

Gizmos

BWRSD Pilot Study Brief

PRODUCT INFO

Product name: Gizmos

Product description: ExploreLearning Gizmos is the world's largest library of interactive online simulations for math and science education in grades 3-12. Gizmos help students develop a deep understanding of challenging concepts through inquiry and exploration. Students use Gizmos to interact with and explore hundreds of math and science topics ranging from heredity to trigonometry. Teachers use Gizmos as dynamic "what-if" tools to help students move beyond memorizing to true understanding. Each simulation is ideal for small group work, individual exploration, or whole class instruction using an LCD projector or interactive whiteboard.

Learning focus: Grades 9 - 12, Science & Math

Teacher training: There is one full day professional development that is part of the subscription cost. This will take place in September of 2018 with a focus on mapping Gizmos to curriculum.

Device specifications: Gizmos are web-based and compatible with chromebooks.

Cost: \$5,097 cost for all science teachers and 1 math teacher.

DISTRICT CONTEXT

District demographics: There are 3,358 students in the district with 6 schools. 88% of students identify as White and 5% identify as Hispanic. 36% of students are eligible for free and reduced price lunches. 2% of students are English Learners. The district is 1:1 with Chromebooks in grades 3 -

12. The district uses G Suite for Edu, along with Achieve3000, Discovery Education, Edgenuity, iReady, and Learning A-Z.

Pilot demographics: All science students in grades 9-12 (889 students), 10 teachers, and 1 school participated in the pilot

PILOT GOAL

The goal of the pilot is to increase student engagement and achievement in science learning through the use of Gizmos.

IMPLEMENTATION PLAN

Duration: 2/28/18 - 2/28/19

Quality of support: PD is offered and teachers requested running the PD at the beginning of next year so as to map out a year's worth of Gizmos. Additionally, the district will provide an in-house expert for ongoing support.

Implementation model: The tool is being used in two ways which match how it is intended to be used. First, teachers assign a Gizmo as an introduction to a new topic/standard. Students are then able to explore and form conjectures with respect to the topic/standard.

Second, teachers assign a Gizmo during a specific unit to help students gain a better understanding of the topic/standard.

All science classes will assign the Gizmos based on units of study and NGSS standards. All teachers will follow the schedule created during the professional development day in September of 2018.

Data collected: Formative assessment at the end of each Gizmo. Discussion questions (generally added to a google form.) Teacher survey. Student survey.

FINDINGS

Actual implementation model: Initial implementation occurred during the Spring of 2018 as planned.

Educator engagement: Most of the teachers in this pilot used Gizmos in their courses over a 6-10 week span, averaging about 2 hours of usage per week (see Appendix A for more information). 100% of educators involved in this pilot expected students to use the tool outside of school.

Educator satisfaction: Most of the educators did not face any technical challenges with this tool. For those that did, it appears to have been a loss of network connectivity as opposed to an issue with Gizmos. Most agree that the product aligns with curriculum, feel confident using the tool, would recommend this to their colleagues, and are more confident trying new edtech tools as a result of this pilot (see Appendix A for more data). Educators and administrators found the tool's interoperability capabilities to be weak. There is no

way to roster students or to mass create user accounts. Users create their own account which could contribute to non standard conventions. Achievement data is reported with each Gizmo that teachers can access. There is not an easily accessible usage report. We have periodically checked in with our rep who has provided us with the information.

Student engagement: Most students averaged around 2 hours of usage per week for about 3-6 weeks. Almost all students did access the tool outside of class time for about an hour or less per week.

Student satisfaction: Most students thought that Gizmos was easy to use and did not have technical challenges with the tool. Most also stated that it was easy for their teacher to use and did improve how their teacher taught class (see Appendix A for more data).

Student learning: All of the educators involved in the pilot reported a small or moderate improvement in learning outcomes as a result of using Gizmos. They also reported that it was helpful to create experiences for students that they cannot physically experience in a lab and effectively aligned with NGSS standards. The tool also enabled students to engage in real-world problem solving tasks and effectively incorporated math into the simulations.

OUTCOME

Purchasing decision: BWRSD will continue to purchase Gizmos for Mt. Hope High School. The district is also considering a pilot in Kickemuit Middle School science classes during the Fall of 2018.