Your Schools

POWERED BY
TECHNOLOGY

Over the last ten years, the use of computers, word processing, robotics and satellite communication have had a profound change on the world. The result is a need for a more highly educated populace and workforce that is able to understand the technical complexities of modern-day life.

Technology has changed the way students learn and teachers instruct. West Babylon students and teachers understand that learning is now powered by technology and fueled by a forward-thinking curriculum that incorporates technology into all areas of education.

At the start of their educational journey, students are introduced to technology via Smart Boards, where interactive learning takes place right in the classroom. All of the elementary schools have access to a cart of Chromebooks to be used and shared.

This year, elementary students were introduced to coding activities and basic programming skills when they participated in an Hour of Code. Many schools also took part in Computer Science Week, which featured workshops such as looping, robotics and computer coding. The activities reinforced concepts taught in other subject areas by integrating math, English language arts, science and technology standards.

As students progress to the junior high school, technology is offered through courses in the computer lab. The school's media center/library has branched out to allow students to be more creative and collaborative with technology and their peers by implementing Makerspaces, a creative DIY area where students can gather to create, invent and learn.

Many junior high school teachers are using Google Classroom with Chromebooks to aid in communication and collaboration among students. In seventh and eighth grade, the technology course offerings expose students to areas of study such as rocketry, hydroponics, structures, bridges and magnetic levitation. After-school activities – such as the computer and robotics clubs – allow students to further their interests in technology.

High school students now have access to robust course offerings in technology thanks to recent enhancements to the curriculum. According to Katharine Reilly-Johnson, high school technology chairperson, the district wanted to make a commitment to ensure its students were both college- and career-ready.

"We have been focused on creating an ever-evolving, relevant and exciting curriculum for our students," Ms. Reilly-Johnson said. "With this mentality at the forefront of our decision-making, our technology department has transformed into a cohesive work environment. So regardless of which class a student enrolls in, they are receiving a smooth workflow transition as they move into another technology class."

West Babylon has aligned its curriculum with industry-standard technology and has been ahead of the curve with certain technologies. The district brought 3-D printing to the high school four years ago, while many schools are only beginning to introduce that technology into their curricula. Students are solving problems and designing in an entirely new way. They are even printing engineering solutions for areas throughout the high school building.

The high school's technology department clubs and events continue to push the bar in excellence. This year, the Robotics Club entered two teams into the FIRST Robotics Long Island/NYC Regional competition and placed third and fourth out of 25 teams. They also received the sought-after Innovators Award at the event.

The high school's National Technology Honor Society has welcomed more than 75 inductees during the past three years. The entire high school technology department, along with many high school students, attended the districtwide Family STEM Night. High school students showcased their classroom projects and discussed the processes and problem-solving techniques that went into them.

Kindergarten Robots

To work on reading and math skills in her classroom, South Bay tech advisor and kindergarten teacher Alison Chiquitucto utilizes her classroom's five tablets and six Chromebooks daily. She also makes use of the five different classroom robots that are designed to make learning fun and teach coding skills. There are two Ozobots (a tiny robot that expands STEM and computer science learning through a collection of game-based activities and digital apps), a Meccano Mechanoid robot (a build-your-own robot that features 1,000 phrases and voice recognition software), Dot and Dash robots (educational toy robots that help kids learn to code through play) and a Wow-wee robot (an innovative robotic toy).

"All of the technology I use with my students increases engagement and develops problem-solving skills while also teaching computer science," Ms. Chiquitucto said. "My students love having the robots in the room and are always excited when they have the opportunity to use them."
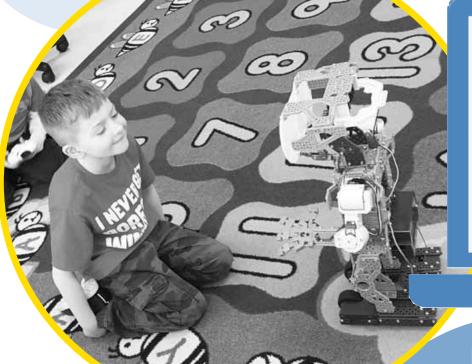
Brain Puzzles

The high school's Design & Draw for Production class is a great introduction to the fundamentals used in the technology department. With a focus on mechanical drawing, measurements, tools and basic production, students are prepared for a variety of other technology courses. Technology teacher Charles Bellino has made Common Core a major focus with his addition of the brain puzzles handcrafted from wood. These projects were very well received by students of all ages at the last two Family STEM Nights. Mr. Bellino's students mass produced them so that they could be distributed as giveaways on STEM Night.

