

Highline

Ratio Rancher Pilot Study Brief

Product Info

Product Name: Ratio Rancher

Product Description: An online puzzle/strategy game in which students are tasked with using their knowledge of ratios to feed and care for fantasy creatures.

Learning Focus: Learning about ratios for students in the 6th grade and above

Teacher Training: Online tutorials available

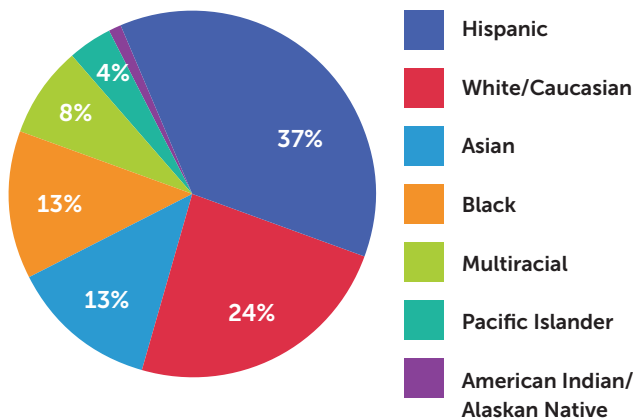
Student Usage Minimum: 4 class periods

Device Specifications: Reliable Internet access

Cost: Free

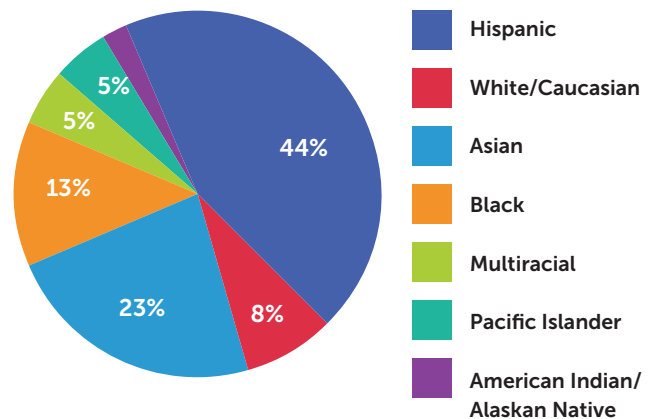
District Context

Student Diversity in
Highline Public Schools



District demographics: Highline Public Schools in Washington State serves a student population of roughly 20,000 students across 39 schools. English, Spanish, and Vietnamese are the top three languages spoken at home by students in the district.

Student Diversity at
Cascade Middle School

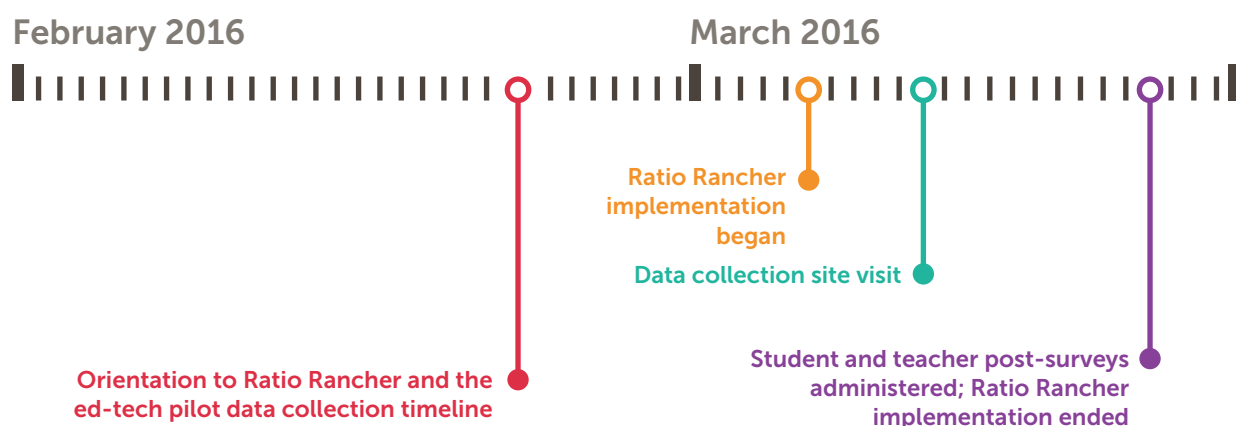


Pilot demographics: Cascade Middle School serves approximately 580 students in grades 7 and 8. All students involved in this pilot had access to 1:1 devices and broadband.

Number of Students in Pilot	Number of Teachers in Pilot	% Free or Reduced Lunch	Speak English at Home	Grade Levels in Pilot	K-12 Students with Access to a Device (1:1)	Students with Access to High Speed Broadband at School
76	3	59.5%	75%	7th	12%	75%

Pilot Implementation

Pilot Goal: To strengthen students' understanding of ratios as applied to real-world situations.



Implementation Model: Most students used Ratio Rancher in class for about two hours each week, for 3-6 weeks. They did not use Ratio Rancher outside of class.

Data collected: Student pre- and post-surveys, teacher pre- and post-surveys, teacher interviews, school leader interviews, product usage data (provided by Ratio Rancher), and student pre- and post-learning/benchmark assessments.

Findings

Quality of Support: Students and teachers said they would have benefitted from more support and guidance on how to optimize the use of the tool.

Educator engagement: Teachers used Ratio Rancher in a variety of ways, including regular

classroom use, as a supplementary review, and as an optional homework assignment.

Educator satisfaction: Teachers were pleased by the results of the pilot.

Student engagement:

	Minimum	Maximum	Mean
Total number of games played	2	153	26
Number of bonus games played	1	29	4
Number of challenges failed	0	29	6
Number of challenges completed	1	96	15
Average time spent per game (in minutes)	14	240	43

Student satisfaction: Students enjoyed using Ratio Rancher because it was graphically pleasing, competitive, applied to a real-world situation, and made learning new math skills fun. Further, the majority of students found the product easy to use.

Student learning: Students that piloted Ratio Rancher were compared to a control group that did not use the tool. Pilot participants had statistically significant higher scores on the ratio and proportions section of a Common Core State Standards benchmark assessment.

Outcome

Purchasing Decision: Highline chose to expand the use of Ratio Rancher beyond the pilot group in the 2016-2017 school year.

For more information, see:

<http://digitalpromise.org/wp-content/uploads/2016/11/rapid-cycle-pilots-mathsixdistricts.pdf>



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