The Achieve Foundation proudly presents this fun event to showcase the exciting new world of STEAM (Science, Technology, Engineering, the Arts and Math) education to the community. Find out about a few of the cutting-edge programs currently being offered in the South Orange & Maplewood schools and try a few of the countless possibilities of ENJOYABLE ways to learn through equal parts demonstration (teaching) and experimentation (creation and play).

The following families and businesses helped the Achieve Foundation bring

Maker Madness

to the South Orange and Maplewood school community
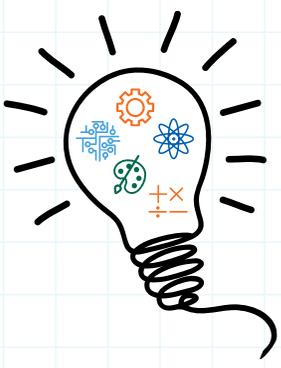
THANK YOU TO OUR SPONSORS

Bernadette Aulestia and Kristian Lynch ▪ The Peacock Family

Aileen Nicoletti and Ben and Meredith Burtt

Paul and Beth Daugherty ▪ Deborah Prinz and Larry Neher ▪ The Boyer Family

#whatwillyoumake
Visit all of our Maker Stations!

Tear Down:
What Makes Things Work?
Want to explore the inside of a hard drive? Dismantle electronics and other devices? See what's inside computers, phones, vacuum cleaners, and other fun machines.

Engineering
Test your skills at solving engineering challenges with common materials. Recreate a bridge designed by Leonardo DaVinci out of pencils.

MeeperBOTS
Meep meep. Join us to create and program small lego-like robots to move over an obstacle course.

Vertical Plotter
The plot thickens…See a 2d vertical plotter in action. Sign your name and watch a 'robot' mimic you.

Virtual Reality
Ready Player Fun! Experience an Oculus Rift or build a Google cardboard headset to use with your phone.

Drone Racing
It's a Game of Drones. Watch drones in action and witness flying from the drones' point of view.

Build a (c)lever
with Maplewoodshop!
Working with wood got you stumped? Create a lever that is clever! Using hand tools, saw, join, and explore ways you can make this simple but amazing machine! 15 min max per child so that everyone has a chance to build. AND, on the half hour, see stress tests of wooden joinery. Which is the strongest joint? How much stronger is oak than pine? Come find out!

Hovercraft in the Hallways
Turn a leaf blower into a hovercraft? See it on YouTube and give one a test drive.

Lego
Everything is awesome! The classic builders toy, still letting kids create after all these years.

Graffiti Wall
Tag, you're it! Make your mark on the wall and sign in with everybody.

Make a Magic Wand
Harry Potter fans make their own custom wands. Need Makers, not Muggles.

BristleBots
Create fun artwork with LED light! Draw your favorite cartoon character, create a card for Mother's Day or just use your imagination and draw anything you would like… and add an LED to light your creation up!

Coding
Take a byte out of programming. We'll put you to the test as you try your hand at a high school level programming challenge.

Computer Science
Unplugged
Computer Science involves lots of thinking that doesn't actually involve a computer. Come explore fun concepts using nothing but your brain ;>)

Batik; Art on Fabric
Dye-ing to try batik? It's a method of producing colored designs on textiles by applying glue to the fabric, then dying the unglued parts for a beautiful result. Thank you Island of Java.

Harmonograph
Use a Harmonograph, a table with three pendula, to make beautiful, mathematical patterns on paper. See what happens when you change the motion, weights and length of the pendula.

Slime
Slime flies when you're having fun! Kids try various recipes to make slime that is sparkly, colorful or 'crunchy' and always hands-on.

Water Science:
Make a PVC Water Shooter
Ready for a drip-roarin' good time? Create a water shooter out of PVC pipe and a plunger. You might get wet! ;>}

Geodesic Dome
There's no place like dome. See a geometric creation (an 'icosahedron') made from PVC pipe and ZipTies.

Marble Roller Coaster
It's Marble Mania! Come see our expanded 8' "Rube Goldberg" marble machine. See an "Archemedes Screw" in action, lifting the marbles to the top. Help reload the marbles and watch how much fun gravity can be.

Learn To Solder
Solder on. Learn how easy it can be to solder by making a robot pin of your own. Wear it as a badge of geek cred.

Make a Hand
Can I get a high five? Learn about how ligaments hold our skeleton together and how tendons work with muscles to move our joints. Come build a working model hand and get a better understanding of the mechanical you!

Escape Room
Do you have what it takes? Work with others to solve your way out of a room of puzzles. But beware: the clock is ticking…

Bubble Mania
Foamtastic! Watch a home-made yet industrial-capacity machine crank out a WALL of foam. (Better hope your car is not parked nearby -- the foam consumes all! ;>)

Flight
Come experiment with the concepts of flight. One project for older kids and one for younger kids.

Hydroponics
Put the petal to the metal. Join us as we demonstrate Vertical Hydroponic Gardening. Kids will make their own planters.

Art Spinner
Make your own art spinner out of recycled motors and switches, or just spin your own art!

3D Printers
Come see a 3D printer in action!

Tracking Flights
with a Raspberry Pi
The Pi's Have It. See a device made from a Raspberry Pi that allows you to track the flights of local aircraft in realtime! See the flights of nearby aircraft on an iPad.

3D Printed Hands
Give us a hand! Come see a project to 3D print prosthetic hands for those in need around the world.

DNA Extraction from Fruit
Extract real DNA from strawberries, and learn about this most fascinating way that all life carries its genetic information to the next generation.