Think Through Math

Motivation

Grades 3–8

TEXAS SUCCESS TEXASSUCCESS.ORG

//CODiE//
2012 SIIA CODiE WINNER
"Best Mathematics Instructional Solution"

FACILITATE ENGAGEMENT AND REWARD EFFORT

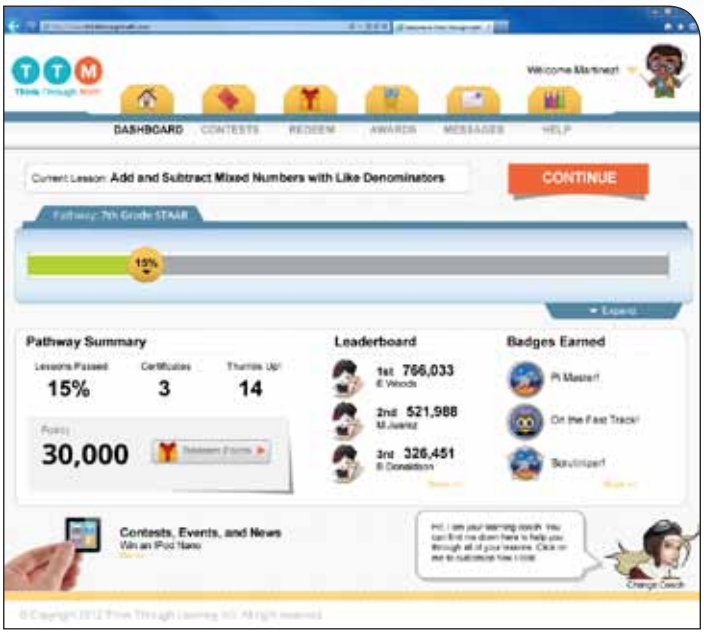
Many students are significantly stressed or fatigued by mathematics. Too many have never experienced success with math and have given up. We know, however, that the more students engage with Think Through Math, the more they learn, and the more they improve.

Think Through Math motivates students to do more math both during and after school with its uniquely 21st century motivation system–a powerful blend of intrinsic and extrinsic motivators. The system is based on a single idea: ***reward effort****.*

Develop Executive Function

Executive function is an imposing name for a group of essential mental tasks that many struggling students lack. They include planning, strategizing, organizing, setting goals, and paying attention to the important details that will help to achieve those goals.

Every time students log in, they check-in with their customized dashboard – the launch pad for their next assignment. Designed to help students build executive function skills, the dashboard helps students take ownership of their own learning, track their progress and manage key decisions. Even our most struggling students benefit from knowing where they are on their learning trajectory and feeling like they are part of their academic narrative.



Unprecedented Differentiation

All students benefit from individualized students require individualized instruction that addresses their unique gaps and provides plenty of opportunities for meaningful practice. Because Think Through Math is adaptive and meets students in their zone of proximal development, students quickly achieve success –a meaningful reward to struggling students. The program continuously collects performance data, modifies learning pathways, and provides immediate corrective feedback at every step.

Gamification – Learning is Fun!

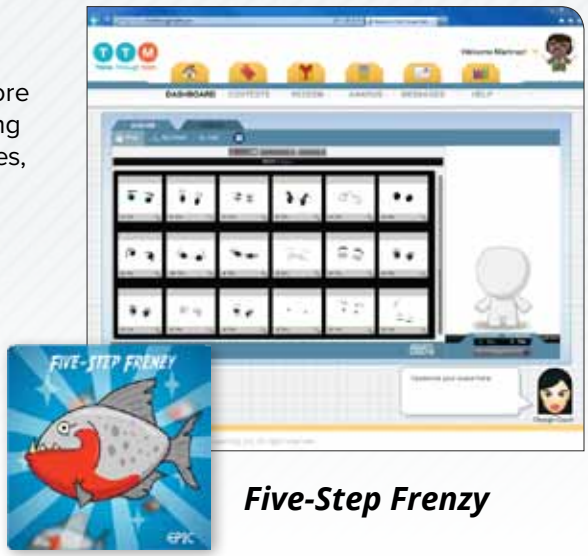
Gamification is the use of game-like thinking and elements in places that aren't traditionally games but are proven effective and serve learning. Research shows that the use of game mechanics and dynamics like badges, leaderboards, and self-customization can be useful for improving motivation and learning. If you think about how engaged so many of our students are in gaming, a big part of what's driving them is to amass more points, move up another level, and beat their personal best. We admire the work of cognitive scientists who often describe how "the brain is addicted to success."

