

The Mill Creek High School Story

Mill Creek High School Teachers Help Refine Cogent Education's Interactive Cases and Engage Their Students With a New Way of Learning

Mill Creek High School

Mill Creek High School is located in northern Gwinnett County, outside of Atlanta. Mill Creek was acknowledged by the Georgia Department of Education as a 2014 Advanced Placement (AP) Honor School in three categories— AP School of Merit, AP STEM (Science, Technology, Engineering, Mathematics) and AP STEM Achievement.

School Profile

Students: 3,979
Grades: High School
Suburban
<http://www.millcreekhs.com/>

Student Population

4% Multiracial
8% Asian
12% Hispanic or Latino
16% African-American
60% Caucasian

A Collaborative Project

With already strong performances on Advanced Placement tests, Mill Creek High School aimed to set the bar even higher. A primary focus for Mill Creek was to raise the percentage of time their students were engaged in instruction and in critical thinking.

Mill Creek science teachers were eager to be a part of a research project that could address these requirements and allow them to provide valuable feedback on current and future Interactive Cases. For the past six years, five Mill Creek biology teachers have been utilizing the Interactive Cases, with over 3000 students, with great results.



Mill Creek Science teachers pictured above starting from the back left- Jennifer Maloney, Pam Perry, Suzanne Eason, Megan Martin, Jessica Holden

“I was interested in being part of a learning community and working and collaborating with people outside of the school to help develop and be a part of something I thought would benefit our students.” -Ms. Susan Eason, Science Teacher

“I’ve never had a company developing education products ask us what we think. They take our feedback and make the products better.” -Ms. Jessica Holden, Science Teacher

The Mill Creek High School Story



Student Get Excited About Learning

Today's students are Digital Natives and live in a media-rich era where technology is a constant driving force of students' expectations from their environment. According to the Silent Epidemic Report, each year, almost one third of all public high school students fail to graduate from public high school. Nearly half (47%) said a major reason for dropping out was that classes were not interesting and some complained school did not seem relevant, and that teachers just told them what to do without involving them in the lesson.

The teachers at Mill Creek are thoughtful about their role as educators, and are trying to keep kids from dropping out. They recognize that the impact a teacher has on a 9th grader, can determine where they may end up. Ms. Maloney explains that it is important that teachers do something different with students in this generation, to grab their attention, and keep them moving.

“They’re so technology-driven - their phones are like appendages. I really felt like the Interactive Cases helped them get into these concepts and understand them better than just traditional student-teacher lectures.” -Ms. Jennifer Maloney, Science Teacher



Image from the Osmosis Interactive Case

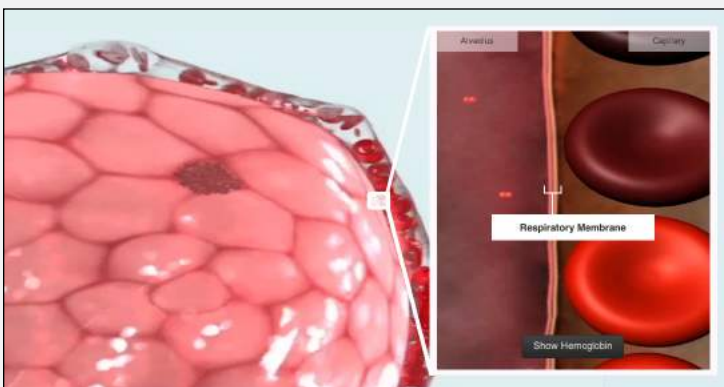


Image from the Diffusion Interactive Case

“The Interactive Cases have the look and feel of the software with which today’s students readily engage, namely modern 3D video games.” - Ms. Megan Martin, Science Teacher

The real world scenarios of the Interactive Cases, effectively engage students, and the virtual environments allow students to see the “invisible”, such as cells, molecules and ions in a dynamic and interactive format. Relating science to the real world provides relevance for students and enables them to develop and hone problem-solving skills.

“My students engage more deeply with these Interactive Cases than they do with any other activities I’ve used in the past. They all felt that they had a richer understanding of the concepts after completing the Interactive Cases.”

