Exhibits & Workshops Index

Please click on the name of an Exhibit, Workshop or Showcase below for more information if available. And please note that when you see this symbol: wef it indicates that it is a WEF grant in action.

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Z 6 - Gym	FIRST Tech Challenge Robotics Team - A Few Loose Screws
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Makerspace: Design, Innovate and Create	
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Zone 1	Gumdrop Towers - How High Can You Go? - Fiske Elementary
Zone 6 - Gym	Hands on Engineering Education for everyone! - Tufts Center for Engineering Education and Outreach
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Room 174	Make videos on a green screen - WHS Broadcasting Studio
Zone 5 - Floor 2	Make with Montessori - The Riverbend School
Zone 2	Maker space, Building Bridges - Wellesley Middle School
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Rm. 219	Gizmo Playground - WMS wef
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Room 220	How do Circuits Work? Learn with littleBits! - Wellesley Robogals
Zone 1	Is it magic? Nope, just chemistry! - Wellesley Middle School
Zone 1	Optics is everyday life - NES/OSA
Zone 6 - Gym	Science of Figure Skating - Upham Elementary
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Zone 5 - Floor 2	STEM Fun with BALANCE! - STEM BEGINNINGS
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Zone 3	The Phantoms of Electricity: Electrons - CrossPoint Engineering
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Zone 6 - Gym	Watt is Going on?? - MassBay Community College
Zone 3	Absorb, Collapse, Relax! - Exponent

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Room 230	Assemble a Gene - WHS wef
Zone 6 - Gym	Fascia, Nerves, & Quantum Spinal Mechanics - New England Spinal Care
Zone 5 - Floor 2	Join our "Baby & Child Scientists"! - Boston Children's Hospital
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Fantastic Mathematics	
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Zone 1	Driving Innovation - Raytheon Company
Zone 3	Jelly Bean Math: Delicious Problem Solving - Sprague Elementary
Zone 6 - Gym	Make your own secret code! - Olin College of Engineering
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Zone 6 - Gym	Math Detectives: Who's up for the challenge? - Wellesley College
Zone 6 - Gym	Math Spring (an Intelligent Tutoring System) – WPI (Math Spring)
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Rm 239 10:30a, 11:30, 1p	Code Your Own Game! - Coding with Kids
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Rm 240 10:30a, 11:30, 1p	Learn to Code Through Game Design - Microsoft, Natick
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Rm 241 10:30a, 11:30, 1p	WEF Planetarium Show - Wellesley Education Foundation wef
Out. 11a, 1p	WMS Science Olympiad Rocket Launch
Showcases	
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Zone 3	Engaging Young Engineers - PAWS wef
Zone 3	Kindergarten Discovery Zones - Schofield Kindergarten Team and Carolyn Collins, WPS Science Coordinator wef
Zone 3	Outdoor Learning: Supporting Our Teachers - WPS wef
Zone 3	WEF, Weatherbug and the Wellesley Public Schools wef

Keynote Speaker, Auditorium @ 2pm

Dr. Edmund Bertschinger, MIT Professor of Physics, *"Rocking Spacetime: The Discovery of Gravitational Waves from Colliding Black Holes"*

An astrophysicist and cosmologist, Dr. Bertschinger explores cosmology, gravitation, and dark matter. He leads a research program studying galaxy formation, the physics of gravitation, and black holes. His program also studies the physics of dark matter in the early universe and the effects of the big bang on the formation of cosmic structure.

Sustainability Challenge

Students in Wellesley were tasked with conveying how renewable energy (solar, wind, hydro, etc.) might impact their life and the environment in the future. We were impressed with the energy, creativity, knowledge and forward thinking it took to create all of those essays, projects, videos, poems, artwork, songs and more. Stop by the ***Sustainabilty Challenge*** exhibit to see amazing projects. **Award Finalists will be presented at 1:45 PM in the Auditorium and a reception for participants will occur at 3 pm in Room 164.**

CreateAthon

The first Wellesley CreateAthon was an exciting day of project-based learning held on March 25, 2017. A group of 67 middle and high school student participants, supported by 23 high school volunteers, WHS Computer Science teacher Robert Cohen, WEF, and the community, gathered to design and create apps to solve real problems in Wellesley. Stop by the ***CreateAthon*** exhibit to as well as apps designed by WHS students in the Building Android Apps class. **Award winning teams will be recognized at 1:55 PM in the Auditorium.**

STEM Professional Panel for High-Schoolers

Faculty Dining Room, 3 - 4 pm

Are you wondering how to select courses and chart a path that will prepare you for college, grad school, and careers? Hear our panel discuss what schools and employers are looking for, and how you can best prepare for admissions, job interviews, and the 21st century workplace. Bring a friend or parent with you! Q&A will follow panel discussion.

Panelists: **Dr. Jason Kim**, Prof. of Medicine; **Jim Cracraft**, a software engineer; **Liz Callanan**, an executive MBA working in corporate and nonprofit philanthropy; **Dr. Rob Martello**, Assoc. Dean for Curriculum & Academic Programs at Olin College of Engineering; and **Dr. Edmund Bertschinger.**

Exhibitor Index

Click on the name of an exhibitor below for more information about that exhibitor's Exhibit, Workshop or Showcase if available. And please note that this symbol: wef indicates that it is a WEF grant in action.

