

## In Bucks, teaching technology on the rise

By Kyle Bagenstose Staff Writer | Posted: Thursday, August 28, 2014 1:00 am

If robots roaming across the classroom floor are a telltale sign of a school of the future, then the Centennial School District has arrived.

That's the scene in one of the district's technology education classes, where students work with a robotics product called Lego LittleBits to drum up a variety of creations.

“Students can program (these) miniature robots to complete certain functions and tasks,” said district director of public relations Andrea DiDio. “With LittleBits, students use their knowledge of physics and engineering along with problem-solving to build the robot and design a program.”

But beyond the novelty of little Lego robots navigating a linoleum terrain on their own, districts across Bucks County are making sweeping changes to both infrastructure and curricula to make sure they're well-positioned in the growing information age.

At Centennial, the district has implemented a new learning management system called Canvas, which allows teachers and students to collaborate by sharing and accessing PowerPoints, videos, assessments and a variety of other multimedia.

“This Canvas implementation brings us one step closer to a blended classroom where instruction can happen in a traditional classroom and virtual setting,” DiDio said.

The New Hope-Solebury School District made headlines recently for making technology more ubiquitous, after the school board approved a “one-to-one” program that will give all high school students a Hewlett Packard computer to start the school year.

The \$600,723 price tag for the initiative — which includes a three-year lease for 650 computers — represents a significant investment, but district officials say will position New Hope-Solebury ahead of the curve. The district declined to pursue an option that would have required families to foot a \$50 insurance bill in order to bring the device home, and decided to pick up the tab themselves.

“We believe digital learning is so important,” said Director of Technology Scott Radaszkiewicz, “We didn't want a family to have to choose between the \$50 and having the student be able to bring the device home.”

In the Penridge School District, educators have started the transition to a one-to-one system, with all



Each iPad for classroom use is outfitted with a child-friendly GripCase to protect it.

ninth- and 10th-graders receiving a district-issued laptop, says Matthew Smith, district director of curriculum and instructional technology.

Smith said the district has been taking strides to improve technology in recent years, including measures in its comprehensive plan that led to improvements in infrastructure and the creation of an “extensive curriculum and technology plan” in the 2012-13 school year.

“The plan communicated the details of the hardware and infrastructure required to deliver a program in which every student had access to the resources necessary to ensure effective integration of technology,” Smith said.

Hints of similar technology growth are present throughout the region. In the Souderton Area School District, secondary mathematics students are using Google Chromebooks to engage in Web-based learning activities, while fifth-grade social studies students use the devices to access Google Apps as part of the learning process.

“We received grant funding from Univest to purchase the 15 Chromebooks for each of our middle school classrooms,” said Maryellen Brousseau, district director of curriculum, instruction and assessment. “(These) students can access a Discovery Education Techbook and collaborate with one another using Google Apps for Education.”

Before laptops can be used in the classroom, districts must build the proper infrastructure, often taking the form of expansive wireless networks.

“One of the things we’re doing in Hatboro-Horsham is making substantial upgrades to the wireless network,” said David Weber, director of curriculum for educational programs and assessment with that district. “I know that many, many districts now are in the same boat as us, as mobile technology has exploded onto the scene in the last five years or so.”

Weber said the upgrades to its wireless network eventually will allow for a one-to-one technology policy, if the administration decided to move in that direction.

Wireless network expansion was the theme of the summer for the Central Bucks School District, where Director of Information Technology Ed Sherretta says all of the district’s high schools and middle schools will now be Wi-Fi ready following upgrades made during the break.

Sherretta said the upgrades will be expanded to cover all of the district’s elementary schools by the end of the fall, setting the table for a pilot program that will put 200 iPad tablets in first- and second-grade classrooms in four of the buildings.

“Teachers participating in the pilot program had the opportunity to be trained over the summer in effective use of the iPad in the classroom” Sherretta said. “Assuming the pilot program is successful, iPad use is expected to be expanded to all elementary schools in a three-phase plan.”

The Palisades School District is taking its technology education approach outside school walls. The district has established a Cyber Academy program where students can take a single class up to a full

course load remotely. District Director of Technology Gary Adams says the district anticipates enrolling as many as 40 students in the full-time program, with an additional 150 taking at least one online course.

The program echoes similar initiatives at schools like Penridge, where 80 students are enrolled in cybercourses for Latin and AP European history this fall, and Souderton, where middle school curricula use the Discovery Education “Techbook” to bridge the divide between school and home.

“These new courses are designed to engage students more deeply in their learning, challenging them to generate questions, examine primary sources, access multimedia resources, and collaborate with one another,” Brousseau said.