Technology in the Woodbridge School District

Woodbridge Board of Education
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Presentation Goal

To highlight recent District advances in technology, including:

- in hardware;
- in the teaching & learning of technology as a special subject; &
- in the use of technology to support the teaching & learning of other subjects.

Segment 1:
Key Hardware Developments

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- Installation & configuration of new desktops
  - 50 desktops in Technology Lab
  - Additional desktops in MakerSpace & STEAM lab
- Deployment of upgraded document cameras for all classrooms
- Deployment of iPads for all Teachers' Assistants

Segment 2:
The Teaching & Learning of Technology as a Special Subject

The Basis of Technology Classes

- All technology classes are based on a combination of:
  - The Connecticut Core Standards;
  - The International Society for Technology in Education (ISTE) Standards; and
  - The Connecticut Computer Science Standards.
- Lessons are scaffolded to create a strong foundation in computer science with a focus on digital literacy, digital citizenship, and coding.

Overview of the Technology Special Curriculum

Grades K & 1:

- Use of hardware
- SMARTBoards, iPads, & desktops
- Database navigation
- Fundamental coding concepts
- Robotics

Grade 2:

- Focus on typing skills
- Hand placement, ergonomics, accuracy, and speed
- Coding reinforcement with Hour of Code activities

Grade 3:

- Use of the G-Suite of products with a focus on formatting and keyboarding
- Coding and robotic integration
- 3D printing

Grade 4:

- Digital citizenship
- Internet and password safety
- Website evaluation
- Artificial intelligence / Machine learning

A Focus on Coding at Beecher

"Seven different studies show: children who study computer science perform better in other subjects, excel at problem-solving, and are more likely to attend college."

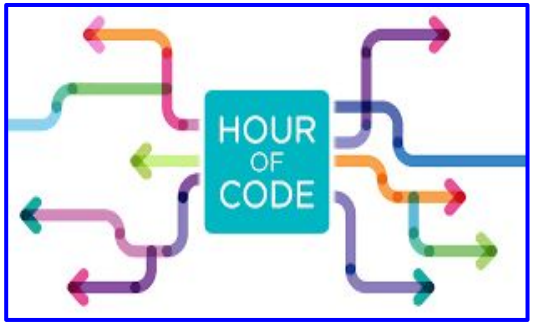
~ Code.org, April 15, 2020

Kindergarten & Grade 1

Kindergarten and Grade 1 are based on understanding the fundamentals of coding concepts. Sequencing, properties, loops, conditions, and functions are taught in a combination of direct lessons. These lessons correlate to everyday routines, explore the program Kodable, and include hands-on application with basic robotics including Ozobots and BeeBot.

Grade 2

Grade 2 students explore coding through Hour of Code activities that expand on coding basics in a fun, engaging way. This helps reinforce background knowledge and prepares students for the independent and group challenges to come.

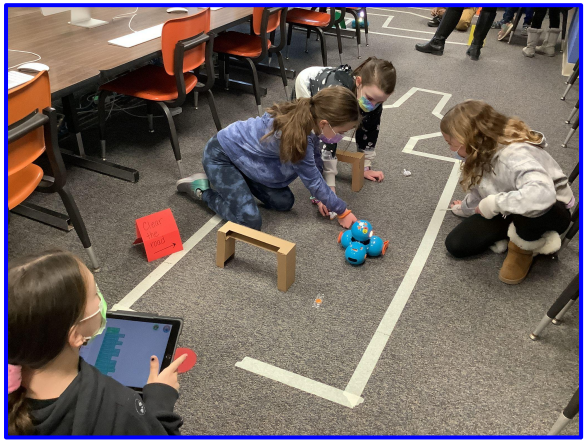


Grade 3: Coding & Robotics Integration

Grade 3 is a robust year. Students focus on many skills, including building on the key concepts of coding taught in Grades K-2.

