

Closing the Achievement Gap, Advancing Science Success

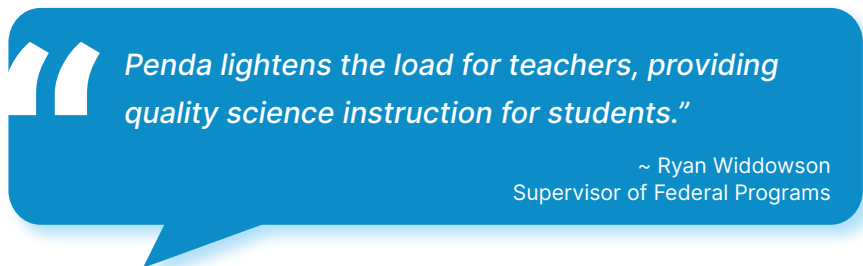
Penda Science's Impact on Clay County Schools' FL SSA and Biology EOC Scores

In Clay County, Florida, houses seem to sprout up overnight. Educational excellence is of paramount importance to the growing community's many families. Ryan Widdowson, a lifelong Clay County resident and the dedicated Supervisor of Federal Programs for the Clay County School District, shares this focus on educational excellence for the district's 38,000 students in its 41 schools. With an impressive 34-year career in education, Widdowson is unwavering in her commitment to providing students and teachers with programs and tools to support their success.

During the 2020–21 school year, Widdowson and Clay County turned to a powerful ally in their pursuit of academic excellence — [Penda Science](#), a gamified program for grades 3–12 with activities hand-crafted to Florida standards and aligned to every organization's unique scope and sequence. Their hope was that Penda would make a profound impact on science achievement, particularly in Title I schools.

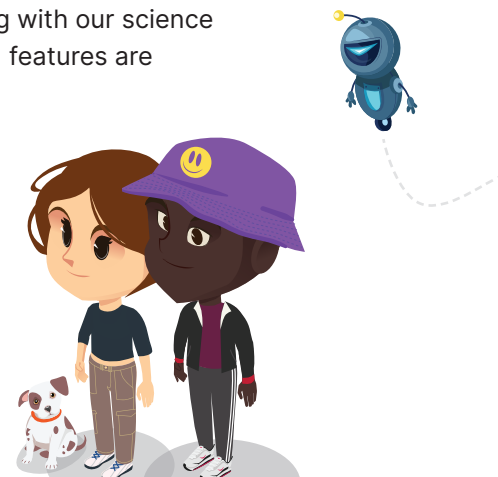
Over the course of that first school year, Penda was piloted in 20 schools. "We did training, we monitored data usage — how many kids were using it, what the reception was, what teachers needed," Widdowson explained. "The more [teachers] used it, the more they liked it. Eventually, it got to be the thing that students were willing to do independently; they pursue Penda on their own in their off time — teachers didn't have to assign it for homework."

This initial reception led the district to implement Penda in all of its schools with students grades 4–10 during the 2021–22 school year. Penda's innovative, online automated platform has been an essential tool in helping the district close gaps in science learning caused by pandemic-related school closures. Post-pandemic, Penda has also been instrumental in supporting English Language Learners (ELL), thanks to its sophisticated translation tools, and keeping science learning going strong in spite of teacher vacancies, long-term substitute teachers, and new teachers. "Penda lightens the load for teachers, providing quality science instruction for students," Widdowson explained. We don't have to worry about what's happening with our science instruction, particularly with new teachers and our ELL kids because the [Penda] features are just amazing."



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~ Ryan Widdowson
Supervisor of Federal Programs





