

Summer Courses 2019



GRADES 1-2		
Week	Morning (9:00am-12:00pm)	Afternoon (1:00pm-4:00pm)
July 8 to 12	Animal Adventures	Magical Science
July 15 to 19	Dino Detectives	Launch It!
July 22 to 26	Mini-Mini Med School	Magical Science
	Dino Detectives	Launch It!
July 29 to Aug 2	Animal Adventures	MoS Construction Zone
August 5 to 9	Mini-Mini Med School	Launch It!
August 12 to 16	Dino Detectives	MoS Construction Zone

GRADES 3-5

Week	Morning (9:00am-12:00pm)	Afternoon (1:00pm-4:00pm)
July 8 to 12	Water Works	Paleontology: Dinosaurs and Beyond
July 15 to 19	Grossology	Blast Off with Rockets!
July 22 to 26	Space Explorers	Blast Off with Rockets!
July 29 to Aug 2	Spy Camp	Urban Engineers
	Science Magic	Grossology
August 5 to 9	Spy Camp	Animal Engineers
	Computers and Coding**	
August 12 to 16	Environmental Investigators	Jr. Museum Guide
	Urban Engineers	Space Explorers

***This is a full day class offering that will run from 9:00am-4:00pm*

GRADES 6-8

Week	Full Day (9:00am - 4:00pm)
July 8 to 12	Space Mission Engineers
July 15 to 19	Mini Med School
July 22 to 26	Design Lab
July 29 to Aug 2	Mini Med School
August 5 to 9	Crime Lab Boston
August 12 to 16	Science Chef

Morning and Afternoon Courses

GRADES 1 – 2

Animal Adventures

From tails to wings to scales, learn what makes animals both different and alike. Investigate what animals eat and where they live through creative play, crafts, and stories. Explore Museum exhibits such as *A Bird's World*, *Natural Mysteries*, and the *Butterfly Garden*.

**Students will not be handling or touching living animals, but they will have the opportunity to observe and learn about some of the exciting live animals at the museum.*

Dino Detectives

Have you ever wondered how paleontologists re-create the world when dinosaurs roamed the planet millions of years ago? Observe a real Triceratops skeleton and a life-size model of Tyrannosaurus rex in our *Dinosaurs: Modeling the Mesozoic* exhibit. Investigate evidence left behind with real tracks and fossils, and then make your own. Study the behavior of live animals, including reptiles and birds, and see what we can learn about dinosaurs from modern day animals.

Launch It!

Explore force, motion, acceleration, and gravity as you experiment with rockets, catapults, paper airplanes, and more. Design a satellite to float in a vertical wind tube during one of our Design Challenges. Investigate how physics and math can help engineer machines that will blast higher, propel farther, and fly longer!

**This course includes an offsite field trip to launch rockets.*

Magical Science

Learn the physics and chemistry behind magic tricks and optical illusions. Experiment with fun, unusual types of matter like bubbles and slime. Make things change color and move with sleight of hand. Learn about magic in nature with a visit from a live animal. Show off your new magic skills during Friday's family magic show!

MoS Construction Zone

Put on your hard hat and discover what it's like to be an architect or civil engineer. Learn which shapes make the strongest structures and experiment with electricity and simple machines. Test out different building materials like foam, wood, and clay as you build bridges, towers, and boats.

Mini-Mini Med School

Get ready to put on your lab coat, don a stethoscope, and become a doctor! Start by learning medical lingo (stat), building a skeleton, and looking at x-rays for broken bones. Study a sheep's heart and lungs along with our own circulatory system. Learn what we need to do to care for our teeth and keep them healthy. End the week by going on rounds in a mini ER where your family members become the patients. Learn to use basic first-aid materials to help the "wounded."

GRADES 3 – 5

Animal Engineers

How does a beaver build its dam? What does an ant nest look like on the inside? Explore the many lessons we have learned about building, designing, and creating from nature's furry friends. Meet some of the Museum's live animals and design enrichment activities for different species!

Blast Off with Rockets!

Be a rocket scientist for a week! Learn how rockets work through fun, hands-on activities. Test different fuels, engineer different rocket designs and end the week with a bang by shooting off your very own water rocket!

**This course includes an offsite field trip to launch rockets.*

Environmental Investigators

From tall mountain peaks and rolling hills to salt marshes and the ocean, our planet has so much to explore! Discover how scientists use geology, biology, and climate to learn more about our planet, and find out about the roles that humans play in shaping the environment around us. Get ready to explore different ecosystems, learn about invasive species, meet live animals, and much more through hands-on activities and investigations!

