CANTON STEAM

The Canton STEAM program continues to expand its opportunities and reach in the Canton Public Schools. The program expanded to provide services at all four schools with engaging, STEAM-centered learning opportunities available to ALL students.

Cherry Brook Primary School, K-3	Canton Intermediate School	Canton Middle School	Canton High School
Library Media Space Redesigned to Learning Commons	In addition to a redesign Library Media space, new Instructional Space Designed along with seven common STEM Experiences including 3D design, the engineering design process, computer coding, and digital media.	STEAM Academy Offerings: Submersible Robots - Students created underwater robots in order to compete in a model competition.	Computer Science Principles course developed, promoting a pathway to AP Computer Science Principles
Additions of Robotics to 3rd Grade Media	Science Investigations - A collaboration with CHS Science National Honors Society Teacher and Students providing opportunities in Biology, Chemistry, and Physics	STEAM Academy Offerings: Digital Photo and Video - Students use analog and digital photo and video to create and document learning	Computer Programming provides students with an introduction to object oriented programming, developing a pathway for AP Computer Science
FIRST LEGO League Jr Pilot Team Developed with Future Expansion	FIRST LEGO League - Pilot team developed with future expansion for grades 4-8	STEAM Academy Offerings: Aerospace Engineering - Students developed a series of rockets as they tested aerospace and physics concepts	FIRST Tech Challenge - High school robotics team with increasingly advanced mechatronics and programming.
	Tinker Club - Project based club for innovation, engineering and creativity	Computer Coding Experiential for ALL Seventh Grade Students	CT Electrathon - High school electric car building competition
	Robotics Bootcamp - An Introduction to Basic robotic programming and computer science concepts.	Robotic Engineering offered as an option for ALL Eighth Grade Students	
	FLL Spring Training - A cooperative, project-based engineering, design, and programming challenge.	FIRST LEGO League - Pilot team developed with future expansion for grades 4-8	

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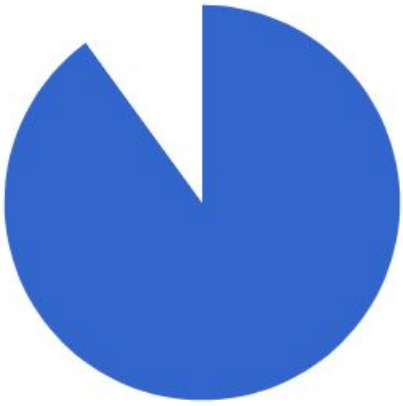
Number of STEAM Participants in Grades 3-12

>200

Favorable Responses of Engagement and Future Interest - >90%



Number of Canton STEAM Offerings

19

Number of Canton Staff Participating in STEAM Offerings

12

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Sample Program Resources

Resource Name	Description	Link	STEAM Field
Code.org	An excellent resources for computer science lessons for students from Kindergarten through High School.	www.code.org	Computer Science
CS First	A Google-based resource of computer science lessons which teach concepts through themes such as fashion and game design.	https://www.cs-first.com/en/home	Computer Science
Mobile CSP	A course developed at MIT teaching computer science principles	http://mobile-csp.org/	Computer Science
SeaPerch	An integrated STEAM learning experience using remotely operated vehicles (ROVs) in the form of student built submarines.	http://www.seaperch.org/index	Science & Engineering
FIRST	A world-wide, multi-leveled robotics competition.	https://www.firstinspires.org/	Computer Science, Tecn & Engineering
Engineering is Elementary	Integrated engineering units ready to embed in school or after school in grades K-8 from the Boston Museum of Science	https://www.eie.org/	Science & Engineering
Citizen Science Center	A repository of outstanding citizen science opportunities	http://www.citizensciencecenter.com/	Citizen Science
Project Noah	A crowd sourced tool to explore and document wildlife	http://www.projectnoah.org/	Citizen Science
Project Learning Tree	An environmental education program designed for schools	https://www.plt.org/	Science
Rocketry Challenge	National rocketry competition	http://rocketcontest.org/	STEM
Stanford Design Loft	Design thinking curriculum from Stanford which incorporates multiple STEAM fields	https://dloft.stanford.edu/dloft-curriculum-units	STEAM
Purdue Epics	Engineering lessons and units developed through Purdue University	https://engineering.purdue.edu/EPICS/k12	Engineering
Yourduino	Electronics and programming through a fun, engaging platform	http://yourduino.com/sunshop//	Tech, Engineering, Art
STEM Challenge	A yearly challenge competition for students	http://stemchallenge.org/	STEM
Try Engineering	Excellent repository of engineering activities	http://tryengineering.org/	Engineering
Hummingbird Kit	An easy to use robotics and programming kit to infuse STEAM concepts	https://www.hummingbirdkit.com/	STEAM
Tinkercad	Free 3D design software for engineering, artistic expression, and 3D printing	https://www.tinkercad.com/	Technology, Engineering, Art
Sparkfun	An outstanding electronics resources with excellent educational offerings for both technical and artistic fields	https://www.sparkfun.com/	Technology, Engineering, Art
Sharespace	Buzz Aldrin's non-profit aimed at increasing student access to and interest in STEM	https://sharespace.org/steam-resources/	STEAM