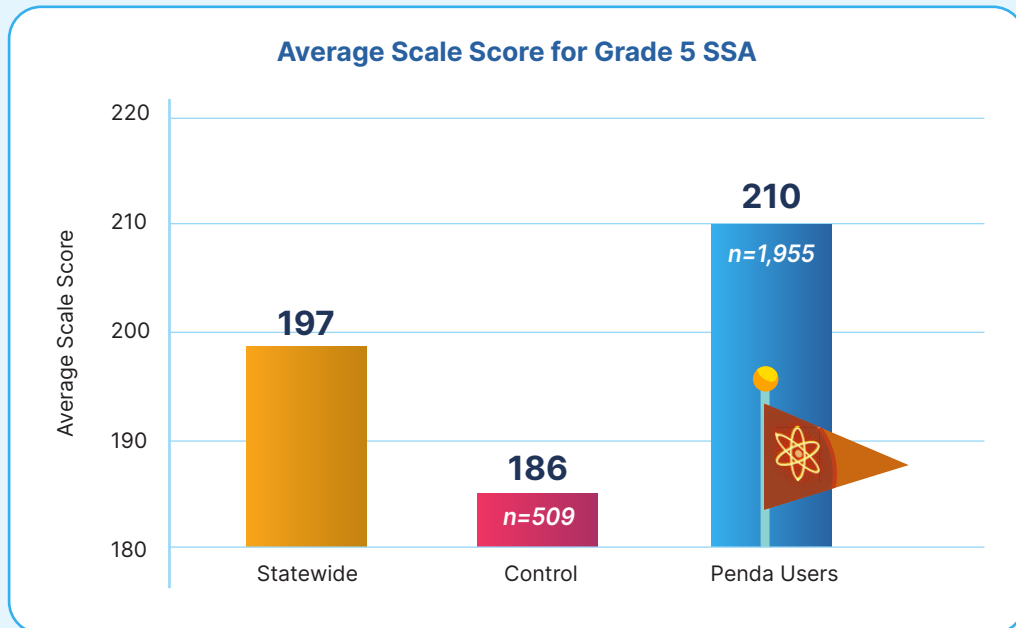
Gamified Science Activities Lead to a Massive Jump in Science SSA Scores

After just two years of using Penda Science, Clay County achieved an incredible accomplishment; they jumped from 36th in the state to 3rd in science achievement based on 2021–22 Statewide Science Assessment (SSA) end-of-course (EOC) test scores.

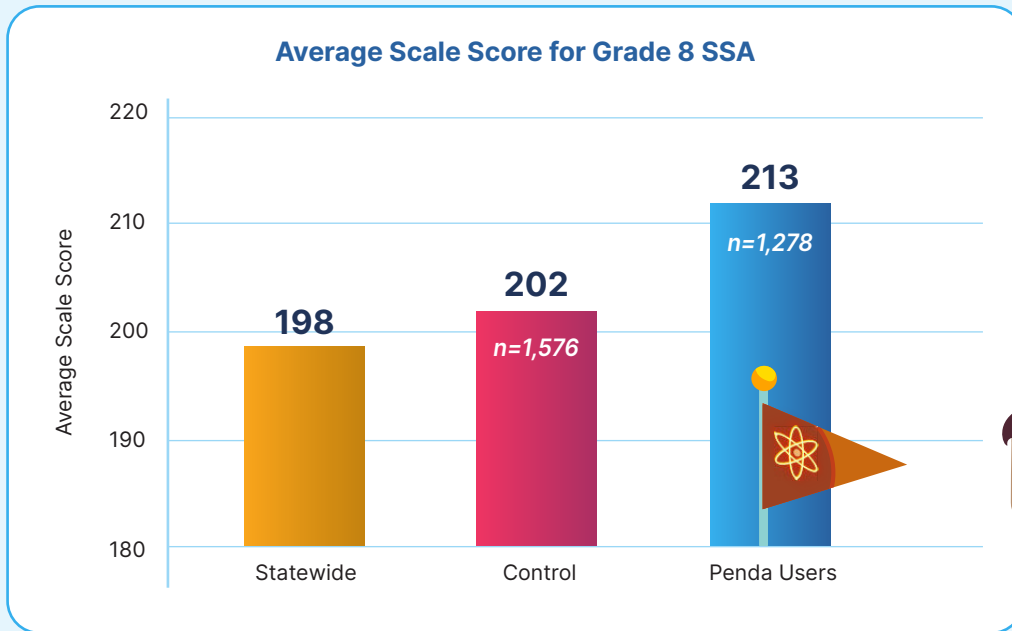
Test score data from the district's grade 5 SSA, grade 8 SSA, and biology EOC show significant increases in mean scale scores between Clay County students who used Penda and those who didn't.