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Boston Children's Hospital
Boston Dynamics
Brainy Yak Labs
Brandeis U. & Schofield Elementary
Cambridge Science Festival & Science on the Street
Clay Observatory
Coding with Kids
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Olin College – Brightbox
Olin College – App Design
Olin College of Engineering – Secret Code
Olin College of Engineering – Robotic Racecar
Olin - Electric Motorsports
PAWS wef
Raytheon Company
RightHand Robotics
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Schofield Kindergarten Team & C. Collins, WPS Science Coord. wef
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STEM BEGINNINGS
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Tenacre Country Day School
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Thermo Fisher Scientific
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Train Boston Physical Therapy & Train Boston Sports Center, LLC
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WMS Sixth-Grade Science wef
WPI (Math Spring)
WPS Outdoor Learning wef
WPS Weatherbug wef

Exhibit & Workshop Descriptions

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LOCA-TION	CATEGORY	EXHIBIT – EXHIBITOR	AUDIENCE	EXHIBIT DESCRIPTION
Zone 3	Chem. & Physics	**Absorb, Collapse, Relax! - Exponent**	K-2,3-5,6-8,9-12	At Exponent's consulting exhibit, we will allow you to discover how materials and devices transform in response to dynamic environments. Come play with our super-absorbent powder, watch balloons collapse in the presence of liquid nitrogen, and tinker around with an actual vehicle crash-test dummy. Aspiring scientists, technologists, engineers, and mathematicians of all ages are welcome!
Zone 5 - Floor 2	Fantastic Mathematics	**An MIT cryptography lesson adopted for students - Foundation Ceibal**	6-8,9-12	https://blossoms.mit.edu/news/stories/blossoms_cryptography_lesson_adapted_"strong_women_strong_girls'_jump_spring"_event
Room 231	Living Things	**Animal Surgery - Hancock Animal Hospital, LLC**	K-2,3-5,6-8,9-12	Hands on basic surgery exhibit with a surgery video, X-rays, and surgical instruments to experiment with.
Zone 2	Our planet & beyond	**Aquaponics: Another Fish Story - WHS Evolutions Program** wef	6-8,9-12	The four basics of this sustainable food system are a tank for fish, growing bed(s) for plants, plumbing to connect them and electronics to circulate water. This demonstration is 10 gallons, but an aquaponics system can be scaled up keeping the many bene
Zone 6 - Gym	Science of Being Human	**Are You At Risk Of Injury? INJURY RISK SCREENING - Train Boston**	6-8,9-12	Train Boston Physical Therapy Inc. and Train Boston Sports Center, LLC will be performing FREE Injury Risk Screens. Participants will receive printed test results and advice from Train Boston's Physical Therapists. Come Train With The Pros!
Room 230	Science of Being Human	**Assemble a Gene - Wellesley High School** wef	K-2,3-5,6-8,9-12	Come assemble a gene using our brand new DNA kits, courtesy of WEF. These interactive, manipulative kits allow users to create the building blocks of DNA using specially designed plastic pieces (think nucleotide legos), then link them together to illustr
Zone 1	Chem. & Physics	**Augmented Reality Sandbox - Cambridge Science Festival & Science on the Street**	K-2,3-5,6-8,9-12	Dig in to the coolest sandbox you've ever seen! This interactive topographic map changes elevation colors and contour lines in real-time as you build. Also, a simulated water feature demonstrates watersheds.

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Zone 6 - Gym	Coding & Tech.	**Automatic Handwritten Equation Recognition - Brandeis University and Schofield Elementary**	3-5,6-8,9-12	This demonstration will show an Artificial Intelligence system that is capable of recognizing handwritten equations. The system is based on Machine Learning that enables computers to learn from examples.
Room 243	Workshop	**Backyard Alchemy: The Merits of Composting - Bootstrap Compost**	6-8,9-12	This workshop aims to cover the larger societal and environmental merits of diverting organics from the traditional waste stream, while touching on the basics for maintaining a backyard composting operation. We will discuss the proper way to compost, what
Room 250	Makerspace	**Balsa Bridges & High Speed videos - Wellesley High School** wef	6-8,9-12	The high school's new Engineering Physics elective built balsa bridges and tested them using a high speed video camera to capture the bridge as it collapsed under a load.
Room 156	Robot Zoo	**Botball Team at Work - WHS Robotics Club**	K-2,3-5,6-8,9-12	Come see the WHS robotics club working on their BotBall project
Zone 3	Chem. & Physics	**Brightbox - Fun optics activities! - Olin College**	K-2,3-5,6-8,9-12	Brightbox is an educational toy and curriculum that can be used to teach optics. It is a light ray projector powered by solar panels. Students may use different lenses, prisms, and other objects to manipulate the light beams and understand how light travels. Brightbox comes with a box of accessories of lenses, prisms, mirrors, and other objects. Teachers may use Brightbox to teach existing curriculum as well as the curriculum we have designed. Our curriculum includes the journey of a baby elephant and many more puzzles to be solved.
Zone 2	Our planet & beyond	**Build your own river! - Wellesley College**	6-8,9-12	Come and build your own river in a huge sandbox. Change sea level, build dams and plant vegetation and explore how your river changes.

