

Owls Head Transportation Museum Education Programs		
Program Name	Description	Grade Level
1D - 2D - 3D	How does understanding deminsions help you draw out your thoughts and designs? Students will learn about the 1, 2 and 3 deminsions of our world through exploration of hands on demonstrations in drawing and building. OHTM's educator will guide your students on challenges thoroughout all three deminsions to have the students gain a better understanding of a line, a flat object and an object they can manipulate in the x,y and z axis.	k - 8th
Aerodynamics	Students will learn about Aerodynamics through hands-on activities that will show the 4 forces (lift, drag, gravity, and thrust) for students to explore and learn. The activities include straw planes, strockets, flying saucers, balloon strocket, and flying dragons.	k - 8th
Alternative Energy	Students will learn about three forms of energy that has transformed and inspired the world of transportation! Using OHTM materials students will learn about animal powered, reusable energy and our most current energy source of non reusable energy. Through testing out these three forms of energy, students will observe the past and start planning about the types of energy they will need to power transportation of the future.	k - 8th
Balloon Power Cars	Lets catch a breeze and drive away! Students will learn how to design a vehible that will be able to be ran off wind power through the use of a ballon. The will be challenged on how far, and fast the car can go but also on how long they can keep their energy source in their balloon. Students will learn about energy transfer, parts of a car, and problem solving through this activitiy.	k - 8th
Be an Inventor	Students will learn about 3 important, influential inventions that are located in the museum. Once they have made observations and learned about the techniques used to create these inventions students will then put on their innovation hat and create their own prototype. They will design their own paton and write a description of what it is and how it will work.	k - 8th

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Biomimicry - Spider Web Engineering - Bird Plane - Camouflage - Locating through the deep sea	Ever looked at a form of transportation and thought to yourself "Hmm that looks like an animal?". Through this program, students will learn about inventors that studied the environment, and animals to help solve complex transportation problems. They will learn about how a bird inspired the Ornithopter, how a whale's tale inspired airplane fins, and how the bug "beetle" inspired the body armor of the Volkswagen beetle. Students will then have time to create a project that is based on biomimicry.	k - 8th
Electricity 101	Learning about electricity can be intimidating, through this activity students are taught about the introductions of electricity and how to make simple and complex circuits.	k - 8th
Engineering Challenge: - Bridges - Drone Delivery - Roller Coasters - Absorb The Shock	Students learn about the Engineering Design Process through these engineering challenges. They are asked a real-world question and taught about the background research, and their group will then imagine a solution, create a prototype, test their prototype, and then improve their prototype to have it answer their initial question. Each of the themes for these engineering challenges prompts the students with a problem in the transportation world that we need their help solving!	k - 8th
Five Senses	What are your 5 senses? Students will learn about their 5 senses (sight, hearing, taste, smell, and touch) through this activity that will demonstrate how each of the senses has their own role but all are used together to determine things around us.	k - 8th
KEVA - KEVA Technology - KEVA City of Perils	KEVA (Knowledge, Exploration, Visual, Arts) Planks fosters creativity and imagination. Through this program, students are challenged to become an architect, engineer, and artist who creates simple and complex designs. Though math students are introduced to 3D models, economics, and counting, through science and social studies students experience the evolution of technology.	k - 8th

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Lego Derby Race Track	What's more fun than a race car, how about a race car made out of legos? Students are challenged to learn and understand the parts of a car, what mechanical engineers do, and how aerodynamics affect the outcome of races with different styles of race cars. Your students will get the chance to make rapid prototypes of their Lego Derby Race Cars to be tested and modified while changing the style of the car to fit the different challenges that are being asked.	k - 8th
Living History Jeopardy - Take Flight - Going Places - Changes In Transportation	OHTM's collection has hit the road! This activity allows students to dive into the history of the museum through listening to stories of key collection pieces. After the students listen to these stories they are put to the test! Groups will be challenged in the game of jeopardy to see which group learned more about the collection piece. Which team will be declared the winners?!	k - 8th
Manufacturing Manifest	How do car companies come out with new makes and models? Do they throw darts at the wall and say that works? Students will learn and study the characteristics of different cars and why models changed over time. After learning about these various changes in body styles students will then create their own unique vehicle to hit the show room!	k - 8th
Nanotechnology - Moving Air - Space Elevator - Build a future car - Understanding Tools	Students will learn how materials have evolved, they will take a step back and look at our race cars, one of the first race cars was made out of copper, steel, and iron causing the vehicle to be heavy. The next race car they will learn about will see how the material got thinner but they needed to install a roll cage to keep the driver safe lastly students will learn about a race car that is made out of carbon fiber and how that is a lightweight material but when crashed will keep you safe and will make the car "fly" with how light the material is. Students will then have time to test and make their own flying car out of different nanomaterials.	k - 8th