- Students who took the grade 5 SSA who used Penda had an average score of 210 — **12.9% greater** than the control group and **6.6% greater** than the statewide average score of 197.
- Students who took the grade 8 SSA who used Penda had an average score of 213 — **5.4% greater** than the control group and **7.6% greater** than the statewide average score of 198.
- Students who took the biology EOC who used Penda had an average score of 417 — **2.7% greater** than the control group and **4.0% greater** than the statewide average score of 401.

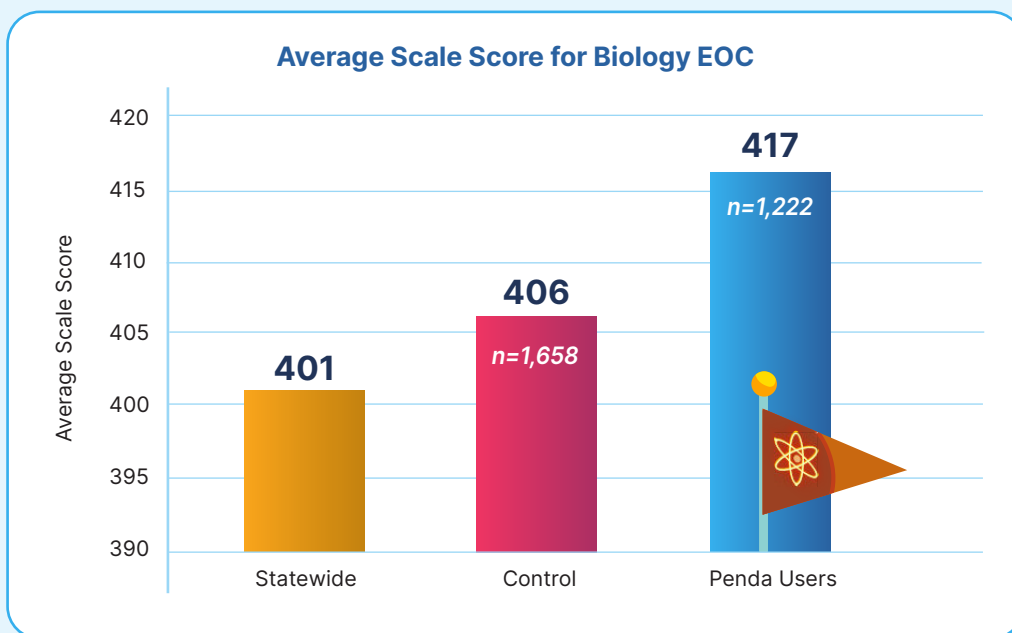
Grade 5 SSA



Grade 8 SSA



Biology EOC



"[Using Penda] we definitely saw an increase in student achievement in our benchmarks, but we also saw it in those SSA scores when they came out," Widdowson remarked. "If Penda had a reading, math, or social studies program, I'd scoop it up in a minute!"



