

## Gaming to Learn Katy ISD April 2019



### **Challenge:**

The challenge was two-fold for learners:

1. to ensure learners gain the knowledge needed to pass the state math assessment and;
2. to ensure learners extend their knowledge from proficient to exceed expectations.

### **Solution:**

The solution was to provide a gaming experience for students in order to increase time on task. A course was developed within our learning management system that would allow the learner to progress through math concepts based on need and on extending learning in a fun and competitive nature. Students were able to contribute to a team of points as well as level-up and earn badges individually when tasks were completed that indicated understanding and knowledge. The Teams could earn additional points and badges when they took on Side Quests and Covert Operations. Side Quests allow students to personalize what they experience by taking on a task that involves math operations that they may or may not enjoy but knowing the end result could lead to more points for their team. Covert Operations spiraled their learning by presenting a problem on known concepts for review but taking that problem more in-depth.

Leveraging similar concepts that students experience on their own video gaming, Katy ISD recreated the gaming experience with math concepts to entice learners to do the work as well as contribute to the team by earning points and contributing to their selves by earning badges. Rankings would be displayed for all to see each day which created excitement among students. Math as with most subjects is about spending the time doing the work. Gamifying the experience created excitement around math and for students to want to conference with their teacher or go back and review the digital components on math skills so they could solve the problem and gain points or badges. Gaming is an area that we know our learners enjoy because it offers rewards, quick feedback and an experience that produces collaboration and problem solving.

When teachers use this avenue for learning, we have also found that it has the same impact. They like to be the content area or grade level with the most badges and the learning is chunked in small tasks and can be implemented the following day within the lesson.

### **Learning Impact Outcomes:**

- More students pass state and local assessments
- More students received Exceeds Expectations on state assessments
- Love of learning
- Reluctant students become involved in team collaboration
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### **Return on Investment:**

- Chunks the concepts into smaller achievable problems
- Changes the way learners feel about math by making it fun experience
- Students are asking for conference time with teachers in order to achieve their game quests
- Learners time on task has been greater because they are still working on holidays and weekends
- Game template has been used for all learners (students and adults) and both groups have benefited from learning additional skills