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Curriculum Units by Fellows of the National Initiative
2026 Volume V: Chemistry of Cooking

26.05.03 Squeeze the Numbers: A Lemonade Math Investigation

Guide for Curriculum Unit 26.05.03, published September 2026
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Squeeze the Numbers: A Lemonade Math Investigation is designed primarily for middle school students and aligns with the Common Core State Standards for Grades 6–7, particularly in Ratios and Proportional Relationships, The Number System, and Expressions and Equations. Through engaging, hands-on cooking and lemonade-based investigations, students develop conceptual understanding of fractions, ratios, proportions, unit rates, measurement, and real-world problem-solving while strengthening mathematical reasoning, communication, precision, and the Standards for Mathematical Practice. Learning progresses from foundational ratio concepts in the Sweetness Scale Experiment to collaborative problem-solving activities such as Ratio Relay and Mix It Up!, before culminating in authentic applications through the Ultimate Lemonade Taste Test, the Lemonade Stand Challenge, and Lemonade Around the World. Along the way, students apply mathematics to recipe scaling, financial literacy, entrepreneurship, and culturally relevant food traditions, helping them recognize the practical value of mathematics in everyday life. Designed to increase engagement and build confidence among students who may struggle with mathematics, the unit uses meaningful, real-world contexts to make abstract concepts more accessible. While developed for middle school classrooms, the activities can be readily modified for upper elementary students by adjusting the complexity of the mathematical tasks, representations, and problem-solving expectations.

(Developed for Pre-Algebra, grade 8; recommended for General Math, grades 6-7

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