

THE EDGERTON EXPLORIT CENTER

208 16th Street • Aurora NE, 68818 • 402.694.4032 • www.edgerton.org

Full STEAM Ahead!

Edgerton Explorit Center programming is based on the philosophy of our namesake, Harold "Doc" Edgerton. "Doc" was a native of Aurora known internationally for developing electronic flash photography, the strobe light and side scan sonar. The Center is carrying on "Doc's" legacy by advancing student knowledge in STEAM (Science, Technology, Engineering, Art and Mathematics) subjects. We are changing our future by creating amazing experiences that encourage discovery through play, asking questions, exploration and using creativity to solve simple problems. Amazing experiences turn into unforgettable learning experiences that can inspire and motivate children to want to learn and explore more on their own. The greatest benefit of our programming is that it fosters a love of learning in students of all ages.



Amazing Bubbles Demo

Programming options include field trips to the Center in Aurora and our Edgerton On

The Move (EOTM) programs – where we bring the science fun to YOU! Both options include time for students to play and explore hands-on exhibits in our Explorit Zones. Those visiting the Center will also get to experience our newly added lower level Discover-It Zone for a second floor of hands-on fun! Programs can also include exciting live science demonstrations, family nights, hands-on labs and even live raptors! The Family Night option allows parents, siblings and friends to join in the STEAM fun!



Go Show Demonstration

**Online registration available at www.edgerton.org
or by calling 402-694-4032**

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Demonstration Descriptions

Offered on and off site

Each of the demonstrations is a 30-minute presentation given by one of our mad scientists (educators).

Arctic Blast (All Age Ranges)

While going through the states of matter of water, dry ice, and liquid nitrogen, this demonstration is full of “arctic blast”-ing fun filled learning. See what happens to objects when they come in contact with super cold substances in one of our most popular demos.

Amazing Bubbles (PK – 2nd)

Bubbles are lots of fun and educational! There will be no lack of bubble making and revealing the science of bubbleology. What are bubbles made of and why can't we make them out of plain water? What shapes do they come in? What other observations about bubbles can be made? And best of all, have you ever been inside a bubble? Would you like to be?

FUNDamentals of Science (PK – 2nd)

In all fields of science, it is important for scientists to be able to describe, classify, and measure the things they do and see. Students must use their senses, and communicate their observations about similarities and differences between several types of balls, and see other ways to gather information. Many student helpers are needed to dig deeper into the fundamentals of science.

Sparks (All Age Ranges)

Sparks fly, and so does the fun, when students meet the Van de Graaff generator during this exploration of static electricity. Participants will learn how energy moves in simple experiments, some of which are even a little “shocking” and “hair-raising”...but always fun!

Spaceflight Explorers (2nd and up)

In this show we investigate the science of spaceflight: how we get into space (and where it begins), and how living and working in space is different compared to back on Earth. We'll even perform an astronaut training exercise! Many materials and curriculum in this show are supplied by NASA's Spaceflight Explorers program. Don't be fooled by the subject you'll learn a lot about science on Earth as well as in space!



Raptorology Demo



Arctic Blast Demo

Raptorology – Science of Raptors (All Age Ranges)

