



BOE Approved 8/18

Cliffside Park Public Schools

Kindergarten

Mathematics

Topic Name: Topic 4: Compare Numbers 0 to 10

Topic 5: Classify and Count Data

Resource: enVision Math 2.0, Pearson, 2016

Duration: November

Topic 4 (8 days)

Topic 5 (6 days)

Enduring Understandings

Topic 4

- In comparing two numbers, the group with more objects is greater in number than the other. The group with less objects is fewer in number than the other.
- In a pair of numbers the number that tells more is greater. The number that tells fewer is less.
- Two groups can be compared by counting the number of objects in each group and finding the position of each number within the counting sequence.
- Two numbers can be compared by finding the position of each number within the counting sequence.
- There is a specific order to a set of whole numbers.
- Good math thinkers look for things that repeat in a problem. They use what they learn from one problem to help solve other problems.

Topic 5

- Objects can be classified into two categories, based on whether they have or do not have a particular attribute.



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- Objects can be classified into two categories, based on whether they have or do not have a particular attribute. Each group can then be counted.
- Data can be sorted and compared in a variety of ways. Objects can be sorted by putting those with a particular attribute in one group and those without that attribute in another group. Then the groups can be counted and the categories can be compared by count.
- Good math thinkers use math to explain why they are right. They can talk about the math that others do too.

Essential Questions

Topic 4

- How can you compare two groups of objects?
- How can you tell that a number is greater than another number?
- How can you compare two groups?
- How can you compare two numbers by counting?
- How can you find the number that comes before or after another number?
- How can repeated reasoning help you solve a problem in which one more object is added to a group?

Topic 5

- How can you put objects into categories?
- How can you find the number of creatures that belong to each category or group?
- How do you know which category has more?
- How can you decide and explain whether someone's answer makes sense?



Focus of Standards			
Student Outcomes	Skills	Assessments	Resources
<p>Topic 4</p> <ul style="list-style-type: none"> • I can compare groups up to 10 numbers, • I can compare groups of numbers using numerals to 10. • I can compare groups of numbers by counting. • I can compare two numbers, • I can count groups of numbers to 10. • I can repeat something from one problem to help solve another problem. <p>Topic 5</p> <ul style="list-style-type: none"> • I can classify objects into categories and tell why they are in each category, • I can count how many objects are in different categories. • I can use counting to compare how many objects are in categories, • I can tell whether the way objects have been sorted, counted, or compared makes sense. 	<ul style="list-style-type: none"> • Solving problems • Understanding concepts • Reasoning 	<p>Formative</p> <ul style="list-style-type: none"> • Diagnostic assessment • Exit tickets • Round robin group work • Analysis of homework • Class polls <ul style="list-style-type: none"> ○ Show of hands: 1 for all set, 2 for just ok, 3 for help • One thing I learned/One thing I need work on <p>Summative</p> <ul style="list-style-type: none"> • End topic tests • Post group topic • EOY tests • SGO tests <p>Benchmark</p> <ul style="list-style-type: none"> • Diagnostic Assessment • Pearson benchmark tests 	<p>Envision Math 2.0</p> <p>Digital</p> <ul style="list-style-type: none"> • <i>Student and Teacher eTexts</i> • <i>Interactive Math story</i> • <i>Home-School Connection</i> <p>Classroom Math Materials</p> <ul style="list-style-type: none"> • Counters • Ten-frames • Number cards 0 - 10 • Connecting cubes • Part-part-whole mat



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		<p>Alternative</p> <ul style="list-style-type: none"> ● Math diagnosis and intervention system 2.0 ● Reteaching Set ● Online Learning <ul style="list-style-type: none"> ○ Games ● Higher Order Thinking Problems ● Leveled homework and practice ● Center games ● One on one conferencing 	
<p>Vocabulary Topic 4 None Topic 5 Category, classify, chart, tally mark</p>			
<p>NJ Student Learning Standards: Math</p> <p>Topic 4 Counting and Cardinality K.CC.A.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1). K.CC.B.4c Understand the relationship between numbers and quantities; connect counting to cardinality. Understand that each successive number name refers to a quantity that is one larger. 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. K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.</p> <p>Topic 5</p>			



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Counting and Cardinality

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.

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

Measurement and Data

K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.3

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.



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NJSLS Technology Standards

8.1 Educational Technology

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



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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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Integrated Differentiation/Accommodations/Modifications <i>(Alternate Modes of Instruction and Support)</i>		
Modifications to Support Gifted and Talented Students	Modifications to Support English Language Learners	Modifications to Support Our Learners (Students with IEPs/504s and At-Risk Learners)
<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>



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