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Zone 2	Our planet & beyond	**Clean Water in Your Cup! - Wellesley Natural Resources Commission**	K-2,3-5,6-8,9-12	Visit our tabletop model town, create a toxic spill from a gas station or factory, and watch where the contamination flows! You'll be surprised at how easily contaminants get carried over our lands, end up in our ponds, and perhaps even into our drinking water. Learn what can be done to help.Especially relevant as Wellesley gets 80% of its drinking water from our two underground aquifers. All ages can participate in this hands-on educational demonstration.
Zone 3	Makerspace	**Code a Dance Party Lamp! - Brainy Yak Labs**	3-5,6-8	Create a pulsing dance party light show by coding a special lamp! Hack Arduino code to control the colors and flashing patterns of an LED lamp. Learn how mixing colors with light is different than mixing paint. Then watch as your custom light show is splashed onto the walls!
Room 239	Workshop	**Code Your Own Game! - Coding with Kids**	K-2,3-5	Do you play games and wonder how they are created? Join us for a Coding with Kids workshop! We will be building a fun game using Scratch, an online drag-and-drop programming environment developed by MIT. Using core coding concepts, such as loops, , conditionals or variables, we will have fun making characters fly, chase each other, leave colorful trails in the sky, and more! Your friends and family will love it when you play your game with them after the workshop. Imagine, create, play! (Computers will be provided.)
Zone 4	Showcase	**Comparative Planetology - WHS**	K-2,3-5,6-8,9-12	Showcase of student work
Zone 1	Living Things	**Compost Odyssey - Land's Sake Farm**	K-2,3-5,6-8	Come on a compost journey along with a crew of micro and macro-organisms! Learn how composting turns kitchen and farm "waste" into productive soil, delicious veggies, and a rich habitat for our farm and garden communities.

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Zone 6 - Gym	Robot Zoo	**Cool and Practical Robots - iRobot**	K-2,3-5,6-8,9-12	iRobot designs and builds robots that empower people to do more. The company's home robots help people find smarter ways to clean and accomplish more in their daily lives. iRobot's STEM program is a resource for students, parents and educators to share in the excitement surrounding the robotics industry. Learn about the many career paths available when you study engineering. Come see how the robots work, the engineering science behind the robot and get a chance to interact with the robots up close and personal.
Room 108	Workshop	**Creating Culinary Masterpieces through Food Science - Little Chefs**	K-2,3-5,6-8	We will perform cooking demonstrations on how to use science and math to create culinary masterpieces.
Room 242	Workshop	**Design and Launch your DNA Experiment - Genes in Space**	6-8,9-12	Genes in Space is a national science competition where students in grades 7-12 design authentic DNA research proposals. Winners have their experiments launched to the International Space Station! In this workshop you will discover how you can pioneer critical DNA research in space to advance our capabilities for human space travel and deep space exploration. You will learn the basics of the polymerase chain reaction (PRC), the technique essential to all Genes in Space proposals, and have a chance to brainstorm Genes in Space ideas. Genes in Space submissions are due on April, 21st 2017. For more information about the contest, find us on the web at www.genesinspace.org.
Zone 5 - Floor 2	Makerspace	**Design Challenge - STEAM Startups! - Epiic Solutions**	6-8,9-12	Learn how STEAM Startups use entrepreneurship, innovation and design to develop creative products and services! Hear about awesome summer opportunities to explore STEAM Startups in Boston!
Zone 2	Food	**Design/Tech Challenge: Growing Hydroponically – Wellesley Middle School**	6-8	Wellesley Middle School Eighth Grade Design and Technology students are posed with the following challenge: Within the confines of the WMS greenhouse, design/build a sustainable system to responsibly grow, maintain, market, process and deliver the maximum quantity of high quality food to feed students at WMS.

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Zone 6 - Gym	Makerspace	**Don't Feed the Bears! Design and construct finish to 12ft ski jump - Explo**	3-5,6-8,9-12	Explo's display features a 12 ft., mountain with a ski jump. Skiers are already on their way to the top but the bottom of the jump IS UNFINISHED! Construct a proper take off and deliver your skier to "The Blue Line" for a safe landing. Make sure to avoid the trees and never-ever feed the bears!
Zone 1	Fantastic Mathematics	**Driving Innovation - Raytheon Company**	6-8,9-12	Raytheon is a $24 billion worldwide engineering company (HQ in Waltham). We are committed to support our local community with STEM events (MMU, MathCounts & STEM EXPO) and education grants and scholarships. Please contact our Raytheon Community Relation
Zone 3	Showcase	**Engaging Young Engineers – PAWS** wef	K-2	A trifold poster board sharing photographs and examples of the use of materials provided by a Preschool WEF grant. The grant allowed us to supply preschool classrooms with age appropriate STEM materials, including robots and science exploration materials.
Zone 5 - Floor 2	Makerspace	**Engineer A Balloon Powered Vehicle - Tenacre Country Day School**	6-8,9-12	Build a balloon powered vehicle that travels 100cm. Visitors will design, build and test vehicles.
Zone 2	Our planet & beyond	**Engineering & Erosion: Become a Coastal Engineer! - New England Aquarium**	3-5,6-8	Step into the shoes of coastal engineers! Tackle the issue of coastal erosion and gain hands-on experience with the engineering design process. Groups will plan, test and refine their solutions to limit the erosion of sand from their own section of simulated coastline.
Room 215	Living Things	**Environmental Education and STEM - Mass Audubon/Drumlin Farm**	K-2,3-5,6-8	How can Science, Technology, Engineering, and Math be tied into outdoor environmental progams? Talk with our Teacher Naturalist from Mass Audubon's Drumlin Farm and meet a wild ambassador.

