Activate Learning

CASE STUDY

Colonial School District Turns Science Education Vision Into Reality with OpenSciEd and Activate Learning

Colonial School District:
New Castle, Delaware
14 schools | 9,132 students

The Challenge:
Pandemic-related declines in student engagement, and outdated pedagogical practices.

The Solution:
Strategic partnership with Activate Learning, including comprehensive OpenSciEd implementation, personalized professional learning, and support.

The Results:
Enhanced student engagement and critical thinking through embedded curriculum strategies, bolstered teacher leadership with training, and solidified district-wide collaboration and implementation.

Redefining Recovery

In the initial return to classrooms in Fall 2022, following the pandemic, school district leaders nationwide grappled with the harsh realization of the pandemic's profound impact on student learning.

In a previous case study, we demonstrated how Activate Learning successfully partnered with a district to create a custom OpenSciEd/IQWST solution for educators that tackled the dual challenges faced by many districts at that time: revitalizing science programs and addressing the student learning gap.

As we pass the three-year mark since the pandemic began, surprising new revelations and challenges have emerged. With the return to normal operations this past school year, leaders could finally assess the pandemic's full impact.

A recent report from the American School District Panel ("Teaching Recovery") sheds light on the complexities of learning recovery today. Interviews with leaders from several school districts across the country revealed a narrative that has seldom been voiced: unforeseen challenges repeatedly disrupted district-wide recovery strategies, shifting the focus from ambitious student recovery initiatives to addressing an equally disruptive crisis—the regression of pedagogical practices.

During the 2-year pandemic lockdown, teaching supports like professional learning, classroom observations, and benchmark assessments were paused. Teachers and principals lost collaboration time previously used for lesson planning, student data analysis, and discussing instructional priorities, often leading to diminished communication between educators and administrators.

Teachers, already stretched thin as they struggled to keep students engaged virtually during the pandemic, faced additional challenges when returning to the classroom. Traditional science instructional practices persisted. Still in "survival mode," districts had limited capacity to prioritize pedagogical innovation. Outdated systems needed to be re-established and modernized.

Despite strong visions, the allocation of substantial resources, and well-intentioned efforts, district leaders nationwide still need to overcome pandemic-related obstacles that are stalling their transformational agendas.

Research indicates that strategic partnerships and layered interventions are crucial for districts seeking to overcome these challenges. A prime example of this integrated approach is Activate Learning's customized solution, a blend of high-quality OpenSciEd curriculum, recently awarded an All-Green rating by EdReports, combined with personalized professional learning and ongoing teacher-centered support.

This innovative strategy is mission-critical for districts recovering from knowledge and instructional loss, just as it did for the Colonial School District in New Castle, Delaware.

Against All Odds

Colonial School District's Response to Unprecedented Challenges

"We loved OpenSciEd the minute we saw it. We never had a curriculum that fully embraced the Next Generation Science Standards and did it so well—where everything tied back to the phenomena and students were highly engaged."

Kim Mulvena
Science Instructional Coach K-12
Colonial School District

As challenging as the pandemic lockdown was, Colonial School District encountered numerous hurdles during its first full year of in-person classroom learning post-pandemic. These issues mirrored the findings of the Teaching Recovery report as Colonial grappled with obstacles that threatened their vision for addressing learning gaps and transforming teaching.

One central challenge for Colonial revolved around adopting an innovative middle school science curriculum, OpenSciEd, which not only represented a significant departure from traditional science pedagogy but also touched on all the systemic problems districts faced throughout the pandemic. Despite the initial setbacks that challenged their recovery efforts, Colonial met and exceeded their goals. Their implementation was so successful that the district became a model and advisor for other school districts implementing OpenSciEd.

With approximately 10,000 students, Colonial consistently demonstrates an unwavering commitment to academic and holistic student development, guided by a shared vision that champions diversity and inclusion, teacher empowerment, statewide collaboration, and high-quality STEM learning for all students.