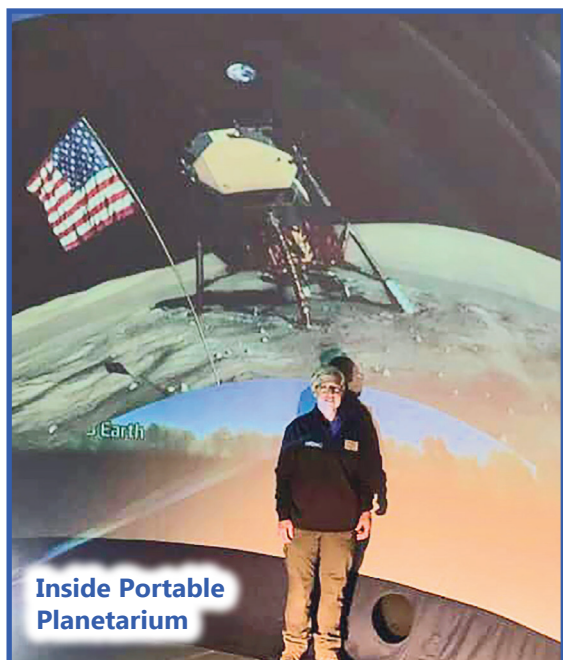
This program gives you a rare and unique opportunity to view birds of prey through a true educational experience. The session allows you to get up close with the Center's Screech Owl, American Kestrel, and Swainson's Hawk. You will learn the fun and fascinating facts of these amazing creatures including identification of raptors, their natural habitat and habits associated with their surroundings. Hands-on labs available in conjunction with the program including owl pellet dissection, nest building and owl masks. This program is offered at the Center and with our Edgerton On The Move Program.

Field trip and Edgerton On The Move registration available online at www.edgerton.org.

For questions contact us at mary@edgerton.org or by calling 402-694-4032.

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Demonstration Descriptions Continued



Planetarium (All Age Ranges)

An interactive tour of the night sky, with our portable planetarium, we literally bring the universe to you! Our inflatable dome and projection system cannot only show you the night sky as it appears from Earth, but we can travel throughout the Solar System as well. We can even recreate a view of the sky from the Moon. Shows last thirty minutes and are performed every forty-five minutes. Planetarium requires a room at least 20 feet per side with a ceiling of 10 feet high.

Stopping Time (3rd and up)

Doc Edgerton's innovation, the strobe light, and a camera are the stars of this entertaining and educational show. Students get to participate in the fun while they learn about stop-motion photography and seeing the unseen. Children and adults alike are amazed at what is revealed when simple everyday events appear frozen in time. A dark room is needed for this show.

Go Show (3rd/4th and up)

Ready to take part in a "moving" experience? Newton's laws of motion and forces will be demonstrated right before students' eyes. Items like a hovercraft, a hydrogen balloon and more will be used to move these concepts to the front from start to finish, and end with a bang.



Good Vibrations (4th/5th and up)

Explore the science of sound and vibrations. We will make terms such as wave length, frequency, and pitch simple to understand, and show different types of sound waves and how they reach our ears. We present dramatic demonstrations of how you can not only hear, but actually see sound waves using fire and our amazing Ruben's Tube.



ABC's of Chemistry (5th/6th and up)

An exciting introduction to chemistry and chemical reactions! When compounds break up, and new ones form, all kinds of interesting events can happen: color changes, explosions, and more. A large, well ventilated space is a requirement; we don't want to set off any smoke alarms! Safety is emphasized throughout this entertaining show.

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Lab Descriptions

Offered on and off site *Cost for labs based on 50 or fewer students. If group is larger, additional fees apply.

Color Mixing (Pre-K and up)

Nothing is more fun for beginning scientists than blending and making things change before their eyes. This lab is all about colors, mixing, pouring, and analysis. Students will get to do their own filling, pouring, and mixing as we start with the primary colors and create the full rainbow spectrum. 30-45 minutes

Dino Excavators (Pre-K and up)

Dinosaurs or more specifically their fossils have been fascinating people for years. In this lab, students get to dig their own "dinosaur" out of a baking soda block using vinegar and a popsicle stick. They get to be a paleontologist as they find their own dinosaur that they get to take home. 30-45 minutes

Density Tubes/ Lava Tubes (Pre-K and up)

Density is a hard idea to grasp, until you see it in action. We use oil and water to make our own lava lamps. Sealing baby soda bottles, oil, water, and color tabs make this lab colorful and safe. Students can do almost all of it entirely on their own, with a little help from adults. 30-45 minutes

Nest Engineering Lab

Raptors are expert nest engineers and they make their nests out of lots of different materials. Their ability to build nests that support and protect their eggs and young is an adaptation that has helped them survive and thrive within their habitats.