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Zone 6 - Gym	Robot Zoo	**Experience your own robot avatar - Vecna**	6-8,9-12	VGo is the name of Vecna Technologies, Inc's Telepresence robot. VGo enables you to be in two places at the same time. Your VGo avatar can be half way around the world interacting with new people while you are physically here in the Boston area. Your robot is you. Your face appears on the robot, and you can interact with other humans as if you were actually there. Imagine your robot avatar going to a class, a museum, conference, hospital, or any other location without you leaving your living room. Glimpse into the future of communication by test driving a VGo.
Zone 6 - Gym	Robot Zoo	**Explore the Formula SAE Electric Vehicle - Olin Electric Motorsports**	6-8,9-12	We are an undergraduate organization at Olin College of Engineering focused on educating young engineers about the development and manufacture of electric vehicles. Our mission is to create an environment where students can design, analyze, and manufacture a large scale interdisciplinary engineering project. Formula SAE Electric provides a rigorous framework for us to meet this goal. It is our belief that building a vehicle for these competitions will be one of the most challenging, engaging, and complex projects our members will ever work on.
Room 238	Workshop	**Explore the World of Coding - jrCode**	K-2,3-5	Join jrCode's Coding Coaches as they run through a variety of coding challenges.
Zone 6 - Gym	Science of Being Human	**Fascia, Nerves, & Quantum Spinal Mechanics - New England Spinal Care**	3-5,6-8,9-12	Discover the new web like work of fascia now called the organ of structure in the body, Nerves and a new view of the body and healing...
Zone 6 - Gym	Robot Zoo	**FIRST Tech Challenge Robotics Team - A Few Loose Screws**	6-8,9-12	We are a high-school robotics team competing in the FIRST Tech Challenge competition. We spend several months designing, building, and programming a robot to complete various tasks.

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Zone 3	Makerspace	**Fun with 3D Printing and 3D Scanning! - Toysinbox 3D Printing**	K-2,3-5,6-8,9-12	3D printing is the future. Come and enjoy this amazing technology and get some hands-on experience! We will help you 3D print an object that you can take home. It is also a great fun to examine the 3D objects we 3D printed. If you still have time, you may want to try our 3D scanning to get a 3D model of yourself. Toysinbox demo tables (& after-school programs, workshops, vacation programs, birthday parties and 3D printing shows) are great for anyone to explore the amazing 3D printing world!
Zone 1	Coding & Tech.	**Fun With MATLAB! - MathWorks**	6-8,9-12	Have you ever wanted to: • Make your math/science homework easier? • Play cool tricks with images and videos? • Learn how to program a robot to operate on its own? • Build your own device to do whatever you want with Raspberry Pi (that's not a dessert
Zone 6 - Gym	Chem. & Physics	**Get Your Hands on a High Powered Rocket! - Edge on Science**	3-5,6-8,9-12	See the innards of a one third scale Nike Smoke rocket. NASA used this rocket to study the upper atmosphere in the 60s. Learn all about parachute recovery, the transfer of thrust, payloads and more!
Room 219	Chem. & Physics	**Gizmo Playground - Wellesley Middle School** wef	3-5,6-8,9-12	Come explore the online science simulations that Wellesley Middle School students use to support learning in their science classes! Gizmos allow students to explore content on a deeper level than can be provided by labs alone. There are gizmos for almost any topic you want to learn more about! Come unlock your curiosity and play around in our virtual laboratory.
Zone 1	Makerspace	**Gumdrop Towers - How High Can You Go? - Plus Conservation of Momentum Experiments - Fiske Elementary**	K-2,3-5,6-8	Come experiment and learn how to build the tallest toothpick and gumdrop tower. Are squares or triangles stronger? What is the most efficient structure? All participants can take their tower home.

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Zone 6 - Gym	Makerspace	**Hands on Engineering Education for everyone! - Tufts Center for Engineering Education and Outreach**	K-2,3-5,6-8,9-12	Tufts University's CEEO is a leader in "improving education through engineering" for K-12 and university classrooms. The fundamental belief motivating our education research, educational technologies, and outreach is that this integration helps students develop critical skills and improved excitement for learning, leading to wider technical literacy, higher quality of life, and greater environmental responsibility awareness. We are now offering an online Certificate called Teacher Engineering Education Program, teep.tufts.edu
Zone 6 - Gym	Chem. & Physics	**Hands-On Fun - The Discovery Museums**	K-2,3-5	Experience table-top versions of the many hands-on learning exhibits you can find inside The Discovery Museums in Acton. Adults and children can play together with magnets, sound, light and more.
Zone 2	Our planet & beyond	**Home Energy Losses: An Infrared Image - Wellesley Saves and HomeWorks Energy**	3-5,6-8,9-12	Wellesley Saves and HomeWorks Energy are working together to help educate Wellesley residents on the benefits of the Mass Save program. Using our infrared camera, see in live colors how much energy your home could be losing due to inadequate insulation, drafty windows and doors, and more!
Zone 5 - Floor 2	Living Things	**Honey DNA and Urban Beekeeping - The Best Bees Company**	6-8,9-12	The Best Bees Company wants students to better understand the honey bee. Our beekeepers will help you discover the plants bees pollinate in Massachusetts through our Honey DNA project.
Zone 6 - Gym	Chem. & Physics	**Hovercrafts and more! - WMS Science Olympiad Team** wef	6-8	The WMS Science Olympiad team will demonstrate several of the events they competed in at the state meet in March. Middle school students compete in 23 events as a team. Events showcased may include hovercraft, scrambler, mission possible , towers and wright stuff. Come and see how much fun this team is! It is open to all WMS middle school students and runs from October until the state meet in March each year.
Room 220	Chem. & Physics	**How do Circuits Work? Learn with littleBits! - Wellesley Robogals**	3-5,6-8	Robogals is a student-run organization that aims to increase female participation in engineering, science, and technology through educational activities.