At the heart of Colonial's mission is the commitment to equip students with meaningful learning experiences and skills vital for graduation in an ever-evolving global workforce. This commitment propelled the district to reimagine science education during the pandemic lockdown, even as subsequent challenges disrupted their momentum.

Colonial leaders Dr. Nick Baker, Supervisor of Curriculum Instruction, and Kimberly Mulvena, Science Instructional Coach K-12, remained steadfast in their vision for an inclusive STEM education program aligned with the Next Generation Science Standards (NGSS).

For Colonial, a Title 1 district, addressing pandemic-related setbacks in students and improving classroom instruction is paramount. "As a diverse Title 1 district," explains Baker, "we are striving to provide innovative experiences to help meet the challenging needs of our students, many of whom view our schools and staff as safe havens. So, in addition to those challenges, we're also committed to do whatever it takes to provide a strong instructional experience for our students."

The adoption of OpenSciEd, designed to promote student learning through collaboration and investigative discovery, helped Colonial re-engage and re-socialize students and simultaneously upskill teachers. With its emphasis on equitable learning and student empowerment, the curriculum has consistently served as an anchor for Colonial, aligning seamlessly with Colonial's science educational mission.

Rather than using a top-down approach, Colonial included teachers in the entire process of adopting the curriculum from the very beginning. "Our teachers did not feel the previous program we implemented truly met the needs of our students," recalls Baker. "We empowered them through professional development and explored other programs. But we ultimately gave teachers the final decision." When teachers were asked if they wanted to tackle adopting OpenSciEd during the pandemic, teachers were "one hundred percent on board," notes Baker.

Colonial School District was ahead of the curve in embracing tiered interventions recommended by researchers for learning recovery strategies, emphasizing providing teachers with a high-quality curriculum, extensive training, and support. During the pandemic lockdown, they invested in implementing teacher support systems, including instructional coaching, virtual professional learning communities, and a robust professional development calendar. Using the calendar allowed for scheduled departmental meetings between leadership and teachers to assess advancements and address challenges collaboratively.

Launching these teacher-centric measures while rolling out a new science curriculum during the pandemic's darkest days was a bold strategy, not without risk. But with Mulvena spearheading the initiative, bringing strong success in coaching and consistent, multi-year targeted support, Colonial established a strong foundation of open communication, teacher support, and inclusive innovation that primed the wheels of implementation for OpenSciEd.

"The pandemic gave us permission to experiment," explains Mulvena, reflecting on the decision to adopt a new curriculum during the pandemic. "We loved OpenSciEd the minute we saw it. Before the pandemic, we engaged in professional development around the NGSS and phenomena-based instruction. We never had a curriculum that fully embraced the NGSS and did it so well—where everything tied back to the phenomena and students were highly engaged."

For Colonial, what set OpenSciEd apart from other curricula was its seamless integration of NGSS principles, its relentless emphasis on phenomena-based learning, and the comprehensive nature of the curriculum. "All these other curriculums had pieces of the puzzle, but OpenSciEd had everything," Mulvena exclaims. The units incorporated engaging phenomena, science and engineering practices, crosscutting concepts, and relevant content that intricately connected all elements to the phenomena in a cohesive way that resonated with Colonial's teachers and students.

Colonial had previously invested significant effort and resources in creating their own instructional materials, but OpenSciEd changed the game. Mulvena explains, "Before OpenSciEd, teachers focused a lot on writing, recreating, and designing lessons, but now we can focus on teaching because we have everything we need with OpenSciEd."

OpenSciEd was the guiding light Colonial needed. "The curriculum has been a steady current for us, and it also embedded a lot of those crucial pieces to help us continue to right the ship and adapt to how education is looking right now," says Baker.

