

District Leverages Technology to Support 21st-Century Learning

Byram Hills Central School District in Armonk, NY, has a goal: to empower teachers and students to leverage technology to support 21st-century learning.

"Students need to be able to effectively use existing and emerging technologies," said Al Lovelace, Building Technology Coordinator at one of the district's two primary schools, Wampus Elementary. "Along with emphasizing 21st-century skills, we are preparing students to navigate cloud applications, interactive presentation tools, and personal devices."

Today, every classroom in the district's four buildings is equipped with cutting-edge technology. It's a big step up from when it used old projector-based whiteboards that were fading, failing, and not meeting the needs of students or teachers.

"A lot of the projectors were getting so dim that you couldn't see the boards very well," said Dr. Andrew Taylor, CIO, Director of Technology and Professional Development. "We knew we did not want to just replace what we had but instead wanted to do things we simply couldn't do with our current technology."

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The district was looking for a solution that had cloud-based applications that worked seamlessly with the 1:1 Chromebooks/BYOD initiative that was implemented.

Out with the Old, in with the New

Although Byram Hills High School has been recognized by Forbes® and Newsweek® as one of the nation's top 100 public schools, the district knew it must prepare for the future. Upgraded technology is key to staying ahead, and four years ago, Taylor and colleagues started making plans for improvement. The district spent 2 years studying their options and piloted several different solutions. After an exhaustive trial, they opted for the Promethean ActivPanel® with an integrated ActivConnect®.

In 2017, Byram Hills benefited from New York's \$2 billion Smart Schools Bond Act, an education technology initiative designed to modernize classrooms and equip students with skills to help them thrive in a global economy. The 2,794-student district combined state funds

with money from its annual technology budget to purchase more than 180 Promethean ActivPanels and other modern technology for its classrooms.

"We narrowed our choice to three vendors, but at the end of the day, selected Promethean because of their forward-thinking approach to education and displays' interactive design," said Taylor. "We were also swayed by the company's strategic outlook as it aligned with where we were headed as a district."

Byram Hills, to narrow its search, established that any new technology investments include a cloud-based platform with connectivity to various classroom devices, including Chromebook™ notebook computers, and be capable of easily transferring data from old systems to new. The school system also sought to move from desktop to cloud-based applications, which ActivInspire® and ClassFlow®, Promethean's suite of lesson-delivery software, provide. The district also required interactive flat panels rather than projectors, which lose brightness as they age. Today, Promethean panels are used in every



Byram Hills classroom for enhanced two-way interaction between students and teachers.

"We're moving to active classrooms where the furniture moves, the people move, and in many cases, the ActivPanel moves and changes with classroom needs," Taylor said. "My goal for technology isn't that it be used every time someone walks into a room, but rather when it benefits the lessons."

Learning Lab Promotes STEAM Skills

Lovelace has been in the trenches of the district's technology progression since he started working at Wampus Elementary as the Building Technology Coordinator in 1999. At the time, however, his duties were more focused on computer maintenance and teaching students how to use keyboards.

Today, Lovelace works to bring interactive learning opportunities to every student. He oversees the school's innovative technology and learning lab, Hub21, where third, fourth, and fifth graders are immersed in STEAM concepts and 21st-century learning skills.

"As a former classroom teacher, I understand how difficult it is to teach everything in the curriculum while trying to fit in other necessary and meaningful experiences," Lovelace said. "Our program gives students a dedicated time and place to focus on STEAM initiatives. Whether it's coding, robotics, digital citizenship lessons, or makerspace challenges, students have many STEAM-focused learning opportunities."

The students explore STEAM concepts with technology such as mounted ActivPanels and littleBits™ Droid Inventor kits, which lets them

build their own Droid and bring it to life while learning and sharpening their coding skills. Their Hub21 experiences are challenging, explorative, and ensure that learning with technology is fun.

Incorporating Technology Improves Interactive Learning

When rolling out its ActivPanels, Byram Hills teachers were immersed in training sessions taught by both dedicated Promethean trainers and a district team of Building Technology Coordinators. Although the learning is ongoing, Taylor has watched staff come to embrace technology as they explore new ways to enhance their lesson plans and make learning time more Interactive.

"We've turned a corner," Taylor said. "Teachers are more willing to take risks, experimenting and figuring out ways to incorporate new technology in the classroom. We're just starting to scratch the surface of using Android™ apps on ActivPanel, and it's exciting to think about the growth we'll continue to see."

So, is Byram Hills Central School District reaching its goal to empower teachers and students to leverage technology to support 21st-century learning? Its students and teachers think so, and the district will continue working to ensure its technology investments continue to support teaching and learning in a modern education environment. "We chose Promethean because of its innovative approach and stay with Promethean because they continue to stay innovative and responsive," Taylor said. "They listen to the needs of educators and make changes based on direct feedback."





