Gizmos Boost Science Scores:
Evidence from 93 California High Schools

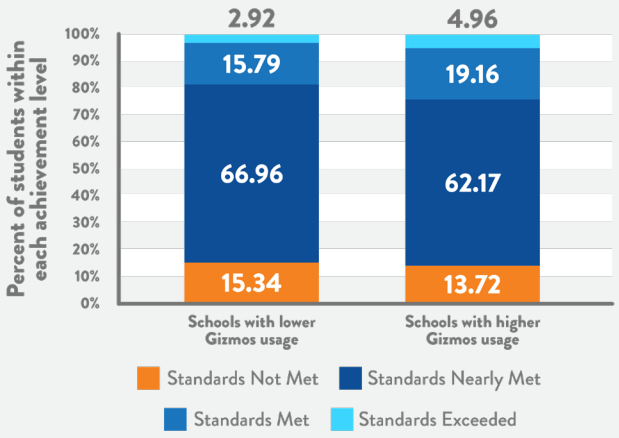
ExploreLearning Gizmos brings the power of inquiry-based learning to teachers and students in grades 3–12, with a library of more than 550 online simulations for math and science. Our researchers conducted a study to meet ESSA Tier 3, comparing the frequency of Gizmos usage and performance on the NGSS-aligned California Science Test (CAST) for over 21,000 high school students attending 93 urban high schools with high levels of ethnic and socioeconomic diversity.

What's the big takeaway?

Our analyses found that students attending schools that relied on Gizmos and STEM Cases as tools for supporting inquiry-based science practices, such as developing and using models, were more prepared for NGSS-aligned state assessments such as the CAST.

What are the key findings from the study?

- Gizmos usage was significantly correlated with passing rates.
- Students at schools with higher Gizmos usage were **1.3x more likely to meet or exceed test proficiency standards.**
- The more widely and frequently Gizmos were used across a school, the greater the likelihood of students meeting or exceeding proficiency standards.
- The amount of usage was related to outcomes, with more usage significantly associated with higher achievement.
- This relationship was significant even when statistically controlling for other factors commonly predictive of student success.



What product usage and NGSS assessment measures were used?

Gizmos usage consisted of three metrics for each school:

- The proportion of students using Gizmos
- The number of different Gizmos used
- The average number of Gizmos used per student

Performance was measured by the percentage of students at a school who met or exceeded proficiency on the CAST in spring 2023.

Take a deep dive into the details.

Review Technical Report

"I see more student engagement with lesson content when students are using Gizmos. Student grades have shown more understanding of the topics."

— California Gizmos Teacher

"Teachers deserve a tool like Gizmos to empower students to conduct their own investigations, learn without reading lots of text but by doing lots of reasoning."

— California Gizmos Teacher