Home-School Connection

To build a strong home-school connection, several first-grade classrooms are using ClassDojo, a classroom management system and communicating app. ClassDojo helps teachers focus on positive feedback and rewards students based on a number of customizable skills and/or behaviors. To engage the students, when a child is rewarded with points, they use the Smart Board to click on their name (the Dojo) and add the points themselves. Parents can see their child's feedback from school in real time and view any comments made by the teacher.

The teacher can share messages, reminders, pictures and videos of what's happening in class to keep parents connected. Parents are encouraged to engage their children in meaningful conversations based on what they see they are doing in class. ClassDojo also gives parents a sense of involvement in the classroom and a glimpse into their children's learning.

Read 180

The special education department at the junior high school uses the Read 180 program, which sets up different zones for students in reading, spelling, word recognition and writing. The program is individualized to meet each student's needs. After logging in to the computer and watching a video that gives them background information on the topic for the segment they are learning, students read a passage that matches up with their own testing range. They answer reading questions and have the capability to switch back and forth between the other zones.

Distance Learning

Recently, high school students participated in a distance learning lesson with scientists and educators from Monterey Bay Aquarium in California. During the 45-minute session, the group of students in grades 9-12 interacted with scientists and educators from the aquarium via Skype and their cell phones, learning about the unique wildlife on the West Coast.

"Distance-learning programs are a unique new way of having students learn without having to travel, and our students were very excited to be able to ask and answer questions in real time," said science teacher Andrea Montalvo.

Teachers Get TECH-SAVVY

Staying up to date on technological trends and new information allows staff to use technology to its full potential. On March 18, the district held a technology conference day, packed with 33 workshops for faculty and staff to find options that best fit their needs. District staff members presented most of the workshops.

Junior High School Principal Scott Payne presented a workshop on 4 Fun Classroom Apps. Attendees learned about apps that integrate with Google such as Plickers (formative classroom assessment); Edpuzzle (inserting questions into YouTube videos); Powtoon (creating animations); and Google Voice/Typing (allowing students to verbally respond to test and homework questions).

Curriculum specialist Jennifer Hoffman presented a workshop on Twitter as a professional tool. Participants learned how to use Twitter as a way to bring authentic experiences to students. It allows educators to share best practices, tap the knowledge of others and provide students with real-world problems at a moment's notice.

Using document cameras in the classroom, effective use of online videos to supplement curricular topics, and computer coding and robotics were just a few of the additional offerings on conference day.

Smart Schools BOND UPDATE

In the November 2014 general election, voters approved a $2 billion capital bond for the purposes of increasing educational technology and expanding classroom space for prekindergarten and high-tech security.

The district was allocated to receive $3.059 million and has developed a Smart Schools Investment Plan. Phase I focuses on expanding the district's technology to enhance collaboration. All instructional areas will be equipped with interactive whiteboards and document cameras.

Demo boards were placed in each of the buildings in January for teachers to test. At the end of January, the district held an in-house showcase of interactive flat panel displays for teachers to share their thoughts and provide input in the final decision-making process.

The district has received approval on its investment plan of $1.96 million from the New York State Education Department and installation will begin this summer.

Design, BUILD, COMPETE

Eighth-grade technology students participated in the annual Maglev competition on March 16 at the Brookhaven National Laboratory. The group of 22 students prepared for weeks leading up to the event, competing against more than 150 students from districts across Long Island.

Maglev (magnetic levitation) is a relatively new topic/project for the students at West Babylon. It uses the basic concepts of magnetism; each side of the vehicle is equipped with magnets that are opposite the polarity of the magnets embedded in the track they move along. The result is a vehicle that "levitates" over a thin layer of air propelled by a variety of possible power sources.

In class, students have the ability to design and build a maglev car in one of five categories. While the vast majority of students chose the appearance and sail-powered categories, a few daring students accepted the challenge of building the more complicated gravity, electrified and balloon-powered cars. During the design and test phases of their vehicles, students are required to incorporate math and science to determine speed, efficiency, aerodynamics and other key features affecting transportation technology.

JHS Technology Department Chairman Anthony Perillo said, "We're proud of our students this year. They put in countless hours of preparation and were able to showcase their math and science skills to conquer the challenges posed by this activity."