Grossology

Get dirty and experience the gross side of science! Learn about animal scat, make snot, and perform a dissection. Meet some of the awesome creepy crawly animals that live at the Museum and find out which environments are the best for growing bacteria. Have fun with these disgusting discoveries!

**This course includes a hands-on dissection activity.*

Jr. Museum Guide

Ever wonder what it's like to work at the Museum? Go behind the scenes to learn how exhibits are created and how we care for our animals. Learn how to engage guests in science conversations, and put a personal touch on a favorite Museum of Science demonstration. At the end of the week, don a red apron and bring your activity to the Exhibit Halls to show off for Museum guests and your family!

Paleontology: Dinosaurs and Beyond

Explore the exciting field of paleontology as you discover that dinosaurs aren't the only things these scientists dig up. Uncover what fossils can tell us about extinct species, and make a tar pit to sink specimens. Meet the Museum's live animals and learn about their characteristics to help you understand what extinct species were like. Then put your skills to the test to solve a mystery millions of years in the making!

Science Magic

Become a master science magician as you concoct mixtures, read minds, and learn card and coin tricks. Discover the physics and chemistry behind magic tricks and optical illusions. Make things appear, disappear, levitate, and change color using mirrors, chemical reactions, and more. On Friday, show off your new skills during our family magic show!

GRADES 3 – 5 (Continued)

Space Explorers

Visit outer space without leaving the planet! Learn about stars, planets, and moons with a Star Lab projection. Create take-home astronomical tools to use in your backyard and observe the sky through the Museum's own telescope. By the end of the week, you will be a real sky navigator!

Spy Camp

Join the Museum of Science Special Agent team! Uncover secret information as you create and solve mysterious codes with your friends. Build spy gadgets and design your own disguise. Train your mind to remember details and use your observational skills to crack the case.

Urban Engineers

Calling all urban planners! We've been asked to design the layout of a brand new city and we need your help! First, you'll explore the basic mechanics of simple machines and how they are used in modern metropolitan areas. After learning about hydraulics, you will design and build an important structure for our model of the new city.

Water Works

You use water every day, but what's so special about this universal liquid? Come learn about water and the amazing properties that it has through experiments and activities both in and around the Museum. Collect and test water from the Charles River, learn about the creatures that rely on water for their survival, see how humans are impacting this precious resource, and find out what you can do to help!

Full Day Courses

GRADES 3-5

Computers and Coding

Learn the fundamentals of computer science and programming both on and off screen! You'll explore how computers work from binary code and circuits to algorithms. Practice writing code in Scratch using conditional statements and loops, and end the week by designing your own computer program or digital making project! No prior computer programming experience required.

GRADES 6 – 8

In our **FULL-DAY** offerings for Grades 6-8, we give students more time to experience everything the museum has to offer from exciting behind-the-scenes experiences, to unique offsite field trips, as well as hands-on activities designed to encourage creativity, inspire curiosity and build a sense of accomplishment!

Crime Lab Boston

Many have seen the television show *CSI*, but how much of it is reality? Learn about forensic science and the tools that scientists use to collect and analyze trace evidence. Explore how we use forensic evidence to test our hypotheses on everything from fossil records to today's crimes.

Design Lab

Use the engineering design process to ask questions, imagine, plan, create, and improve solutions to real-world problems. Explore how engineers use these skills in a variety of fields from robotics to medical prosthetics. You'll design, build and test mechanical models and contraptions to complete tasks in engineering design challenges throughout the week.

Mini Med School

Be a medical student for a week! Perform a dissection, design an artificial heart valve replacement, and explore how human body systems function. You'll also visit the *Hall of Human Life* exhibit throughout the week to learn about physiology, anatomy, and staying healthy.

**This course includes a hands-on dissection activity.*

Science Chef

Who needs a lab when you have a kitchen? Explore how acids and proteins affect the outcome of your recipes. Experiment with ingredients to make baked goods rise and learn the science behind culinary trends and techniques. Complete the week with a cooking challenge to see if you have what it takes to be the next top Science Chef!

**Please note: This course is not recommended for students with food allergies.*

Space Mission Engineers

Do you have what it takes to get to space? With the help of museum space experts, you'll spend the week going behind-the-scenes at the museum, experimenting with rocket launches, and visiting with real-life engineers. By the week's end, you will design a mission to go farther than we've ever gone before!