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Zone 3	Makerspace	**Innovation Lab - Fay School**	K-2,3-5,6-8	A range of design and technology products at Fay School.
Zone 1	Chem. & Physics	**Is it magic? Nope, just chemistry! - Wellesley Middle School**	K-2,3-5,6-8	Come join WMS eighth grade students as they walk you through a chemical reaction in a zip lock baggie! You will learn about chemical reactions and how you can tell when one is happening.
Zone 3	Fantastic Mathematics	**Jelly Bean Math: Delicious Problem Solving - Sprague Elementary**	K-2,3-5	Math worksheets using small cups of jelly beans to facilitate problem-solving. Two different difficulty levels geared towards elementary school level math abilities.
Zone 5 - Floor 2	Science of Being Human	**Join our "Baby & Child Scientists"! - Boston Children's Hospital**	K-2,3-5,6-8,9-12	Do you ever wonder how your child learns about and experiences the world? Boston Children's Hospital's Translational Neuroscience Center has a growing research program, with dozens of studies looking at childhood development from infancy through adulthood. Our goal is to gain a better understanding of the healthy development of children and improve outcomes for children and families with conditions such as autism, ADHD, epilepsy, sleep disorders and many others.
Zone 3	Showcase	**Kindergarten Discovery Zones - Schofield Kindergarten Team and Carolyn Collins, WPS Science Coordinator** wef	K-2	The exhibit is a poster containing photographs of students using science materials that were purchased through a WEF grant (Fall, 2014)
Zone 1	Our planet & beyond	**Learn How to Waste Watch - Bates Elementary**	K-2,3-5,6-8,9-12	Curious about what kids throw away during school lunch? Worried about plastics in the environment and food waste? Allow Bates' eye-opening cafeteria waste assessment and their recycling and food recovery pilot to shed some light on how you can practice sustainable materials management.
Room 240	Workshop	**Learn to Code Through Game Design - Microsoft, Natick**	6-8	Explore coding for middle-school aged students through fun hands-on game design activities. From Kodu to Flatverse, TouchDevelop to Hour of Code, explore ways in which the Microsoft Store is engaging students in STEM.

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Zone 6 - Gym	Robot Zoo	**Lend us a Hand - Test our Robotic Grippers! - RightHand Robotics**	K-2,3-5,6-8,9-12	RightHand Robotics makes robotic grippers and tactile sensors used by robotics researchers all over the world. Come help us test our grippers and see how they are made!
Zone 2	Living Things	**Let's Talk About Trees! - NRC - WHS Evolutions program** wef	K-2,3-5,6-8,9-12	Wellesley's urban tree canopy is a priceless natural resource and needs our protection. Learn how to ID local trees in your yard, take care of them and even adopt a seedling to add to our town's Tree City USA status.
Room 174	Makerspace	**Make videos on a green screen - WHS Broadcasting Studio**	K-2,3-5,6-8,9-12	Come to the WHS Broadcasting Studio so make a video on the green screen
Zone 5 - Floor 2	Makerspace	**Make with Montessori - The Riverbend School**	K-2,3-5,6-8	View, demo and test design technology projects created by Montessori students grades 2-8 in Riverbend's dLab! Program robots, play a DIY Launchpad, create robotic art and more through this STEM-infused student showcase.
Zone 6 - Gym	Fantastic Mathematics	**Make your own secret code! - Olin College of Engineering**	K-2,3-5	From Julius Caesar's famous secret code used in the first century B.C., to the secure systems used today for online shopping, people have been figuring out ways to communicate secretly with each other for thousands of years. The study of making and breaki
Zone 2	Makerspace	**Maker space, Building Bridges - Wellesley Middle School**	3-5,6-8	I will be setting up a small demonstration of the bridge building we do in seventh grade, talking about basic structures and materials science.
Room 219	Our planet & beyond	**Man in the Moon?! - WMS Sixth-Grade Science** wef	3-5,6-8,9-12	Use a GIZMOS computer simulation to learn about why there are phases and what the phases of our closes celestial neighbor, the moon are.
Zone 6 - Gym	Robot Zoo	**Mass State Police Bomb Squad - Mass State Police Bomb Squad**	K-2,3-5,6-8,9-12	Mass State Police Bomb Squad
Zone 1	Fantastic Mathematics	**Math Casino - RSM Wellesley**	K-2,3-5	Logical problems, prizes for solving.