- Ms. Pam Perry, Science Department Chair

The Mill Creek High School Story



Students Solve Real World Problems

Scientists solve real-world problems by using the scientific habits of mind that allow them to move step-wise through making observations, collecting and analyzing data, forming and testing hypotheses, and communicating their findings to their peers. Cogent Education's Interactive Cases allow students to behave like scientists and solve real world problems.

In the Osmosis Interactive Case, students take the role of a veterinarian who must help a young calf, named Clark, who is having seizures secondary to over-hydration. Students "fly into" Clark's brain to explore and become familiar with the key elements of the environment. They must select from three possible treatments: hypotonic saline, isotonic saline and hypertonic saline. They must justify their decision in the form of a hypothesis, test that hypothesis by administering the treatment to Clark and monitoring the values that change dynamically over time.

Ms. Martin, who often has a difficult time getting her students to complete their traditional lab assignments, was excited about using the Interactive Cases with her students. She finds her students attracted to the real world scenarios, and believes it is the key to motivating them to complete the assignment.

"This is the first time I feel like you are teaching me something I need to know!"

- A student in Ms. Martin's class

"In the Osmosis Interactive Case, they were really into saving the cow. They were invested in the story."

-Ms. Megan Martin, Science Teacher

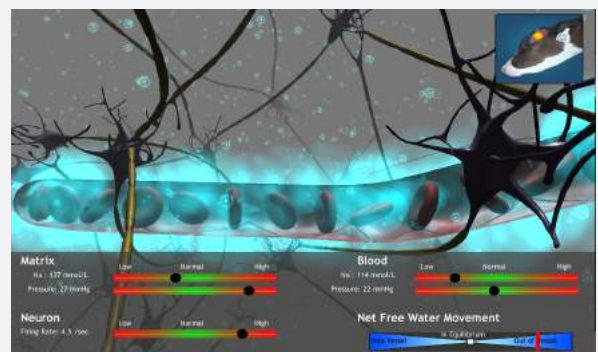


Image from the Osmosis Interactive Case

"The Interactive Cases improve their content knowledge and critical thinking ability. The kids are putting more insight into things and they're asking better questions."

-Ms. Jessica Holden, Science Teacher

The Mill Creek High School Story

Real-Time Assessment Guides Instruction

Cogent Education's SABLE (Skills Assessment Based Learning) program, has been designed to enable teachers to assess student achievement at each step in the scientific method in a format that rapidly identifies where students are succeeding or having difficulty. The student responses to questions are "tagged" with the skill being practiced by the student (e.g., analyzing data, forming a hypothesis etc.), and then sorted by the analysis platform. In doing so, the teacher can view a "heat map" of problem solving skills for each student and can grade students in real time. Teachers can then identify pain points for each student, and modify their instruction to meet the needs of their class.



“Teachers can view a heat map that identifies pain points for each student, and they can focus on these issues.”

-Ms. Megan Martin, Science Teacher

SABLE Provides Valuable Feedback for Students

Students no longer have to wait days or weeks to get feedback on their tests or their answers. As students work through problems in the Interactive Cases, their performance is exported to the analysis platform in real time. They are able to reflect on their answers and review comments from the teacher, helping them develop and hone their problem-solving skills. Successful scientists solve real-world problems, and students need to experience this first hand.

“I didn’t have to do a lot of number crunching and averaging, you could just automatically see twenty of my students didn’t get that and we could stop and address it.”

-Ms. Jennifer Maloney, Science Teacher

Ms. Eason uses SABLE with an iPad, and walks around the class to monitor her students’ responses in real-time. She can tell instantly when some of her students aren’t understanding a concept and can stop the class, or go directly to an individual student to provide assistance. She appreciates the free response component of SABLE, as it allows her to address a challenge one-on-one immediately, rather than having to wait two days, when she has graded their papers.

“To me, the hugest asset of the program has been that assessment key, that we didn’t think we needed.” -Ms. Suzanne Eason, Science Teacher

“With SABLE we could get to kids that were struggling much more efficiently and address any issues in a direct manner.” -Ms. Pam Perry, Science Department Chair



www.cogenteducation.com

Real World Skills, Real Time Data

320 East Clayton Street Suite 504 Athens, Georgia, 30601

Phone: 877.654.1001 Fax: 404.907.1845