



BOE Approved 8/18

Cliffside Park Public Schools

Grade 5

Mathematics

Topic Name: Step Up to Grade 6

Resource: enVision Math 2.0, Pearson, 2016

Duration: June (12 days)

Enduring Understandings

Step Up to Grade 6

- Learners are engaged by connecting prior knowledge to new ideas.
- Integers are the counting numbers, their opposites and zero.
- A number to the right of another on the number line is the greater number.
- Ordered points are rational numbers can be plotted on the coordinate plane.
- Ratios can be used to describe the relationship between two quantities where for every x units of one quantity, there are y units of another quantity.
- A rate is a special type of ratio that compares two quantities with different units of measure.
- A percent is a rate in which the first term is compared to one-hundred. The percent is the number of hundredths that represent the part of the whole.
- Fractions, decimals and percents are three ways to show parts of a whole.
- Visual models, such as number lines and area models, and equations can be used to represent and solve problems involving division of fractions.
- Dividing a whole number by a fraction is equivalent to multiplying the whole number by the fraction's reciprocal.
- The formula for the area of a parallelogram, $Area = bh$, can be derived from the formula for the area of a rectangle.

Essential Question



<p>Step Up to Grade 6</p> <ul style="list-style-type: none"> • How can I apply what I learned to future math concepts?
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Focus of Standards

Student Outcomes	Skills	Assessments	Resources
<p>Step Up to Grade 6</p> <ul style="list-style-type: none"> • I can recognize positive numbers and their opposites. • I can compare and order integers. • I can graph rational numbers on a coordinate plane. • I can use a ratio to describe the relationship between two quantities. • I can explain what a rate is and solve problems involving rates. • I can represent and find the percent of a whole. • I can write a value as an equivalent fraction, decimal, and percent. • I can use models to divide with fractions. • I can change division by a fraction to an equivalent expression that uses multiplication. 	<ul style="list-style-type: none"> • Solving addition, subtraction, multiplication and division problems • Construct math arguments in order to solve addition and subtraction problems. • Understanding concepts • Reasoning 	<p>Formative</p> <ul style="list-style-type: none"> • Diagnostic assessment • Study Island • Kahoot! • Exit tickets • Round Robin group work <ul style="list-style-type: none"> ◦ Open ended questions ◦ May/may not be game activity • Analysis of student homework • Class polls <ul style="list-style-type: none"> ◦ Show of hands: 1 finger ok, 2 fingers need help, 3 fingers lost • One thing I learned/One thing I need work on 	<p>Texts:</p> <ul style="list-style-type: none"> • enVision math 2.0 <p>Digital:</p> <ul style="list-style-type: none"> • Student/Teacher eText • Interactive math story • Home-school connection <p>Classroom Math Materials</p> <ul style="list-style-type: none"> • Coordinate grid



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		<p>Summative</p> <ul style="list-style-type: none">● End topic tests● Group topic assessment● EOY test● SGO tests <p>Benchmark</p> <ul style="list-style-type: none">● Diagnostic assessment● Pearson benchmark tests● PARCC test <p>Alternative</p> <ul style="list-style-type: none">● Work paper from tests will also be graded for additional points if reasoning is clear and correct, even if answer is wrong● One on one conferencing● Oral presentation on math strand● Weekly time capsule:summary of what was learned● Topic Pattern search: find the thread in topic● Crosswords with math vocab	
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Vocabulary

Percent, coordinate plane, x-axis, y-axis, quadrant, ordered pair, origin, ratio, term, rate, unit rate, percent

NJ Student Learning Standards: Math

Step Up to Grade 6

6.NS.C.5 Apply and extend previous understandings of numbers to the system of rational numbers. 5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

6.NS.C.6a 6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.

a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.

6.NS.C.6b Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.

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: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.

8.1.5.A.3 Use a graphic organizer to organize information about a problem or issue.

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 Standards

- RI.5.1. Quote accurately from a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
- RI.5.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
- RI.5.7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently

Science

- 5-LS2-1 Develop a model to describe a phenomena.
- 5-PS2-1 Support an argument with evidence, data, and/or a model.



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- 5-ESS2-2 Describe and graph quantities such as area and volume to address scientific questions.

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:

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

9.1.8.B.7 Construct a budget to save for long-term, short-term, and charitable goals

9.1.8.C.2 Compare and contrast credit cards and debit cards and the advantages and disadvantages of using each.

9.1.8.C.5 Calculate the cost of borrowing various amounts of money using different types of credit (e.g., credit cards, installment loans, and mortgages) and compare the interest rates associated with each.



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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> <p>Differentiated instruction</p>



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		Basic Skills
		Intensive individual intervention
Sources New Jersey Student Learning Standards (2016) http://www.state.nj.us/education/cccs/2016/math/standards.pdf New Jersey Student Learning Standards: Technology (2014) - http://www.state.nj.us/education/cccs/2014/tech/8.pdf New Jersey Student Learning Standards: ELA (2014) - https://www.state.nj.us/education/cccs/2016/ela/g05.pdf New Jersey Science and Engineering Practices - https://www.state.nj.us/education/aps/cccs/science/resources/QR35.pdf New Jersey 21st Century Life and Careers 9.1 - https://www.state.nj.us/education/cccs/2014/career/91.pdf Pearson enVision 2.0 (2016) https://www.pearsonrealize.com/index.html#/		