



# EUREKA Invention



## Fall 2021

Due to COVID regulations, only East Windsor registered students are permitted to attend.



Students explore famous inventors such as Leonardo da Vinci, Thomas Edison, Archimedes, Ben Franklin and even Rube Goldberg, along with the contributions each made to science, engineering and society. Guided by our Mad Scientists, Junior Inventors use their knowledge and creativity to overcome a series of challenges using basic materials, simple machines, tips from famous inventors and the most important of all – their minds! Each student will also bring home a cool science take-away every week! While Thomas Edison said “invention is 10% inspiration and 90% perspiration” this program is 100% FUN!

### Do Like da Vinci

Inventing means curiosity! Children learn about da Vinci's many discoveries and try his experiments, from writing notes backwards, building devices and measuring human proportions. The da Vinci-inspired take home is designed to help inspire them to imagine their own creations.

### Forts and Catapults

Inventing means discovery! Children learn the difference between a catapult and a trebuchet. They learn how to adjust for distance and accuracy, and they have the chance to launch projectiles with catapults and a large trebuchet! The inventors bring home their own catapult to experiment with.

### ET Phone Home

Inventing means practicality! Inventors Bell, Edison and Tesla were locked in several battles over electrical inventions of their era. Children work together to form circuits and recreate Edison's invention of the phonograph. They talk about sound and learn that anyone can be an inventor.

### Crazy Contraptions

Rube Goldberg became famous for his drawings of complex machines that perform very simple tasks. Children will learn about simple machines and devices to transfer energy, then design, build, and test their own wacky Rube Goldberg machines using every-day material

### Creative Creatures

Inventing means creativity! Using the skills that they are cultivating as inventors, children will build a flying dragon, will launch sticky creature flingers and be inspired to design their own model creatures.

### Into the Future

Inventing means reaching for the stars! Kids race in a robotic relay and build their own sci-fi inspired light sticks that they can take home, along with their dreams of the future!

### Bridge-O-Rama

Inventing often involves trial and error: kids will build a bridge of their own design using everyday materials, then test its ability to span a divide. They will also build an arch bridge without using glue and nails, and get a mysterious propeller take-home that demonstrates fundamental forces.

### Survivor

How would you survive on a deserted island? Kids explore and discover solutions to challenges like finding and transporting water and food. Kids will build, test and take home their own (safe!) Mad Science blow dart.

### Sub Space Transportation

Jules Verne imagined what it would be like to travel in space and underwater. *Written long before modern travel, these books got a lot right. Kids will experience how humans been very creative in designing transportation and living environments for both space and underwater, and build their own model of a space-station with artificial gravity.*

### Shipwrecked

Inventing means necessity! This day puts children on a deserted island in which they must work together to invent solutions to collect food and water, and to build shelters. They also create messages in a bottle and learn how the ocean currents might carry them.

### Mad Machines

Most mechanical inventions involve one or more simple devices such as levers, pulleys and inclined planes. Kids will explore simple machines and get their very own rubber-band powered racer to take home.

### Smooth Sailing

How do you get off that deserted island?! Kids will design, build and test their own sailboats and build a navigation device.

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