

Fraction Face-Off!

Intervention Snapshot | Primary Mathematics Topic Area

WHAT WORKS CLEARINGHOUSE™

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Understanding fractions is a critical skill for success in school and the workforce, and is often necessary for daily life tasks like distributing work or cooking a meal. Fractions are also an important precursor to other math courses, such as algebra. *Fraction Face-Off!* is a supplemental math program designed to support fourth-grade students who need assistance solving fraction problems. Teachers use program materials with individual students or small groups to promote understanding of the magnitude of fractions, to compare two fractions, to put three fractions in order, and to place fractions on a number line. The program includes 36 lessons, each with four activities: a warm-up problem, group work, a speed game to build fluency, and a worksheet to check students' understanding. These lessons are designed to be taught three times a week for 12 weeks.

This What Works Clearinghouse (WWC) report, part of the WWC's Primary Mathematics topic area, explores the effects of *Fraction Face-Off!* on mathematics outcome domains including geometry and measurement, number and operations, and general mathematics achievement. The WWC identified one study of *Fraction Face-Off!*, which meets WWC standards. The evidence presented in this report is from one study of the impact of *Fraction Face-Off!* on a racially and ethnically diverse group of fourth-grade students.

Findings on *Fraction Face-Off!* from the one study that meets WWC standards are shown below. For each outcome reviewed by the WWC, an effectiveness rating, the improvement index, and the number of studies and students that contributed to the findings are presented. The improvement index is a measure of the intervention's effect on an outcome.

What Happens When Students Participate in *Fraction Face-Off!*?

The WWC found that implementing <i>Fraction Face-Off!</i> ?:	Effectiveness rating	Study Findings	Evidence meeting WWC standards (version 4.0)	
		Improvement index (percentile points)	Number of studies	Number of students
May increase student achievement in geometry and measurement	Potentially positive effects	+33	1	212
May increase student achievement in number and operations	Potentially positive effects	+31	1	1,152
May increase student achievement in general mathematics achievement	Potentially positive effects	+24	1	1,152

Note: The improvement index can be interpreted as the expected change in percentile rank for an average comparison group student if that student had received the intervention.

FINDINGS ARE BASED ON:

1 study with 1,152 students in at least 14 elementary schools in 1 school district



STUDENT CHARACTERISTICS:

Free & reduced-price lunch: 88%	Gender: 55% female	Race: 81% minority	Ethnicity: 23% Hispanic
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What Does *Fraction Face-Off!* Cost?

Fraction Face-Off! includes a teacher's manual (\$40) that has all information necessary for implementation and supplemental materials in paper format, including worksheets, flashcards, and templates for manipulatives. Before implementing *Fraction Face-Off!*, teachers may attend up to a week of initial training

at their school. An experienced trainer from Vanderbilt University offers the training, which ranges from \$1,500 to \$1,800 plus travel expenses for the trainer. School districts or schools usually purchase *Fraction Face-Off!* and pay for the teacher training costs.

LEARN MORE



Read more about the *Fraction Face-Off!* intervention and the studies that are summarized here in the [Intervention Report](#). Contact the [Fuchs Research Group](#) at Vanderbilt University for additional information on implementing *Fraction Face-Off!*.