CUSTOMIZED AVATARS

As students enter Think Through Math, they select an Avatar that they can customize. As students acquire more points, they earn access to increasingly more compelling features to customize their avatars. As the program evolves, students will also be given options to customize their learning environment.

BADGES

Using advanced gamification techniques, such as badges, students are motivated to engage with the program and acquire points. The result is that they unlock and earn new badges by completing math challenges or multiple lessons in a row. Badges are competitive emblems that represent solid mathematical practice, proficiency and achievement.



Five-Step Frenzy

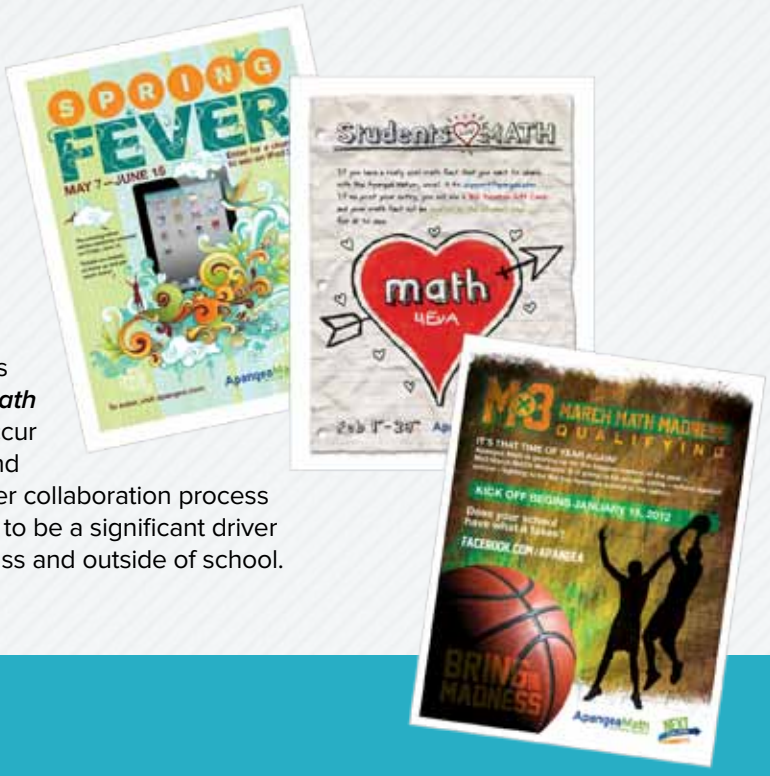
Teamwork and Collaboration

One of the most powerful motivational experiences students have on Think Through Math is being part of a team and learning how to work together. Though students often acquire points in order to beat their personal best, they're also engaged in endeavors "bigger than themselves."

DONATIONS TO CHARITY

Students work individually and collaboratively to earn points for special events and select charities. More than 50% of our students use the TTM online redemption center to donate their points to the United Way, Boys and Girls Clubs, Wounded Warrior and others. Think Through Math also designs periodic state-specific disaster relief programs as needed. For example, students in Indiana and Idaho worked together to raise thousands of dollars in the spring of 2012 when tornados destroyed a community in Indiana, including a large middle school.

Special Olympics · United Way · Wounded Warrior Project · Boys & Girls Clubs of America · Big Brothers Big Sisters



THEME-BASED CONTESTS

Students are presented with a series of fun, short-term contests (1 to 4 weeks) that target a wide range of relevant and engaging themes –***Spring Fever, Students Love Math, March Math Madness*** and many others. These contests occur each month and are announced on teacher and student dashboards. The powerful peer-to-peer collaboration process combined with teacher leadership has proven to be a significant driver for students to make a strong effort both in class and outside of school.

IT WORKS!

Student gains on Think Through Math provide significant data relative to the positive impact of Think Through Math's student motivation system.

Garland TX, District Example

Garland, TX is the 14th largest school district in TX with 57,000 students. In 2010-2011, Garland ISD and TTM partnered for a pilot program designed to target students measured as "at risk" for not passing the TAKS exam in the middle grades. Students in the 6th, 7th, and 8th grades participated in an intensive remedial, 2nd math class over the course of 2 semesters. Students were encouraged to use TTM both in-school and at home. All students were measured against a similar control group. Based on the results of the TAKS exam, TTM was instituted for every Garland student in the middle grades for the next 5 years.

	TTM Student Increase	Control Group Increase*
Gr. 6	+71	+4
Gr. 7	+69	+27
Gr. 8	+63	+20

TTM v. Garland Control Group

"Students enjoy the program because they see their math performance improve. This helps their self-esteem and has a huge impact on their performance in other classes."

– Nate Carman, Ed.D.
Assistant Superintendent of Curriculum and Instruction
Pine Tree ISD