



BOE Approved 8/18

Cliffside Park Public Schools

Grade 3

Mathematics

Topic Name: Topic 5: Fluently Multiply and Divide Within 100

Resource: enVision Math 2.0, Pearson, 2016

Duration: November: Topic 5 (10 days)

Enduring Understanding

- There are patterns in the factors and the products for multiplication facts.
- Any division problem can be thought of as a missing factor multiplication problem.
- Strategies and reasoning can be used to recall multiplication and division basic facts.
- Strategies such as using properties of operations, drawings, and skip counting can be used to multiply.
- Some real-world problems can be represented and solved using different multiplication and division strategies.
- Some real-world problems that involve equal groups can be solved using multiplication.
- Some real-world problems that involve equal groups can be solved using division.
- Good math thinkers look for relationships in math to help solve problems.

Essential Questions

- What are strategies to solve multiplication and division facts?
- How can you explain patterns in the multiplication chart?
- How can you use a multiplication table to solve division problems?
- How can you find multiplication and division basic facts?
- How can you solve word problems using multiplication and division?
- How can you describe a multiplication fact?
- How can you use the structure of mathematics to solve a problem?



Focus of Standards

Student Outcomes	Skills	Assessments	Resources
<p>Topic 5</p> <ul style="list-style-type: none"> I can use structure and properties to explain patterns for multiplication facts. I can use reasoning and the relationship between multiplication and division to find basic facts. I can use different strategies to solve multiplication problems. I can use strategies to solve word problems that involve multiplication and division. I can write and solve math stories for multiplication equations. I can write and solve math stories for division equations. I can use the structure of multiplication and division to compare expressions. 	<ul style="list-style-type: none"> Solving addition, subtraction, multiplication, and division problems Understanding concepts Reasoning 	<p>Formative</p> <ul style="list-style-type: none"> Diagnostic assessment Study Island 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>Summative</p> <ul style="list-style-type: none"> End topic tests Group topic 	<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"> Multiplication table Colored pencils Two-color counters



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		<ul style="list-style-type: none">assessment<ul style="list-style-type: none">• EOY test• SGO testsBenchmark<ul style="list-style-type: none">• Diagnostic assessment• Pearson benchmark tests• PARCC testAlternative<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

Topic 5

No new vocabulary

NJ Student Learning Standards: Math

Topic 5

3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

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.



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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 and Activities

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

ELA Standards

- RL.3.1. Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
- RI.3.3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.
- RI.3.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

Science

- 3-PS2-2 Science findings are based on recognizing patterns.
- 3-LS2-1 Construct an argument with data, evidence and/or a model.
- 3-LS3-2 Use evidence (eg., observations, patterns) to support an explanation.
- 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

NJSLS: 21st Century Life and Careers



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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”.



Integrated Differentiation/Accommodations/Modifications for Mathematics <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> <p>Basic Skills</p>



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		Intensive individual intervention
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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/g03.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#/#/](https://www.pearsonrealize.com/index.html#/)