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Zone 6 - Gym	Fantastic Mathematics	**Math Detectives: Who's up for the challenge? - Wellesley College**	3-5,6-8	Math Professor Ann Trenk and some of her Wellesley College students will guide participants as they explore ideas in mathematics using hands-on models. Can you figure out the colors of M&M's in a sealed envelope with a few clues? Can you cut a pizza into 11 pieces with just 4 cuts? Can you figure out how to tile a board with L-shaped tiles? Come play with our models and explore these and other mathematical questions.
Zone 6 - Gym	Fantastic Mathematics	**Math Spring (an Intelligent Tutoring System) – WPI (Math Spring)**	6-8,9-12	Math Spring is an intelligent tutoring system, which is especially valuable as MCAS\PARCC approaches ! All of our math problems are aligned to the common core standards, and we know that it improves MCAS\PARCC performance according to research studies.
Room 226	Robot Zoo	**Meet the Robots, Lava & Sky! - Wellesley Free Library**	3-5,6-8,9-12	Drop by to see Lava and Sky, Wellesley Free Library's NAO robots, in action! These humanoid robots are high-tech ambassadors that bring digital literacy to life. Curious? Explore the world of STEM and catch the excitement by observing and interacting wi
Zone 3	Living Things	**Meet the Succulents - Wellesley College Botanic Gardens**	K-2,3-5,6-8,9-12	Meet some plants that can really defend themselves! Take a close look at succulents from the Wellesley College Botanic Gardens collection and discover the various ways they have adapted to harsh desert environments around the world.
Zone 3	Our planet & beyond	**Meteorites, R2D2 Robot, Segway, and more! - Clay Observatory**	3-5,6-8,9-12	Ride a Segway, meet R2D2, weigh yourself on Jupiter, touch a rock from outer space, and more. Learn how you can visit the largest public-accessible observatory in greater Boston.
Zone 5 - Floor 2	Coding & Tech.	**Minecraft in Education - Saint John School**	K-2,3-5	Our 4th grade students created a solution that would reduce the impact of geohazards (earthquake, landslide, tsunami, and volcanic eruption) and built a prototype using the Minecraft App.
Zone 2	Our planet & beyond	**Oceanography Lab, Drive an ROV - Hardy Elementary**	3-5,6-8,9-12	
Zone 6 - Gym	Coding & Tech.	**Olin Students Talk App Design - Olin College**	3-5	We are a student team at Olin College working to expand Insulet Corporation's iPad application, Toby's T1D Tale, for children diagnosed with type 1 diabetes. Visit our table to learn about the design process for mobile applications and play with our prototypes!

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Zone 1	Chem. & Physics	**Optics is everyday life - NES/OSA**	3-5,6-8,9-12	New England is home to one of the largest collections of companies using optical technology to solve problems in medicine, information display, consumer products and defense. The New England Optical Society explores the science and engineering of optics t
Zone 3	Showcase	**Outdoor Learning: Supporting Our Teachers – WPS** wef	K-2,3-5	A trifold poster board sharing details of a WEF grant for professional development. The grant allowed us to provide full day training with staff from MA Audubon for all K-5 teachers. Poster on WeatherBug Grant
Zone 6 - Gym	Robot Zoo	**Pet Robotic animals, test video games - Empow Studios**	K-2,3-5,6-8	Empow Studios brings technology, arts, and play together to help young learners discover and build on their creative talents. Program locations in Back Bay, Belmont, Brookline, Cape Cod, Lexington, Newton, and Westford.
Zone 1 and Outside	Our planet & beyond	**Power To Choose Campaign - Wellesley High School**	K-2,3-5,6-8,9-12	Choose renewable energy. Support Wellesley's goal to reduce CO2
Zone 6 - Gym	Robot Zoo	**Program a Robot - Schofield School** wef	K-2,3-5	Can you program a robot to navigate an obstacle course, move in a rectangle, or do the Hokey Pokey? Drop by for a robot challenge!
Room 158	Makerspace	**Record breaking ball machine, our new laser engraver, scratch built computer, revolutionary highway improvement and more! - Wellesley High School STEM Club** wef	K-2,3-5,6-8,9-12	Come see what interested high schoolers can do with some time and a few tools. Showcase includes a segment of our record breaking ball machine, our new laser engraver, scratch built computer, revolutionary highway improvement and more!
Zone 6 - Gym	Robot Zoo	**Robots that walk and run - Boston Dynamics**	K-2,3-5,6-8,9-12	Talk to our robotics engineers, see cool parts from real Boston Dynamics robots, and get a chance to control a real working robot.