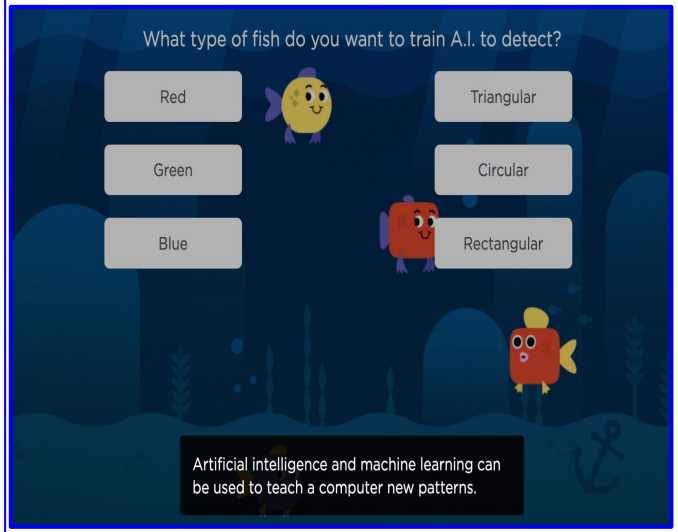
They begin this exploration with a unit on block-based coding using the program Scratch.

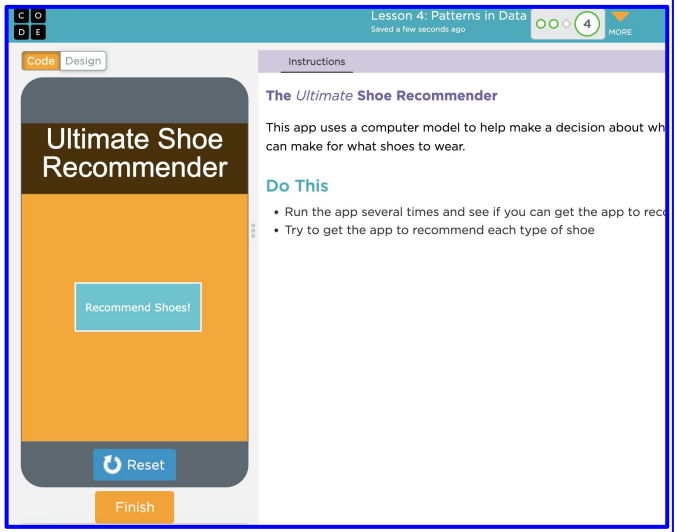
Students then transition to working collaboratively to complete a series of mazes using the Dash Robot. Dash is programmed through block-based coding, which closely mirrors Scratch and allows our learners to experience hands-on application of their coding skills.



Grade 4: The Ethics of Coding & Computing

During Grade 4, students start to explore the ethical implications of coding and computing. Students learn about artificial intelligence and machine learning and how coding is applied to real-world applications.





Grade 5

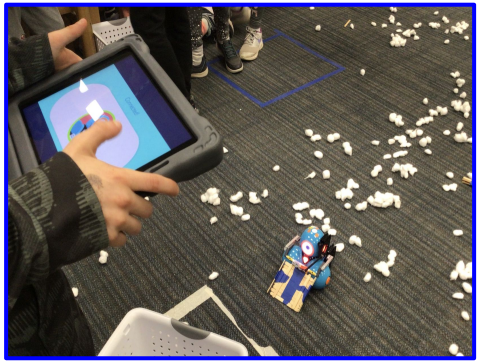
Fifth-grade students were invited into the Lab for the National Hour of Code Challenge!

After directed lessons by the technology specialist teachers on the activities, homeroom teachers continued to support student exploration during Open Lab hours.

Grade 6

Sixth-grade students will have the opportunity to work with circuits and robots during MakerSpace time, a collaboration between the Technology & Library Media Departments. Students will continue to practice block coding and JavaScript during this independent exploration time.

TAG



Grade 4 TAG students were challenged to design and build plows for the Dash Robot, and work together to clear a “snowstorm” that mysteriously happened in the BRS Library Media Center!

Grades 5-6 students used their coding skills to collaboratively create 3D printed vehicles that will soon be raced.

Segment 3:
The Use of Technology to Support the Teaching & Learning of Other Subjects

A Representative Example: Grade 4

- Engaging students through document camera use
- Learning theme through Disney shorts
- Doing science interactively

Future Anticipated Focus Areas

- Continued use of technology specialist teachers in supporting strong technology integration practices
- Sharing of strong technology integration practices across grade levels

Questions?