While OpenSciEd immediately proved impactful and effective, Mulvena and Baker recognized that maximizing its full potential required more strategy, support, and resources than they had internally, especially with the return to in-person instruction. Colonial finally had the necessary tools and full teacher support. The big challenge now was, "How do we do this in the classroom?" recalls Mulvena.

Colonial needed to find the right strategic partner to help them accelerate and propel their OpenSciEd implementation.

Partnering with Activate Learning

The Key That Unlocked Colonial's OpenSciEd Potential

"Activate Learning understands our vision and has been a key partner in helping us fulfill our vision for what science education should look like."

Dr. Nick Baker
Supervisor of Curriculum Instruction
Colonial School District

Colonial explored working with various vendors to achieve their implementation goals. Still, it became clear that these solutions were insufficient and offered a one-size-fits-all approach that ignored the unique challenges of Colonial and its teachers.

Mulvena and Baker reached out to Activate Learning before the return to in-person instruction to regain momentum. A dedicated team of specialists, including Tracy Marmolejo, M.Ed. (Professional Learning Manager) and Ron Antinori (Regional Manager) developed a customized OpenSciEd implementation strategy and provided personalized professional learning opportunities for teachers to further Colonial's science education vision.

"Nick and I met with Tracy, and we told her where our teachers are with OpenSciEd and where we want to go," recalls Mulvena. Marmolejo suggested nine distinct professional learning sessions and provided ideas on structuring them to address teachers' specific needs and goals.

Mulvena was pleased with the process. "It's been effortless, and Tracy is very understanding of the needs of teachers," she notes. "She's always thinking about how to help move us forward, which I like."

Karen Eller, an OpenSciEd facilitator trained by Activate Learning, working on a consensus model with science teachers.

Partnering with Activate Learning was the key Colonial needed to unlock the full potential of OpenSciEd and transform science education throughout the district. This crucial pivot helped Mulvena and Baker to build on the momentum they established with teachers and students during the pandemic and deliver results immediately. "We've been through various vendors as we tried implementing OpenSciEd," explains Baker. "But Activate Learning understands our vision and has been a key partner in helping us fulfill our vision for what science instruction should look like. They're very accommodating, personalized, and solution-oriented."

Activate Learning also supported Delaware's statewide adoption of OpenSciEd by providing professional learning to Delaware Department of Education trainers from various districts across the state. This innovative "Train the Trainer" model supports long-term, professional learning sustainability. "Last year, Activate Learning did the OpenSciEd launch training for Delaware," explains Marmolejo. "This year, we personalized training for two OpenSciEd units at each grade level to troubleshoot and prepare ahead of time for that unit rollout."

Colonial School District also joined the statewide training initiative to cultivate teacher leadership, sending teachers to work with Activate Learning trainers to become OpenSciEd workshop facilitators. As a result, Colonial now has teachers who can help with other OpenSciEd facilitator sessions around the state. "I think that's good too--that Activate Learning is willing to do that kind of work with us," shares Mulvena.

Activate Learning provided innovative solutions and strategies that played a crucial role in Colonial's successful OpenSciEd implementation.

Personalized Professional Learning

Cultivating Teacher Leadership

"When teachers succeed, students succeed. Activate Learning aims to boost teachers' confidence in facilitating learning."

Tracy Marmolejo M.Ed.
Professional Learning Manager

The success of any curriculum often hinges on the support provided to teachers, ensuring they feel confident and capable of delivering it effectively. Activate Learning's approach to professional learning is a testament to this principle.

After Colonial had completed two units, Mulvena took proactive steps to gauge the training needs of her educators, sending them surveys for feedback. "We sought direct feedback from our teachers, asking what they felt would benefit them most in our upcoming professional development sessions," Mulvena recalls. The feedback was consistent: while they grasped the storyline and phenomena approach of OpenSciEd, they yearned for a hands-on experience with the materials and a deep dive into the lessons.

