5 Math Unit 08: Multiply Fractions

Content Area: **Mathematics**
Course(s):
Time Period: **January**
Length: **3 weeks**
Status: **Published**

Unit Overview

In preparation for Grade 6 work in ratios and proportional relationships, students learn to see products such as 5 x 3 or 1/2 x 3 as expressions that
can be interpreted in terms of a quantity, 3, and a scaling factor, 5 or 1/2. Thus, in addition to knowing that 5 x 3 = 15, they can also say that 5 x 3 is
5 times as big as 3, without evaluating the product. Likewise, they see 1/2 x 3 as half the size of 3.
Grade 5 work with multiplying by unit fractions, and interpreting fractions in terms of division, enables students to see that multiplying a quantity by a
number smaller than 1 produces a smaller quantity, as when the budget of a large state university is multiplied by 1/2, for example.

How can I apply and extend my previous understanding of multiplication to multiply fractions?

Goal
Students will be able to multiply fractions and mixed numbers.

Students will be able to...
multiply fractions and mixed numbers.

Standards

MA.5.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
MA.5.NF.B.5	Interpret multiplication as scaling (resizing), by:
MA.5.NF.B.6	Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Materials

- [EnVision Math](#)
- 8-1 Use Models to Multiply a Whole Number by a Fraction
- 8-2 Use Models to Multiply a Fraction by a Whole Number
- 8-3 Multiply Fractions and Whole Numbers
- 8-4 Use Models to Multiply Two Fractions
- 8-5 Multiply Two Fractions
- 8-6 Area of a Rectangle
- 8-7 Multiply Mixed Numbers
- 8-8 Multiplication as Scaling

- 8-9 Math Practices and Problem Solving: Make Sense and Persevere

- [ST Math](#)
- [Happy Numbers](#)
- [3 Act Lessons](#)
- [Building Fact Fluency Kit](#)
- [Brainingcamp Manipulatives](#)
- [Nearpod Lessons](#)
- [Brainpop Resources](#)
- [Math Diagnosis and Intervention System](#)
- [Online Resources](#)

Technology

- 8.1.5.A.1,2,4 (solve problems, word processing, databases, spreadsheets)
- 8.1.5.F.1 (digital tools to support scientific finding)
- 8.2.5.C.1,2,3 (solve problems, troubleshoot repair tools)

Assessment

Formative Assessment

- Teacher Observation
- Daily Quick Check
- Quizzes
- Exit Tickets

Summative Assessment

- Topic Tests
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

Accommodations & Modifications

Special Education

- Follow IEP Plan which may contain some of the following examples...
- In class/pull out support with special ed teacher
- Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Limit number of questions
- Scribe
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud

- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

Topic 1 Math and Science Project - Using different presentations tools, students will collect different types of paper. Talk about the uses of
paper. Tell how strong each type of paper is.Tell how the paper feels. Tell if the paper can soak up water.

ELA:
NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

Science:
3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

21st Century Life Literacies & Key Skills

Critical Thinking and Problem Solving:

Problem-solving activities starting with the lesson "Solve and Share" and ending with higher order thinking questions that utilize the mathematical practices

Communication and Collaboration:

Throughout the lesson, students are provided with opportunities to discuss their ideas as they investigate mathematical concepts.

Creativity:

Students have opportunities to express their creativity by solving problems their own way, participating in performance tasks, and group projects.

Technology:

Use of iPads, instructional apps, lab materials embedded in lessons. Programs such as BrainPop,Math Reflex, Google Slides are used to support instruction.

Career Ready Practices

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.