic and physical needs of the students as per IEP/504.</p> <p>Provide appropriate accommodations, instructional adaptations, and/or modifications as determined by the IEP or 504 team.</p> <p>Differentiation through content, process, product, environment</p> <p>Provide Title I services to students not meeting academic standards in ELA and/or Math.</p> <p>Provide instructional adaptations and interventions in the general education classroom.</p> <p>Modify classroom environment to support student needs.</p> <p>Differentiated instruction</p> |



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|   |  | Basic Skills<br>Intensive individual intervention |
| <b>Sources</b><br>New Jersey Student Learning Standards (2016) <a href="http://www.state.nj.us/education/cccs/2016/math/standards.pdf">http://www.state.nj.us/education/cccs/2016/math/standards.pdf</a><br>New Jersey Student Learning Standards: Technology (2014) - <a href="http://www.state.nj.us/education/cccs/2014/tech/8.pdf">http://www.state.nj.us/education/cccs/2014/tech/8.pdf</a><br>New Jersey Student Learning Standards: ELA (2014) - <a href="https://www.state.nj.us/education/cccs/2016/ela/k.pdf">https://www.state.nj.us/education/cccs/2016/ela/k.pdf</a><br>New Jersey Science and Engineering Practices - <a href="https://www.state.nj.us/education/aps/cccs/science/resources/QRk2.pdf">https://www.state.nj.us/education/aps/cccs/science/resources/QRk2.pdf</a><br>New Jersey Career Awareness, Exploration, and Preparation - <a href="https://www.state.nj.us/education/cccs/2014/career/92.pdf">https://www.state.nj.us/education/cccs/2014/career/92.pdf</a><br>Pearson enVision 2.0 (2016) <a href="https://www.pearsonrealize.com/index.html#/">https://www.pearsonrealize.com/index.html#/</a> |  |   |