Marmolejo and her team developed personalized professional learning workshops for Colonial that would ensure Colonial's educators were well-prepared and confident in implementing OpenSciEd effectively. "The teachers needed a deeper dive into the OpenSciEd units to prepare for the activity setups," explains Marmolejo. "Kimberly worked closely with the teachers and was very familiar with their classroom challenges. We identified areas where teachers needed support and helped them troubleshoot for success. When teachers succeed, students succeed. Activate Learning aims to boost teachers' confidence in facilitating learning."

Mulvena collaborated closely with Marmolejo to tailor the ideal experience for teachers. "Together, we crafted a professional development session that used stations for key investigations, allowing teachers to immerse themselves in the materials and lesson flow, which gave them the tangible, practical insights they wanted," Mulvena explains.

What stands out for Mulvena in the partnership between Colonial and Activate Learning is the flexibility and adaptability. "Tracy and her group work really well with our teachers," Mulvena states, praising the Activate Learning team. "Even if a question comes up during the professional development that takes us down a different path that the teachers want to explore, the Activate Learning team is very willing to do that with us."

This approach sharply contrasts with the professional development methods Colonial encountered with other providers. Baker emphasizes the value of this adaptive, personalized approach and the strong rapport between Colonial and Activate Learning. "Tracy strategized with Kim to ensure our professional development isn't a cookie-cutter workshop, something our teachers have zero patience for," notes Baker. "Unlike some other vendors we worked with, we've never encountered backend issues that require last-minute fixes. This smooth partnership, especially from an administrative standpoint, has significantly enhanced our collaboration with Activate Learning."

Additionally, the ongoing support provided by Activate Learning has made a significant difference in Colonial's OpenSciEd rollout. Mulvena appreciates that their Activate Learning Regional Manager, Ron Antinori, is just a message or phone call away. "His responsiveness and support have been game-changers," says Mulvena.

Antinori exemplifies Activate Learning's commitment to exceptional customer support. Teachers often seek assistance with curriculum content, using the digital platform, and tracking orders. "Teachers don't have time to wait for answers," says Antinori. "I put myself in the teachers' shoes; they need the answer immediately because students are entering the classroom. So, I want to respond as quickly as possible to help the teacher in the classroom."

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Ron Antinori
Regional Manager
Activate Learning

Accessible support is vital during curriculum implementation and professional learning. Activate Learning ensures customers can reach out anytime they require help throughout the implementation process.

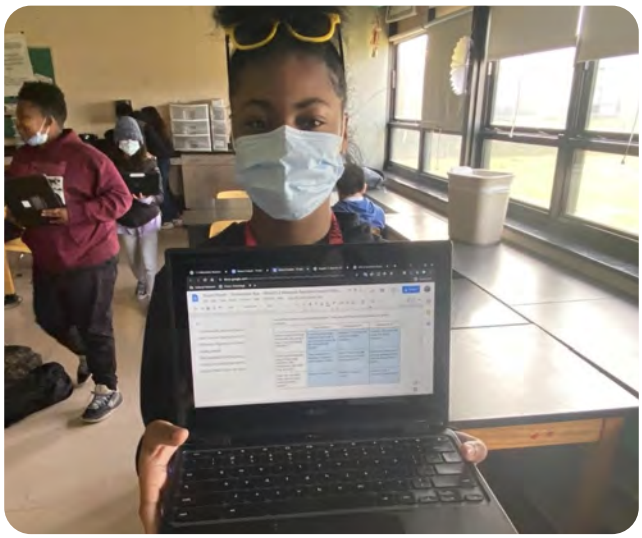
Activate Learning Digital Platform

A Saving Grace for New and External Teachers

We contracted with external teachers to teach synchronously, and they had to rely extensively on the Activate Learning Digital Platform to make it work. The platform's role in supporting new and external teachers during these times cannot be overstated!

Training new teachers during and after the pandemic has been a top priority in Colonial's recovery strategy, but it comes with distinctive challenges. Mulvena acknowledges that for new teachers who weren't part of the initial OpenSciEd planning sessions during the pandemic, the abundance of materials educators must navigate in OpenSciEd can be overwhelming.

