

INTRO TO STEM CAREERS

“RAIN’s mission is to grow the biotechnology industry in Tacoma. We want to increase accessibility and show kids, no matter what their background, that this is an exciting and possible path for them.

We had about 50 students from Stewart Middle School visit our facility on DiscoverU Day, a district-wide career exploration event for students of all ages. We wanted them to see what a professional lab was like so we set up miniature activities for them to move through. They held tools in their hands and got a sense of what the work is like.

We did a lesson with several classes at Jason Lee and Stewart as well, introducing them to our processes. We focused on DNA extraction and students took cells from their cheeks using pipettes, test tubes, and measuring tools. We talked about our work, synthetic biology, and what our own scientists have researched.

We’re now developing level two of the Bioengineering Camp, which offers more intense research opportunities for sophomores who already took level one or are taking AP Biology.

Our first camp had 15 students and 14 of them were female, so that was a win for us. We had five students of color, so there’s definitely room to grow. Our camp was free due to a grant from Graduate Tacoma and other funding.

This is our third year doing the iGEM program, which gives seniors and advanced students an opportunity to conduct real research and compete nationally.

We also support Superheroes of Science talks where we introduce students to a variety of STEM careers through guest speakers. In addition, we’ve added STEM-focused professional development for teachers in middle and high school. Our goal is to make synthetic biology available to them and help them see how it can connect with their existing curriculum.”



Mandy Galuszka is the Education Coordinator at RAIN Incubator.

MIDDLE SCHOOL EIGHTH GRADE MATH

Despite gains made in the sixth grade, the toll of transitions a student experiences through their middle school years continues to show itself by the eighth grade. The shift from a single class to a course load, extracurricular activities, and new expectations compounds an exceptionally difficult age of development for a student.

The overall rate of Tacoma eighth graders passing algebra or geometry with a C or better remains steady from last year. However, as the data are disaggregated, we see most student of color groups are getting left behind. The racial gap for eighth grade math continues to widen as results improve for White students but stagnate — and in some cases worsen — for students of color. Latinx and Native American kids in Tacoma are experiencing the largest disadvantage. For Native American students specifically, this is both reflective of the small population size as well as the impact of barriers to Native American student success compared to other groups.

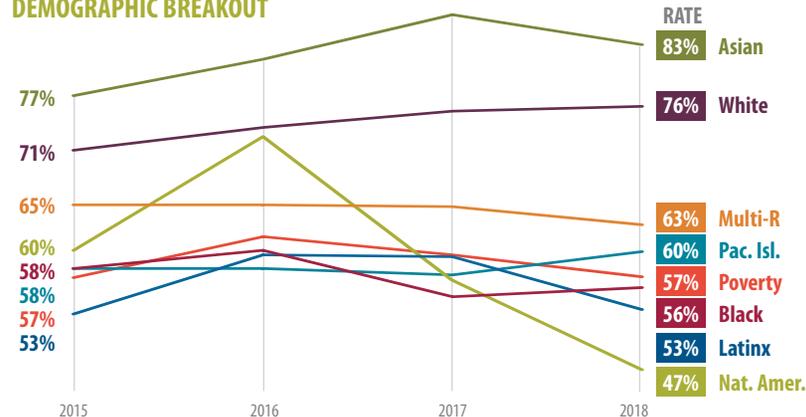
In addition, the poverty gap is not closing and remains a necessary area of heightened focus for educators and providers. These persistent gaps in middle school position kids for lower success in high school. Together, we must strengthen our reach and programs to target this transition period of a student’s life.

Shining Schools

Three Tacoma middle schools are moving the needle for eighth grade math in significant ways. In particular, Stewart went from 39 percent to 57 percent of students passing. This is the largest increase of any school. Also notable are Giardrone with a six point increase from 50 to 56 percent and First Creek nearing almost 70 percent of their students.

All three schools have among the highest concentrations of students of color and low-income students in TPS.

DEMOGRAPHIC BREAKOUT

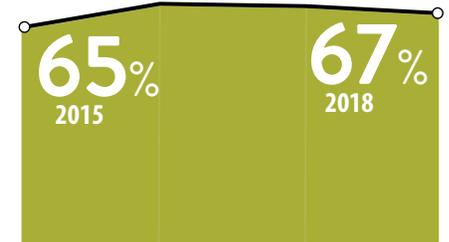


Data Source: TPS

DATA TRENDS

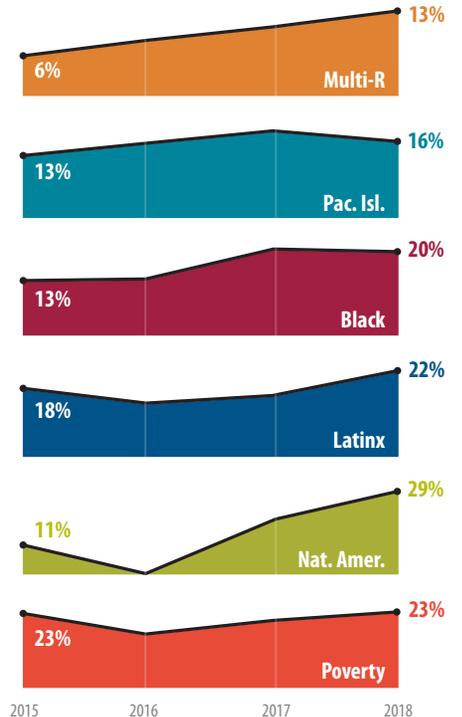
BASELINE TO CURRENT

Passing algebra or geometry



AIMING HIGHER GOAL: Increase the percentage of eighth graders who pass algebra or geometry with a C or better.

MULTI-YEAR GAPS Represents the increase or decrease in the achievement gap between students of color and White students and between students in poverty and those not in poverty, baseline to current.



Notes: Asian students historically always perform above White students. Gap measures don’t perfectly match demographics due to rounding to the nearest percent.