

# Summer Courses 2020



<b>GRADES 1-2</b>		
<b>Week</b>	<b>Morning</b> (9:00am - 12:00pm)	<b>Afternoon</b> (1:00pm - 4:00pm)
<b>July 6 - 10</b>	MoS Construction Zone	Animal Adventures
<b>July 13 - 17</b>	Mini-Mini Med School	Launch It!
<b>July 20 - 24</b>	Dino Detectives	Earth Heroes
	Mini-Mini Med School	Magical Science
<b>July 27 - 31</b>	Animal Adventures	Launch It!
<b>August 3 - 7</b>	MoS Construction Zone	Magical Science
<b>August 10 - 14</b>	Mini-Mini Med School	MoS Construction Zone
	Dino Detectives	Earth Heroes

**GRADES 3-5**

<b>Week</b>	<b>Morning</b> (9:00am - 12:00pm)	<b>Afternoon</b> (1:00pm - 4:00pm)
<b>July 6 - 10</b>	Environmental Investigators	Science on Screen
<b>July 13 - 17</b>	Water Works	Blast Off with Rockets!
	Urban Engineers*	
<b>July 20 - 24</b>	Urban Engineers*	
	Computers & Coding*	
<b>July 27 - 31</b>	Spy Camp	Blast Off with Rockets!
	Space Explorers	Grossology
<b>August 3 - 7</b>	Paleontology: Dinosaurs and Beyond	Jr. Museum Guide
	Spy Camp	Extreme Engineering
<b>August 10 - 14</b>	Extreme Engineering	Grossology
	Space Explorers	Animal Engineers

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

**GRADES 6-8**

<b>Week</b>	<b>Full Day</b> (9:00am - 4:00pm)
<b>July 6 - 10</b>	Mini Med School
<b>July 13 - 17</b>	Live Animal Center Jr. Internship
<b>July 20 - 24</b>	Space Mission Engineers
<b>July 27 - 31</b>	Design Lab
<b>August 3 - 7</b>	Crime Lab Boston

## Half Day 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.*

July 6-10      1:00pm – 4:00pm  
July 27-31     9:00am – 12:00pm

#### 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.

July 20-24     9:00am – 12:00pm  
August 10-14 9:00am – 12:00pm

#### Earth Heroes

Every day there are ways we can help protect Earth's resources. In this class, you'll learn about weather, water, recycling and our ever-changing environment. Come explore how you can take care of the incredible planet we call home!

July 20-24     1:00pm – 4:00pm  
August 10-14 1:00pm – 4:00pm

#### 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 (weather permitting)*

July 13-17     1:00pm – 4:00pm  
July 27-31     1:00pm – 4:00pm

#### Magical Science

Learn the science 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!

July 20-24     1:00pm – 4:00pm  
August 3-7     1:00pm – 4:00pm

## GRADES 1 – 2 (Continued)

### 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.

July 6-10 9:00am – 12:00pm

August 3-7 9:00am – 12:00pm

August 10-14 1:00pm – 4:00pm

### Mini-Mini Med School

Get ready to 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."

July 13-17 9:00am – 12:00pm

July 20-24 9:00am – 12:00pm

August 10-14 9:00am – 12:00pm

## Half Day Courses

### 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 learn about different species!

August 10-14 1:00pm – 4:00pm

#### **Blast Off with Rockets!**

Be a rocket scientist for a week as you 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 (weather permitting)*

July 13-17 1:00pm – 4:00pm

July 27-31 1:00pm – 4:00pm

#### **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!

*\*This course includes an offsite field trip (weather permitting)*

July 6-10 9:00am – 12:00pm

#### **Extreme Engineering**

Hurricanes, earthquakes and lightning -- just a few of the ways Mother Nature challenges engineers! In this class, you'll learn about severe weather, natural disasters, and how engineers design solutions that can withstand Earth's most severe conditions. Throughout the week you will apply the engineering design process to build and test creations that can survive extreme conditions.

August 3-7 1:00pm – 4:00pm

August 10-14 9:00am – 12:00pm

#### **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.*

July 27-31 1:00pm – 4:00pm

August 10-14 1:00pm – 4:00pm

## GRADES 3 – 5 (Continued)

### **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!

August 3-7 1:00pm – 4:00pm

### **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!

August 3-7 9:00am – 12:00pm

### **Science on Screen**

Be a part of the Museum of Science film crew and learn how some of your favorite movies are made! Research an important topic in science and then create your own stop-motion short film. End the week by sharing your work at our Summer Courses "Film Festival" for your family and friends.

July 6-10 1:00pm – 4:00pm

### **Space Explorers**

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

July 27-31 9:00am – 12:00pm

August 10-14 9:00am – 12:00pm

### **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 learn about fingerprints. Train your mind to remember details and use your observational skills to crack the case.

July 27-31 9:00am – 12:00pm

August 3-7 9:00am – 12:00pm

### **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!

*\*This course includes an offsite field trip*

July 13-17 9:00am – 12:00pm

## Full Day Courses

### GRADES 3-5

#### Computers & 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 and programs. Complete physical computing projects and practice writing code in Scratch using conditional statements and loops.

*\*This class is designed for beginners with little to no prior computer programming experience.*

July 20-24 9:00am – 4:00pm

#### Urban Engineers

Calling all urban planners! We need your help to design the layout of a brand new city! 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.

July 13-17 9:00am – 4:00pm

July 20-24 9:00am – 4:00pm

## Full Day Courses

### 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, and test hypotheses to solve crimes. Test your skills at the end of the week to solve a mystery and become a Museum of Science Crime Scene Investigator!

August 3-7 9:00am – 4:00pm

#### Design Lab

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

July 27-31 9:00am – 4:00pm

#### Live Animal Center Jr. Internship

Visit the Live Animal Center to learn about our scaly, furry, wet, and feathered friends -- where they come from, how they live, and how to care for them. Assist the staff by helping to clean, feed, and handle a variety of animals that call the museum home.

*\*Please note: many animal diets include tree nuts. This course is not recommended for students with the following allergies: fur, animal dander, peanuts, tree nuts, or other food allergies.*

July 13-17 9:00am – 4:00pm

#### 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.*

July 6-10 9:00am – 4:00pm

#### 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 learning from real-life engineers. By the week's end, you will design a mission to go farther than we've ever gone before!

July 20-24 9:00am – 4:00pm