



# Strengthening Foundational Multiplication and Division Skills with SMART lab

A SMART Customer story with *Todd Davis, Bear Creek School, Elizabethtown, PA*



## Motivation

Bear Creek School is a grade 4-6 school located in a rural community outside of Elizabethtown, Pennsylvania containing approximately 930 students. Bear Creek has consistently ranked as one of the top schools in the district maintaining over an 85% overall rating on their school performance review. Todd Davis is a 5th grade STEM teacher at Bear Creek School. This is Todd's 14th year of teaching elementary, with the last 6 focused on STEM. Todd graduated from Penn State University with a degree in Elementary Education & Early Childhood, and has a Master's Degree in Instructional Design, Technology & Online Teaching.

Through an analysis of his Pennsylvania System of School Assessment results and his Study Island Benchmark Assessment results, Todd found his students were weakest in multiplying and dividing computations relating to fractions. After a closer look at his classroom data in relation to the state data, he felt the main cause of this learning gap was due to lack of conceptual understanding and fluency with multiplication and division skills. Therefore, they struggled when applying these skill to fractions.

## Why SMART?

To help his students build a stronger foundation for completing multiplication and division of fractions, Todd decided to use the SMART lab Speed Up activity to begin each class throughout the second semester, focusing solely on multiplication and division. Through the use of Speed Up, he felt his students would be more engaged in the daily activity of practicing and reinforcing basic multiplication facts.

## Teacher and School

Todd Davis, 5th Grade Teacher  
Bear Creek School, Elizabethtown, PA

## Key Challenge

Students struggled with multiplying and dividing fractions because they lacked foundational multiplication and division skills.

## SMART Solution

SMART Board® 800 series  
SMART Learning Suite

## Result

The class average increased 24% from pre- to post-assessment after integrating the SMART lab™ Speed Up activity.

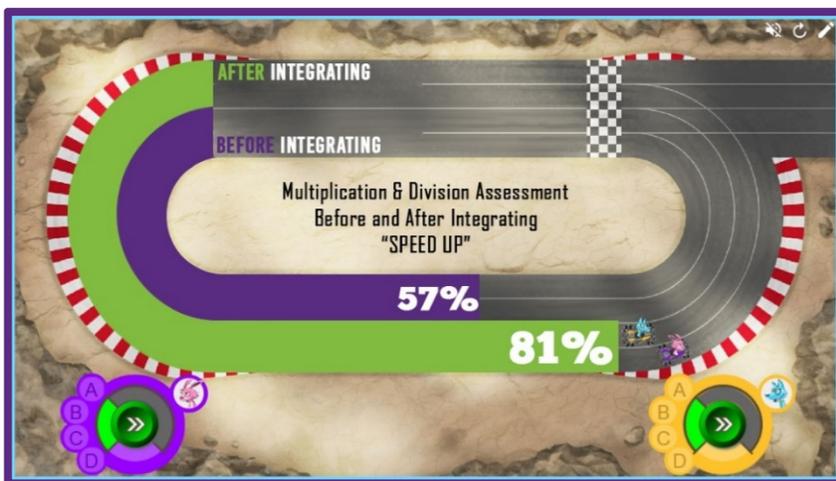
## SMART lab Integration

Todd created a 10-question Speed Up activity to begin each class where four students were selected daily to answer the first question. After answering, students then turned to “tap-in” another student to interact with the SMART Board and answer the next question. This process was repeated until all 10 questions were answered and each student had a chance to answer a question.

## How SMART Solutions Improved Learning Outcomes

Todd could never have imagined the varied benefits he witnessed after incorporating Speed Up into his instruction. Over the course of his study, he noticed students were more engaged in his new Speed Up activities rather than his previous worksheet-based activities. Specifically he noted, “I was surprised to see that even though students were chosen at random, their ability to collaborate and support each other was impressive.” Consequently, he began seeing an increase in students automaticity within a few weeks of introducing this practice.

Before integrating Speed Up into his instruction he gave his students a common pre-assessment where the class average was 57%. By the end of the semester, the class average on the post-assessment was 81%, an increase of 24%. Todd attributes this increase to Speed Up, as this was the singular adjustment to his instruction.



*“Students were excited to see how they fared daily against their classmates, leading to increased focus during our daily warm-up.”*  
— Todd Davis

### About SMART

SMART Technologies Inc. is a world leader in simple and intuitive classroom technology solutions. We are an innovator in software and interactive technologies that enable natural collaboration, helping every student and teacher discover and develop their greatness. To learn more, visit [smarttech.com](http://smarttech.com).

### SMART Technologies

Toll Free 888.42.SMART (U.S./Canada or 800.260.9408 to speak to a sales representative)

[smarttech.com](http://smarttech.com)

For more customer stories visit: [smarttech.com/greatness](http://smarttech.com/greatness)



©2018 SMART Technologies. All rights reserved. SMART Board, SMART Notebook, SMART lab, SMART response, the SMART logo and all SMART taglines and product logos are trade-marks or registered trade-marks of SMART Technologies in the US and/or other countries. All third-party product and company names are for identification purposes only and may be trade-marks of their respective owners