

Case Study:

Del Dios Academy of Arts and Sciences

San Diego, CA

Overview

PROFILE

Del Dios Academy of Arts and Sciences is a public 6-8 specialty school located in North County San Diego, California with a total student enrollment of 782, with 287 students classified as English Learners.

CHALLENGE

At Del Dios Academy of Arts and Sciences, students struggled with motivation, collaboration, and communication, and they longed for a more cohesive classroom experience after two years of distance learning. Students struggled with working in small groups and demonstrating the complex, rigorous demands of mathematical word problems. It was a top priority to narrow learning gaps, provide accessibility for the large Hispanic population, and to meet state requirements by incorporating more problem-solving tasks into the curriculum.

SOLUTION

Exemplars diverse approach to problem solving for leveled instruction made it an easy choice to use in instruction. The Spanish task translations increased students' motivation and readiness. It encouraged students to collaborate and conceptualize their learning. Students became math practitioners and developed creative approaches to problem solving which propelled them to a mastery level. Their motivation increased along with their communication skills.

How To Reach, Boost, and Empower English Learners' Problem-Solving Skills With Exemplars



Project Lead:
Diana Whelan
8th Grade Math &
Science Teacher



School Profile

- Population Density: Suburban*
- Size: 782 6-8 Enrollment*
- Math Proficiency: 25%*
- Free & Reduced Lunch: 84%*

*Source: Niche.com

Read the full study



The Challenge

An educator with a diverse teaching background understood the impact the pandemic had on students' abilities to problem solve while working in small groups. There was a lack of motivation and many students chose not to do academics or attend school. After an audit of the math curriculum, it was observed that there was a deficit in problem solving. Whelan recognized the need for students to solve complex, multi-step problems to encourage rigor, English language acquisition, and higher-order thinking skills. It was imperative that students had access to problem-solving tasks for real-life applications.

Choosing Exemplars

Seeing the absence of problem-solving tasks, it was critical for students to experience the rich demands of mathematical investigation within the classroom. Exemplars provide the flexibility for teachers to adapt instruction to varying abilities and levels. The modeling assists students' individual learning styles while developing their critical thinking and analysis. In addition, Exemplars Spanish problem-solving offer greater accessibility for the school's large population of English Learners. The teacher used Exemplars in previous districts to challenge, scaffold, and differentiate instruction. The authentic and relevant mathematical problem solving places students into the real-life situations they crave.

The Outcome

Seeking performance tasks for students, the teacher's primary focus was to get kids caught up in math after the pandemic with engaging problem-solving tasks and to increase collaboration skills among students. After implementation in other districts with both high-achieving and low-achieving students, Exemplars were used for problem solving once a week. The entire process was modeled: the problem, approach, conversation, and evaluation. Students were placed in small, heterogeneous groups based on abilities using key mathematical language. Students presented their approach, graded themselves against the Exemplars rubrics, and then attended individual conferencing to promote them from Novice to Practitioner to Expert. The performance tasks helped students with problem-solving skills that enabled real-world, authentic connections. Students met the high-expectations of Exemplars with each task and developed creative solutions and collaborative skills necessary for problem solving.

“ I love Exemplars because they have a written component where we embed mathematical language. ”

Diana Whelan
8th Grade Math & Science Teacher