

Curriculum Unit  
Title

**The Algebraization of Fraction Division: A Unit to Support  
Lasting Understanding of Concepts and Algorithms in Sixth  
Grade Mathematics**

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**KEY LEARNING, ENDURING UNDERSTANDING, ETC.**

Development of both fraction concepts and procedures are critical to students' future success in mathematics, and fraction division in sixth grade provides students the opportunity to work explicitly with generalization processes that are foundational to algebraic reasoning that develops through middle school and beyond. This unit supplements the unit on fraction division from Illustrative Mathematics to apply fraction division in authentic global contexts, communicate reasoning about fraction division concepts, and investigate patterns that will lead to fluency with the standard fraction division algorithm.

**ESSENTIAL QUESTION(S) for the UNIT**

What does it mean to divide two fractions?  
What algorithm can we apply to divide two fractions, and why does algorithm work?

**CONCEPT A**

Fraction Division to Reason about Our  
Global Community

**CONCEPT B**

Communicating Connections between Fraction  
Division Equations and Visuals

**CONCEPT C**

Generalizing an Algorithm for Fraction  
Division

**ESSENTIAL QUESTIONS A**

How can fraction division help us to reason  
about how our global community compares  
with our local community?

**ESSENTIAL QUESTIONS B**

How can we visualize the structure of fraction  
division problems through visuals? How can we  
visualize fraction division solutions through  
visuals?

**ESSENTIAL QUESTIONS C**

What patterns do we notice in how the  
equation of a fraction division relates to  
its solution? Why do these patterns hold  
true?

**VOCABULARY A**

Community; Sample; Comparison

**VOCABULARY B**

Dividend  
Divisor

**VOCABULARY C**

Algorithm  
Generalization

**ADDITIONAL INFORMATION/MATERIAL/TEXT/FILM/RESOURCES**

Lamon, *Teaching fractions and ratios for understanding*; 100 People Project data; Desmos; supporting video footage for key terms