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Parachutes	When was the first parachute used? Who designed it? What have parachutes been used for today? Students will step back in time to learn about the history of parachutes and how they have been transformed into the quick-release safety feature we know them as today. After the students have learned about the history of the parachute they will be challenged to make parachutes for various items that range in size and weight to see if they can safely return to earth.	k - 8th
Patents and Prosecution	Through history one's work was also the inspiration of someone else's ideas and designs. However some ideas were not also used for inspiration but rather copied and sold as their own work. This program will allow your students to learn about two important patent trials, one in aviation and one in automotive, that set the course of transportation on the track it is today. Your students will get to learn and reevaluate these trials and see what they believed to be right vs. wrong.	k - 8th
Robotics - Robot Rumble - 3 forms of code	Depending on the age group students will learn about line coding, directional coding, and block coding to complete different challenges.	k - 8th
Rockets	3...2...1 Blast off! Students get to learn about rocket launching and energy transference through our unique rocket programming.	k - 8th
Simple Machines - Rig-A-Ma Jig - Mouse Trap - Catapult - Peg Board	Students will learn about the 6 simple machines (screw, pulley, lever, wheel and axle, wedge, and inclined plane) through building and testing different types of challenges. They will learn how each machine plays a role in most of the items around them. After identifying what the simple machines are students will build one of the following, big claw, mouse trap, roller coaster, or catapult to test their knowledge of the 6 simple machines,	k - 8th
Space Exploration - recovery payload - sound study - pictures - repairing ISS - Survival Testing	Students will learn about the OHTM's Gemini Capsule piece that is a replica of the capsule that was instrumental in getting astronauts to have the ability to survive long duration missions into space. Through this program students will get to experiment with building their own capsule to be sent into space to retrieve information for mission control.	k - 8th

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Stop Motion	After learning about everything that goes on in the museum and the stories that come along with all the collection items students will create a story, setting, characters, props, and movie to tell their collection items story. Students will learn about 3D animation and 3D sculpting along with what it takes to write a story.	k - 8th
Storybook Science	What was the best storybook you had growing up? Students will relive their childhood bedtime stories by learning about the challenges the characters faced and then testing out those same challenges. Some stories are The 3 Little Pigs, Rapunzel, The Three Billy Goats, Jack and the Beanstalk, and The Three Little Bears.	k - 8th
Tangrams	Students will use tangrams to learn about shapes and structures. Students will be able to assign colors to the seven different shapes that make up the big square for tangrams, after they have colored and cut out their squares students will be challenged to create different collection pieces from the museum. The students will be given challenges during the use of the tangrams by being instructed to only use x amount of shapes or certain colors to complete the design.	k - 8th
What would you bring	Lets plan a trip together, but plot twist you are planning a trip in the 1800's and your form of transportation in a Stagecoach that can only carry 550 pounds of cargo! While it takes months to move out west, students will hear about the migration of settlers to the west and what they had to bring with them to survive their journey. Students will be challenged in this program to pack their own stagecoach with essentials to survive their trip while staying within the weight capacity of their Stagecoach.	k - 8th

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Women Who Dare	There are so many influential women who have transformed transportation throughout history, students will learn about 3, Bertha Benz, Harriet Quimby, and Alice Ramsey. Once the students have learned their background information they will spend the rest of the time doing an activity that made these women famous. Through Bertha Benz students will design a car and a proton and then build the car, through Harriet Quimby students will test different paper airplanes for longevity and style and through Alice Ramsey students will master their skills of navigation by coding a robot through a city play mat.	k - 8th