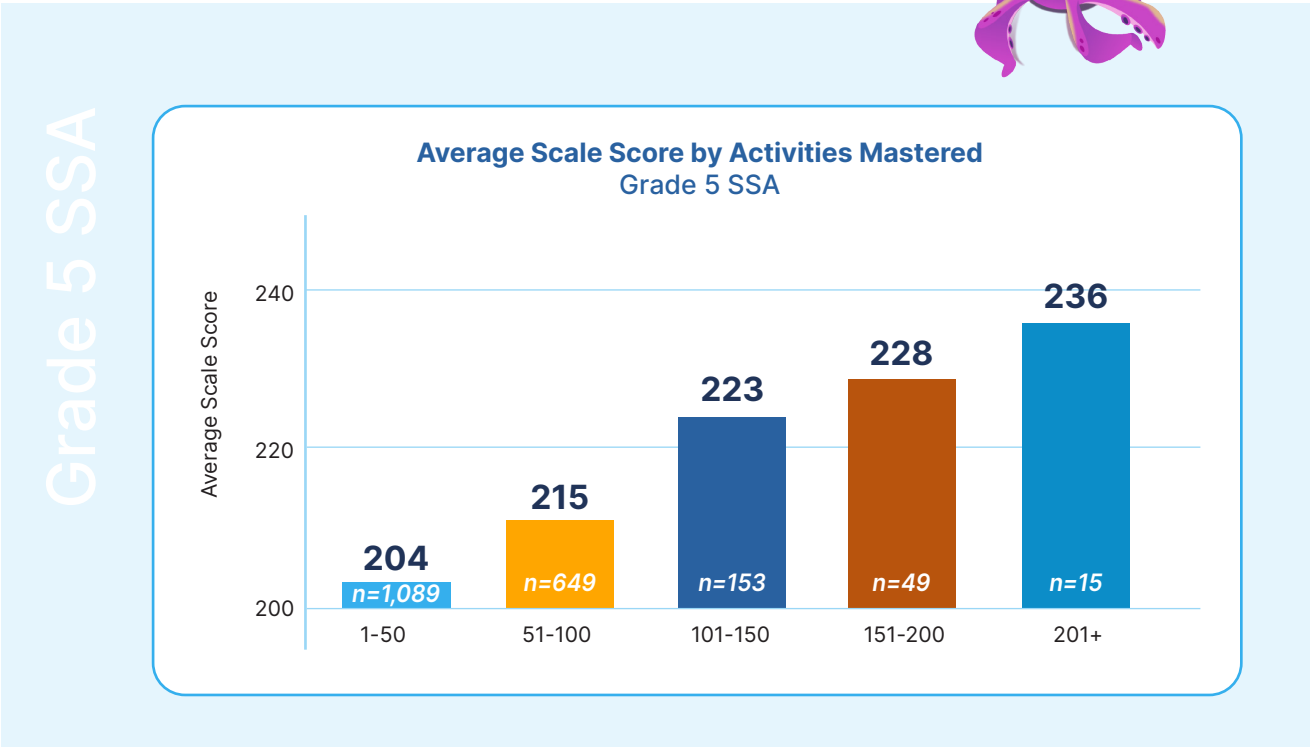


More Penda Leads to Even Greater Gains in SSA Scores

Leaders and teachers in the district continue to be impressed with how Penda supports student achievement in science. “We’re excited about the progress our students are making,” Widdowson reflected. “Usage is up, kids like it a lot.”

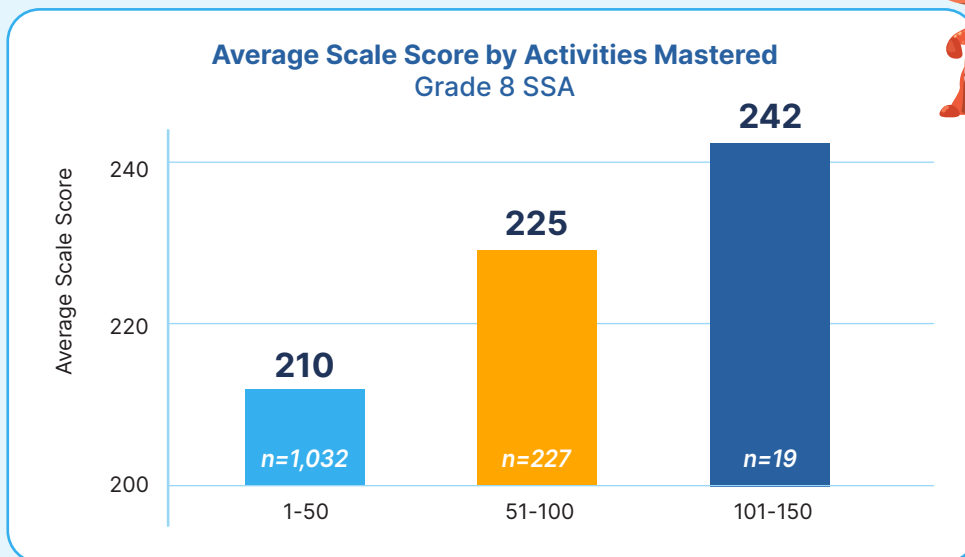
In fact, many students are voluntarily choosing to use Penda during their free time, demonstrating the program’s appeal and ability to keep students on task. That additional use of Penda paid off in even higher SSA and EOC scores. The more Penda activities students mastered (defined as achieving a score of 80% or greater on an activity), the higher their scores.

- Students who mastered Penda activities scored on average **12.28% greater** on the grade 5 SSA than the statewide mean scale score of 197.
- Students who mastered Penda activities scored on average **13.97% greater** on the grade 8 SSA than the statewide mean scale score of 198.
- Students who mastered Penda activities scored on average **7.18% greater** on the biology EOC than the statewide mean scale score of 401.

