



# WCSO STEAM TEAM

innovation is a state of mind

Fall 2018 STEM News

Watertown City School District

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WHS Physics and Technology students engaged in a Spaghetti Bridge Competition organized by Tom Joles and John Lachenauer.

Makerspaces are collaborative work spaces for students to explore their interests as they make, learn, and explore. In makerspace activities, some readily available materials such as cardboard and more sophisticated technical equipment including robots and 3D printers are used for inventive projects and challenges. WCSO has also benefited from the use of loanable equipment and kits from the Jefferson Lewis BOCES School Library System.



A fun Maker Challenge in the North Elementary Library with Mrs. Gamage!

## Making News!

Watertown City School District has established makerspaces in each of its school buildings. Makerspaces allow for the blending of do-it-yourself projects with education to yield rich, inquiry-based learning environments. Some of these spaces are in formally established locations, such as libraries and classrooms.



Mrs. Fillhart's 5<sup>th</sup> grade students participated in the Cardboard Challenge.

WCSO Makerspace Advisors include Ginny Arney, Lisa Gamage, Jean Hinckley, Christine Netto, Chad Passage, Debi Smith, and Julie Williams.



Ohio elementary students planted Farm in School grow racks to raise healthy fresh lettuce with advisor Colleen Murphy.

## UPCOMING EVENTS

- 12/14/18 **FFA Breaking Barriers**  
6-8pm Case Gymnasium
- 1/12/19 **Clarkson FIRST Tech Challenge (FTC) Qualifier**
- 1/16/19 **WHS Living Environment Science Fair**
- 1/18/19 **Wiley STEAM Fair**
- 1/19/19 **Clarkson FIRST LEGO League (FLL) Tournament**
- 3/7/19 **Knickerbocker & North Science Fairs**
- 3/14/19 **Starbuck Science Fair**
- 3/29/19 **Sherman Science Fair**

**Attention Staff!** Remember to check [WCSO Empower](#) for professional learning opportunities!

**empower**

*"Making is fundamental to what it means to be human. We must make, create and express ourselves to feel whole. There is something unique about making physical things. These things are like little pieces of us and seem to embody portions of our souls"*

Mark Hatch  
The Maker Movement Manifesto



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## 9<sup>th</sup> Grade SUNY Poly Visit & Manufacturing Day

Manufacturing Day<sup>®</sup> is a celebration of modern manufacturing meant to inspire the next generation of manufacturers. Forty-two WHS freshmen attended this event, at which they learned about advanced manufacturing and related careers in fields such as robotics, computers, nanotechnology, engineering, electromechanical equipment, medical technologies, and more. Many of these career areas are currently in high demand and require 2 years or less of training beyond high school.



Students also received a comprehensive student-led tour of the SUNY Poly Utica campus, which included labs (including robotics and 3D modeling), food service areas, the library, classrooms, and dormitories.



## Breaking News!

Case Middle School's 8<sup>th</sup> grade Team Citizenship, led by Nadine Britton, Jessica Brown, Gary Downey, and Jayson St. Croix was recently in the news because of the student work on the Design a Playground Challenge.

A preschool classroom at the Watertown Learning Center is currently in the process of establishing a new playground, so staff consulted our middle school experts for playground ideas. These students had to contact professionals in related fields of business to develop a nature-based playground plan that met developmental, social emotional, health, and learning needs of preschool children. The proposals had remain within a fixed budget and be in alignment with appropriate laws and codes. In addition to budgets and proposal documents, students developed 3D printed models which were shared in a community forum. The final step was to pitch their proposals in teams to a panel of experts. While developing academic and research skills, students learned to work collaboratively in teams as they shared ideas, researched, developed, and presented their plans.



*Playground design using Tinkercad*

## ADOPT A BEACH



On September 15th, thousands of Adopt-a-Beach volunteers from all over the Great Lakes helped to clean up local beaches and shorelines. Fifth grade students from Diane McCormick's and Stephanie Eldridge's classes served as volunteers in this effort by cleaning up trash along the St. Lawrence River in Clayton. Students learned about the coastal ecosystem and had fun helping the local community.



*A student in Carla Clayborn's 5th grade uses a vacuum kit from the James Dyson Foundation to our classrooms for students to learn about engineering design.*



*Students in Ann Donato's and Ellen Fuller's classrooms participated in Mini-Punkin' Chunkin'.*



*Nine district teams including students from grades 5-12 competed at the JCC Spaghetti Bridge competition on November 9th.*