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Zone 5 - Floor 2	Science of Being Human	**Saving Lives with Simulation - Newton-Wellesley Hospital**	6-8,9-12	Simulation staff from the Shipley Medical Simulation Center at Newton-Wellesley Hospital will share how simulation is used to train healthcare providers at our hospital. We will demonstrate an interactive CPR training mannequin. This technology provides real-time objective feedback to the learner, which improves the quality of the resuscitation effort.
Zone 3	Food	**Science is -321 Degrees Cool! - Subzero Ice Cream & Yogurt**	6-8	We explain the science of how we make our ice cream with liquid nitrogen and we will provide samples of ice cream. We also will talk about the Ideal Gas Law, pressure, evaporation and condensation through several visual experiments.
Zone 6 - Gym	Chem. & Physics	**Science of Figure Skating - Upham Elementary**	K-2,3-5,6-8,9-12	Ice skaters are not only talented on the ice, but they also have a great understanding of physics as the jump, twist and spin. If you've ever seen an ice skater start to spin slowly on the tip of their skate and then speed up into an incredible blur of a spin, the secret is pure science.
Zone 3	Food	**Science of Fries - VEGGIE FRIES**	K-2,3-5,6-8,9-12	Frozen Healthy French Fries made with a blend of vegetables, white beans and potatoes. Veggie Fries are Non-GMO verified, GF, Vegan and Free of the Top 8 allergens. You can find them in your local Whole Foods, Roche Bros, Wegmans, Stop and Shop and Big Y.
Zone 6 - Gym	Makerspace	**Sew Electric - WMS**	K-2,3-5,6-8,9-12	Come see the Sew Electric Club working on their project
Zone 6 - Gym	Robot Zoo	**Snapping Snake, Bottle-Flipping & Other Robots – WMS** wef	3-5,6-8	Students exhibits will include a snake that slithers & snaps at its' prey, a robot that can flip a bottle, and other projects currently being developed.
Room 248	Makerspace	**Solarplate Printmaking - WHS Art Department** wef	6-8,9-12	Come see a WEF Grant come to life with Solarplate Printmaking
Zone 1	Chem. & Physics	**Spin Doctor - Thermo Fisher Scientific**	K-2,3-5,6-8,9-12	We will conduct an experiment to figure out what a certain liquid might be and how we can centrifuge it to find out.

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Zone 6 - Gym	Robot Zoo	**StandX: Robotic Chair - Robilis**	K-2,3-5,6-8,9-12	Come sit on the world first smart chair, StandX. It is robotic and removes all the sitting related problems - back pain, bad posture, diabetes just to name a few.
Zone 5 - Floor 2	Chem. & Physics	**STEM Fun with BALANCE! - STEM BEGINNINGS**	K-2	The children will learn about balance, simple levers and fulcrums, as they explore different Balancing challenges - using a Bongo board, a balance scale, balance games and creating a balancing parrot or dolphin.
Zone 3	Our planet & beyond	**Sustainability Challenge Entries - Sustainability Challenge**	K-2,3-5,6-8,9-12	Come see how renewable energy (solar, wind, hydro, etc) might impact our lives and the environment in the future.
Zone 6 - Gym	Robot Zoo	**Take control of NASA's Valkyrie humanoid robot - UMass Lowell**	6-8,9-12	Students will have the opportunity to use the HTC Vive virtual reality headset to remotely operate NASA's Valkyrie humanoid robot. Valkyrie is 6 feet tall, weighs 300 pounds, and lives at the UMass Lowell NERVE Center. Video of the robot moving and the vi
Zone 3	Chem. & Physics	**The Aerodynamics of Kites in Flight - KitingUSA.com**	6-8,9-12	The aerodynamics of flight is broken down for everyone to understand. See kites flying indoors with examples and demonstrations that bring this topic to life with dramatic clarity. Test a kite yourself because kites are a perfect example of cross-disciplinary and multi-cultural STEM.
Room 216	Living Things	**The Chicken: Our Friend and Food - Natick Community Organic Farm**	K-2,3-5	Come meet a chicken from the Natick Community Organic Farm and learn everything about this wonderous bird, including why some eggs have chicks and some eggs are just good for eating; what is a "pecking order?"; and what the value is of a good dust bath. If you've ever considered hatching your own chicks, we'll have an incubator to show how it might be done.
Zone 6 - Gym	Robot Zoo	**The Mystery Machine: An Autonomous Robotic Racecar - Olin College of Engineering**	6-8,9-12	The Mystery Machine is an autonomous race vehicle that can map the world around it in order to safely drive around people and other obstacles. Come learn how autonomous vehicles drive and see the world around them!

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Zone 3	Chem. & Physics	**The Phantoms of Electricity: Electrons - CrossPoint Engineering**	3-5,6-8,9-12	Ever wonder how electricity works? Come experience how electricity works through hands-on exposure to voltage, current, resistance, magnetic force and batteries. Fundamental principles of electricity will be brought to life, including Ohm's Law, Faraday's Law, Maxwell's Law and Lenz's law. This is a very interactive exhibit designed for all ages . On display are the following apparatus: a Van de Graf generator, a Tesla Coil, a Plasma ball, a Wimshurst Machine, a working Homopolar motor , a Homopolor Motor train, a Variable frequency drive , and a Watts balance. The range of exhibits and equipment is designed to "spark" interest in the science of electricity.
Zone 6 - Gym	Chem. & Physics	**The Science of Bottle Flipping - Hunnewell Elementary**	K-2,3-5	There is a recent craze of water bottle flipping among kids with success being the bottle landing upright or on it's cap. The science and physics of water bottle flipping is relatively complex. In this exhibit we will highlight the reasons why different types of bottle flips are more or less successful and the the probability of the various outcomes.
Zone 3	Living Things	**The Science of Plant Pollination - Bates Elementary**	K-2,3-5,6-8,9-12	Why do plants make flowers? How do flowers turn into fruits? And how would you catch a bee using only your mouth? Learn the science behind flowers, pollination, and fruits.
Zone 1	Living Things	**The Wild World of Plants - Mass Hort**	K-2,3-5	Take a look at incredible plants from all over the world, and learn how you can grow your own at home.
Zone 1	Science of Being Human	**Think Like a Scientist: MEDscience Program - HMS MEDscience**	9-12	The mission of HMS MEDscience is to address the inspiration gap in high school STEM education by providing opportunities that enhance the necessary 21st century skills for students' success in their academic and future careers. The cornerstone of our program is the medical simulator patient, STAN. He can breathe, talk and have a pulse, allowing our students to have an immersive hands-on experience where they can critically think, problem-solve and utilize teamwork skills to diagnose the patient's medical emergency. Our program has a history of producing substantial outcomes in exposing our students to STEM, inspiring them to pursue the field and enhancing the 21st century skills necessary for academic and career success.