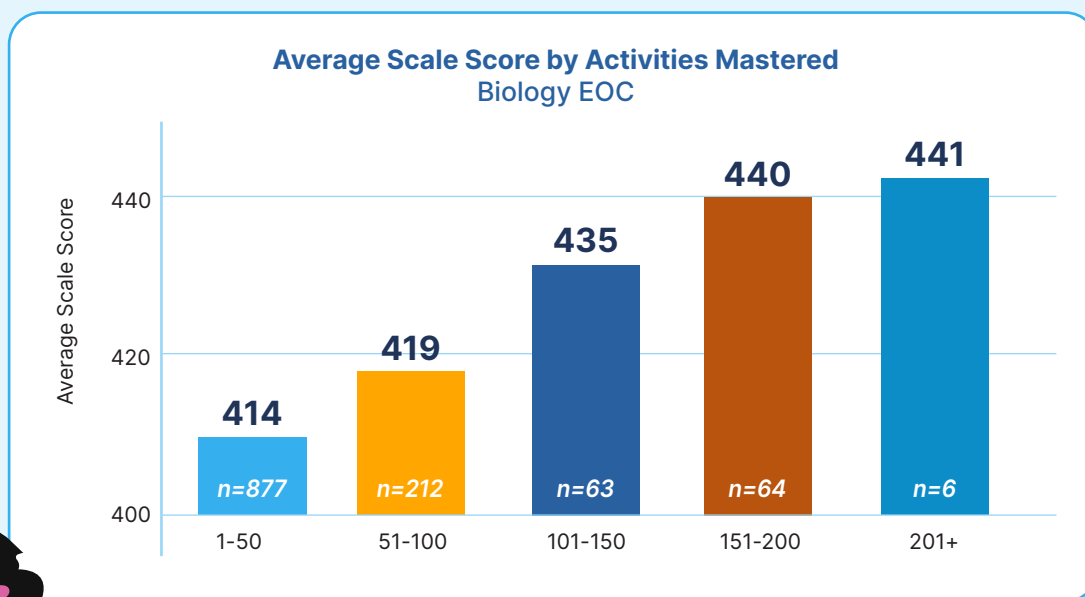




Grade 8 SSA



Biology EOC



What I like is that Penda really does cater to kids of all ability levels."

~ Ryan Widdowson
Supervisor of Federal Programs





Automation That Supports Excellent, Inclusive Science Instruction

Penda's gamified activities have been a game-changer for teachers and students alike. But Widdowson and teachers throughout the district also appreciate Penda's automation of many instructional tasks. For instance, Penda auto-assigns activities to students each week based on their skill level and the district's scope and sequence. The custom alignment to the organizational progression calendar is done by Penda's one-of-a-kind Pacing Assistance Service (PAS). So, the activities students are doing in Penda support and enhance what they're learning in class — all without teachers having to lift a finger.

Line item analysis reports are available for every Penda activity. A Class Mastery report is delivered weekly to teachers' inboxes, providing a comprehensive overview and summary of students' progress toward mastery of each standard. These reports conveniently provide insightful data to guide instruction at teachers' fingertips.

Students with diverse abilities and skills are able to build their science knowledge with Penda and have fun. "What I like is that Penda really does cater to kids of all ability levels. The gamification really speaks to kids that struggle with reading or other content areas. The games keep them engaged in the program and they're learning science along the way. Our high-achievers like the game aspects and they're getting that content as well."

In addition to gamification, Penda supports the inclusive classroom with translation from English to over 60 languages, sophisticated text-to-speech capabilities, a picture dictionary, and much more. Scaffolded activities and a built-in feedback cycle help students build their knowledge and confidence and learn independently. "Our curriculum specialist that works with our ELL teachers talks about Penda being a very powerful tool for students who don't speak English or don't speak English well," Widdowson offered. "...it is very supportive of those students."

As Clay County looks ahead, Penda will continue to be a valued partner in the district's mission to ensure students have the resources they need to be successful both inside and outside of the classroom. "We've done very well given the status of COVID and learning loss," explained Widdowson. "Truly some of the things we have done with our science work with intentional practices and programs [like Penda] have really made a difference."



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