



BOE Approved 8/18

# Cliffside Park Public Schools

# Grade 2

## Mathematics

**Topic Name:** Topic 1: Fluently Add and Subtract Within 20

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

**Duration:** September (12 days)

### Enduring Understanding

- Counting on is a strategy that can be used to find sums. The order of the addends does not change the sum.
- Basic addition facts that are near doubles can be found using a related doubles fact.
- Some addition facts can be found by changing to an equivalent fact with 10.
- Patterns in a 0-10 addition facts table are useful for adding numbers and for developing mental math strategies and number sense.
- A number line is a tool you can use to help you count on or count back to subtract.
- Addition and subtraction have an inverse relationship. The inverse relationship between addition and subtraction can be used to find subtraction facts; every subtraction fact has a related addition fact.
- Some subtraction facts can be simplified by making use of the numbers' relationship to 10.
- The addends determine efficient strategies, such as making 10 or using double facts, for finding additional facts. "Think of a related addition fact" is an efficient strategy for finding a subtraction fact.
- Objects, diagrams, and equations can help you solve different types of word problems.
- Good math thinkers use math to explain why they are right. They can talk about the math others do, too.

### Essential Questions

- What are strategies for finding addition and subtraction facts?

### Focus of Standards

Student Outcomes	Skills	Assessments	Resources
<b>Topic 1</b> <ul style="list-style-type: none"> <li>• I can count on to add and add in any order.</li> </ul>			



<ul style="list-style-type: none"><li>• I can use doubles and near doubles to add quickly and accurately.</li><li>• I can make a 10 to help me add quickly and accurately.</li><li>• I can use the patterns on an addition facts table to help me remember the addition facts.</li><li>• I can count on and count back on a number line to subtract.</li><li>• I can use addition to help me subtract quickly and accurately.</li><li>• I can make a 10 to help me subtract quickly and accurately.</li><li>• I can add and subtract quickly and accurately using mental math strategies.</li><li>• I can use addition and subtraction to solve word problems.</li><li>• I can use pictures, numbers, and words to explain why my thinking and work are correct.</li></ul>	<ul style="list-style-type: none"><li>• Solving problems</li><li>• Understanding concepts</li><li>• Reasoning</li></ul>	<p><b>Formative</b></p> <ul style="list-style-type: none"><li>• Diagnostic assessment</li><li>• Exit tickets</li><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 Thinking Problems</li><li>• Leveled homework and</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 Teacher eTexts</i></li><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>• Connecting cubes</li><li>• Counters</li><li>• Addition tables</li><li>• Number lines</li><li>• Double-Ten Frame Mat</li><li>• Sticky notes</li></ul>
--	---	--	--



BOE Approved 8/18

## Cliffside Park Public Schools

## Grade 2

		<ul style="list-style-type: none"><li>practice</li><li>• Center games</li><li>• One on one conferencing</li></ul>	
<b>Vocabulary</b> equation, addends, sum, doubles, near doubles, difference			
<b>NJSLS Math Standards</b> <b>Operations and Algebraic Thinking</b> <b>2.OA.A.1</b> - Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. <b>2.OA.B.2</b> - Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers			
<b>Standards for Mathematical Practice</b> <b>MP1.</b> Make sense of problems and persevere in solving them. <b>MP2.</b> Reason abstractly and quantitatively. <b>MP3.</b> Construct viable arguments and critique the reasoning of others. <b>MP4.</b> Model with mathematics. <b>MP5.</b> Use appropriate tools strategically. <b>MP6.</b> Attend to precision. <b>MP7.</b> Look for and make use of structure. <b>MP8.</b> Look for and express regularity in repeated reasoning.			
<b>Career Ready Practices</b> <b>CRP1.</b> Act as a responsible and contributing citizen and employee. <b>CRP2.</b> Apply appropriate academic and technical skills. <b>CRP3.</b> Attend to personal health and financial well-being. <b>CRP4. Communicate clearly and effectively and with reason.</b> <b>CRP5.</b> Consider the environmental, social and economic impacts of decisions. <b>CRP6.</b> Demonstrate creativity and innovation. <b>CRP7.</b> Employ valid and reliable research strategies.			



BOE Approved 8/18

## Cliffside Park Public Schools

## Grade 2

**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**

**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.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
- RI.2.3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- RI.2.4. Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- RI.2.5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

#### **Science**

- 2-LS4-1 Scientists look for patterns and order when making observations about the world.



BOE Approved 8/18

## Cliffside Park Public Schools

## Grade 2

- 2-ESS2-1 Compare multiple solutions to a problem.

### **NJ: 2014 SLS: 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:

- Global Awareness
- Financial, Economic, Business and Entrepreneurial Literacy

9.1.4.A.2 Identify potential sources of income

9.1.4.C.5 Determine the relationship among income, expense and interest

9.1.4.D.2 Explain what it means to “invest”.



BOE Approved 8/18

# Cliffside Park Public Schools

# Grade 2

<b>Integrated Differentiation/Accommodations/Modifications</b> <i>(Alternate Modes of Instruction and Support)</i>		
<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>



BOE Approved 8/18

## Cliffside Park Public Schools

## Grade 2

		Basic Skills
		Intensive individual intervention
<b>Sources</b> 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> 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> New Jersey Student Learning Standards: ELA (2014) - <a href="https://www.state.nj.us/education/cccs/2016/ela/g01.pdf">https://www.state.nj.us/education/cccs/2016/ela/g01.pdf</a> 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> 21st Century Life and Careers: <a href="https://www.state.nj.us/education/cccs/2014/career/91.pdf">https://www.state.nj.us/education/cccs/2014/career/91.pdf</a> Pearson enVision 2.0 (2016) <a href="https://www.pearsonrealize.com/index.html#/">https://www.pearsonrealize.com/index.html#/</a>		