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Zone 6 - Gym	Robot Zoo	**Tiny Robots, Squishy Robots, and More! - Harvard Microrobotics Lab**	6-8,9-12	Come see our cutting edge robotics research - tiny robots that fly like insects, robots that fold themselves, and robots that give deep-sea creatures hugs!
Zone 1	Science of Being Human	**Understanding Diabetes & Obesity Using Mice - University of Massachusetts Medical School**	K-2,3-5,6-8,9-12	This exhibit will highlight the basic facts and important relationship between diabetes and obesity and how researchers investigate using genetic mouse models. Beneficial role of healthy diet and exercise will also be emphasized. There will be hands-on activities to experience simple lab procedures including gene mapping and a display of obese and exercising mice.
Zone 1	Makerspace	**Watch 3D Printers in Action - Wellesley Education Foundation**	K-2,3-5,6-8,9-12	Stop by to watch 3D printers in action and pick up a commemorative Wellesley STEM Expo Bracelet
Zone 6 - Gym	Chem. & Physics	**Watt is Going on?? - MassBay Community College**	3-5	Students will experiment with closing circuits using various conductive materials. They will also experience electro magnetism to float a magnet through an aluminum tube. They will have to figure out watt is going on?
Zone 6 - Gym	Robot Zoo	**WE LOVE DRONES! - Sat-Drones**	9-12	This exhibit will show to WHS students the thrill of riding a drone for fun! The activity is offered by Sat-Drones, a company that deals with integration of data, mostly from satellites and drones.
Zone 3	Showcase	**WEF, Weatherbug and the Wellesley Public Schools – WPS** wef	K-2,3-5	A trifold poster board sharing details of a WEF grant for installation of a Weatherbug Weather station on the Bates school. Through this grant we are able to incorporate live weather data from Wellesley's own tracking station into our elementary science curriculum

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LOCA-TION	CATEGORY	EXHIBIT – EXHIBITOR	AUDIENCE	EXHIBIT DESCRIPTION
Room 247	Science of Being Human	**Wellesley College Neuroscience Brain Booth - Wellesley College Neuroscience Program**	K-2,3-5,6-8	Our brains control everything we do, including how we move, learn, think and feel. At the Brain Booth, you will get to hold a real sheep brain and learn the basic parts of the brain and what they do. We will also explore a real human brain that has been sliced in different ways and embedded in plastic. Did you know that the part of the brain that controls how we learn and remember is shaped like (and named after) a seahorse – come see it for yourself! You can even make your very own "brain hat" to keep!
Zone 3	Coding & Tech.	**Wellesley CreateAthon - WHS Computer Science Club** wef	6-8,9-12	Come see what our participants created with App Inventor
Zone 6 - Gym	Robot Zoo	**Wellesley FIRST Lego League Teams in Action - FIRST Lego League**	K-2,3-5,6-8	Tomorrow's innovators practice imaginative thinking and teamwork. Guided by adult Coaches, FIRST LEGO League teams research a real-world problem such as food safety, recycling, energy, etc., and are challenged to develop a solution. They also must design, build, program a robot using LEGO MINDSTORMS® technology, then compete on a table-top playing field. Stop by to learn about the experience of some of Wellesley FLL teams
Zone 2	Our planet & beyond	**Wellesley Middle School Solar Panels - WHS Evolutions Solar Team** wef	K-2,3-5	Wellesley High School students are proposing to place solar panels on the roof of the Wellesley Middle School to save money, resources, and trees. Engaging activities for children, and informative information for parents.
Room 246	Workshop	**The Nature of You: Capture Your DNA in a Necklace - The Science Club for Girls**	3-5,6-8,9-12	Come join us to learn about the molecular basis of life and the molecule that encodes what makes you YOU: DNA! We will isolate DNA from participants' cheek cells and capture it in a helical tube to make a necklace that you can take home. (Elementary aged
Room 241	Workshop	**WEF Planetarium Show - Wellesley Education Foundation**	K-2,3-5,6-8,9-12	See the Stars! Experience the night sky in its full glory without light pollution in a Starlab portable planetarium. Learn hot to find the North Star, ask questions, see the Milky Way, and see the southern constellations.

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LOCA-TION	CATEGORY	EXHIBIT – EXHIBITOR	AUDIENCE	EXHIBIT DESCRIPTION
Outside (weather-permit-ting)	**Workshop**	**WMS Science Olympiad Rocket Launch** wef	K-2,3-5,6-8,9-12	Wellesley Middle School Science Olympiad Rocket Launch In courtyard, weather permitting, no sign-up required.