The curriculum is rich in content, with over 300,000 printed pages across all middle school grades. Each grade level encompasses extensive Teacher and Student Editions, making organizing and managing the materials a herculean challenge that can easily intimidate new educators and significantly hinder implementation.



The Activate Learning Digital Platform simplifies access to all OpenSciEd resources, alleviating the burden on teachers and ensuring they can focus more on effective teaching and less on logistical challenges. What truly stands out is the platform's ability to consolidate all these resources into a single organized location. With a simple click, teachers can access the storyline, relevant videos, and student documents they intend to use. This central hub has been a significant game-changer for Colonial's teachers, especially the new ones.

"The Activate Learning Digital Platform was like a saving grace for us this year," Mulvena highlights. "Teachers like that everything is right there in one place, in a very nice, easy-to-use format."

Colonial faced a unique staffing challenge on top of the pandemic: teacher shortages. Baker explains that they contracted with an outside tutoring agency to find certified science teachers willing to teach virtually, and these teachers had to rely heavily on the Activate Learning Digital Platform to make this approach viable. "Our staffing situation was unique," says Baker. "These external teachers had to teach synchronously and rely extensively on the Activate Learning Digital Platform to make it work. Without it, our situation would have been even more challenging. The platform's role in supporting new and external teachers during these times cannot be overstated!"

According to The 74, more than 40% of the nation's schools reported teacher vacancies last year, forcing school districts to invest millions of dollars on virtual instruction to address staffing shortages. With more districts rolling out virtual classroom options, giving teachers and students tools to collaborate effectively virtually is not just crucial for today; it's the future. "The Activate Learning Digital Platform has allowed students to still receive the OpenSciEd curriculum uniquely through a teacher who was located geographically somewhere else virtually," says Baker.

The Activate Learning Digital Platform has emerged as a powerful ally for districts like Colonial that quickly adapted to virtual instruction. It stands as a testament to innovation and partnership, ensuring that teachers can focus on what truly matters: effective teaching and student engagement.

OpenSciEd's Impact Beyond Academics

Fostering Students' Social-Emotional Learning Recovery

> "Students are learning how to talk with each other. They're learning those discussion skills, and they're learning about themselves. I love that the openness of OpenSciEd allows for kids to gain the social skills that they're going to need moving forward!"

OpenSciEd has ignited engagement and critical thinking for Colonial's middle school students. Beyond its direct academic outcomes, OpenSciEd serves a greater purpose. Baker notes, "It's about more than just absorbing content."

The pandemic disrupted invaluable daily interactions for students, including time in school, extracurriculars, and community organizations. This prolonged disruption highlighted an urgent need for accessible social-emotional learning (SEL) support for students. In the past three years, some districts have started investing in SEL as a crucial part of pandemic learning recovery. Building students' emotional intelligence, empathy, and relationship skills are now a top priority due to their increasing demand in the workforce.

Seeing the harmful pandemic impacts on student well-being, Colonial proactively addressed SEL needs. The Delaware Department of Education published guidance on integrating SEL in science using NGSS connections. Here, too, OpenSciEd's emphasis on an equitable classroom community and student personal development aligns perfectly with Colonial's science education goals. "I believe you can observe a significant amount of social and emotional learning embedded in OpenSciEd's design and in how teachers implement it," suggests Baker. "This aspect is beneficial when students need to relearn certain concepts."

By incorporating frequent group discussions, collaboration, and self-reflection, OpenSciEd reinforces crucial social-emotional skills. Students emerge as more assertive communicators, collaborators, and problem-solvers—skills that prepare them for lifelong success. This integrated support fosters personal growth, supporting their academic development.

Equitable and social-emotional learning is the core of Activate Learning's OpenSciEd professional learning, forming the foundation of its highly effective implementation strategy. The impact on Colonial's students was visible right from the start. It was an exciting transformation to witness for both leaders and teachers.

In one instance, students' deep engagement with OpenSciEd captivated a visiting school administrator, observing firsthand the interactive, investigative approach in one science class. She visited the classroom to watch the process in action. In particular, she was impressed by how, together, students worked through exercises in Unit 7.3, "Metabolic Reactions," featuring a real case study involving a middle-school girl named M'Kenna that prompts students to investigate potential differences in pathways and processes within her body compared to a healthy system -- actively questioning, debating, and listening to each other.

"It made this administrator stay in the class longer than she planned because she wanted to know, well, 'What happened to M'Kenna?'" recalls Baker. The administrator witnessed and enjoyed the deep student engagement and social-emotional learning that happens every day with OpenSciEd.

This social-emotional component of OpenSciEd fuels Colonial's learning and instructional recovery engine. For Mulvena, the positive results are undeniable. "Students are learning how to talk with each other," explains Mulvena. "They're learning those discussion skills, and they're learning about themselves. I love that the openness of OpenSciEd allows kids to gain the social skills that they're going to need moving forward!"

From Crisis to Clarity

How the Stars Aligned for Colonial School District with Activate Learning

The pandemic brought unprecedented disruptions and obstacles that threatened to derail district leaders' ambitious visions for revitalizing teaching and accelerating student progress. But Colonial School District's journey exemplifies how staying focused on an equity-driven mission can lead to transformational outcomes even amidst the bleakest crises.

By remaining steadfast in their commitment to inclusive STEM education aligned with research-based standards like NGSS, Colonial leaders found clarity in the chaos. Adopting the OpenSciEd curriculum and Activate Learning's customized implementation support gave teachers and students the tools they needed to re-engage learners.

"I want to give full credit to Kim," acknowledges Baker. "She's our lead teacher. She played a pivotal role in supporting professional learning communities and nurturing teacher leadership."

Teamwork makes the dream work. From the outset, Colonial involved teachers, listening to their needs and feedback. This inclusive innovation model was a significant factor in Colonial's success. Activate Learning further tailored professional learning using a personalized, adaptive approach that built educator expertise. The integrated emphasis on social-emotional learning and equitable instruction inherent in OpenSciEd also addressed priorities for pandemic recovery.

Despite the challenges of training new teachers virtually and managing extensive curriculum materials, Colonial effectively empowered new and external teachers with the Activate Learning Digital Platform, which consolidated resources and simplified teacher access. Throughout it all, Activate Learning offered unwavering customer service and support.

The results speak for themselves. Students regained curiosity and confidence through OpenSciEd's phenomena-driven lessons. Teachers grew professionally and personally as leaders while building new skills. Administrators witnessed engagement and meaningful learning return to science classrooms.

Colonial found that focus and partnership are the antidotes to chaos and uncertainty. Their collaborative efforts continue to transform science education throughout the district and serve as a model for implementation success. Most importantly, their steadfast equity vision ensured that pandemic impacts did not deny any student access to the inspiring power of science. Colonial's journey illustrates that clarity and meaningful change can emerge even out of crisis.

Nick Baker, Kim Mulvena and members of Colonial's science department.

Empowering Teachers to Lead

"I can't say enough about how wonderful the teachers' professional learning was over the last three days! We chose the right teachers to help with the facilitation, and Activate Learning chose the right facilitators to help mentor the teachers and co-present. Thank you, thank you, thank you! It was like all the stars lined up. I loved hearing how much the teachers loved being in the training. This group of teachers will be the teachers that rally for professional learning and this program."

Tonyea Mead,
State Science Supervisor
Delaware Department of Education

Reimagine Science Education in Your District with Activate Learning

Transform science teaching and learning. Learn how we can develop and execute an equity-driven OpenSciEd implementation strategy tailored to your district's needs.

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