Option #1 (K – 3rd) In this lab, students build a nest that can protect their eggs. Just like real birds, you can use a combination of natural and man-made materials to build your nest that are provided.

Option #2 (4th and up) In this lab option, students get to test their nests to see if they can safely catch an egg. 30 - 45 minutes.

Slime (K and up)

Mixing, measuring, and following instructions are foundational parts of chemistry. Students can start to learn these skills (and have some 'gross' fun) by making slime. This glue/borax slime is guaranteed to be a hit with all ages. 45-60 minutes

Owl Eyesight Lab (2nd – 4th)

Did you know that owls have unique eyes? They have something called binocular vision. No wonder they have to turn their heads almost completely around to see the world around them. This unique owl eyesight keeps them from seeing well from side to side. In this lab, students make an owl mask and use it so they can see and understand how binocular vision works. 30-45 minutes

Grass Heads (2nd and up)

Dig into biology with this hands-on lab focusing on plants. Each student will make a personalized "head" that grows grass for hair. The fun will continue at home as the students take care of the plant and watch the grass grow into hair. 45+ minutes

Stomp Rockets (2nd and up)

Learn about beginning rocketry as we build and launch these simple cardstock rockets. Students will decorate and LAUNCH their rockets, watching the fun fly! After the lab, ask about plans for the launch pad to keep the fun going! 60+ minutes

Glitter Blood (3rd and up)

Blood, our bodies' life force is a very interesting fluid. In this lab, we will dissect and discuss the different parts and kinds of blood. For those who are squeamish, no real blood will be spilled in the making of this lab, we will use glitter instead. 30-45 minutes

Lab Descriptions Continued

Flashlights (3rd and up)

Basic circuitry can be very simple; power source, LED, and conductor, all built in a closed circle-flowing path. With this lab, students will make a working flashlight out of a popsicle stick, button battery, tin foil or conductive tape, and other office supplies. This is a simple way to see the way a circuit works! 45-60 minutes

Owl Pellet Dissection (3rd and up)

What are owl pellets? They are the regurgitated remains of an owl's meal, including all the bones of the animals it ate (usually small rodents). Owls usually swallow their food whole, digest the edible parts, and then expel the indigestible parts through their mouth as a pellet. It might sound gross, but dissecting these is a project most kids love! 30-45 minutes

Soda Can Catapult (3rd and up)

Construct a soda can and rubber band resistance catapult. Students will learn to follow instructions and engineering as they build these old-fashioned war machines. Afterwards participants divide into warring parties and battle it out! 45-60 minutes

Mallonaut Spacesuit Building (4th and up)

We have a piece of an actual NASA spacesuit; the different layers are imperative to keep astronauts safe in space. With this lab, we will discuss space, vacuums, and spacesuits. Students will then create spacesuits to keep our marshmallow astronauts safe from a vacuum. 45-60+ minutes

Marble Machines (4th and up)

Students will get to build marble-powered computers using the puzzle book as their guide as a way to discover and see how computers work on the inside. This lab has several different levels that increase in complexity with each level the students successfully solve. Limit of 30 students. 60+ minutes.

Spectroscopes (4th and up)

How can scientists identify the composition of a star — or the gas inside of a street light — by looking at its light? In this lab, we'll build a spectroscope, a device that breaks up light into component colors. Students examine at least two "stars" to see if they can determine the elements that make them shine. 45-60 minutes

DNA (5th and up)

What is DNA? Where is DNA? We will discuss this and harvest our own. No blood, don't worry...but there is a little spit and elbow grease involved. We will use common household items to pull DNA from our dead cheek cells. Students even get to keep small vials of their DNA. 45-60 minutes.

Get STEAMED Portable Miniature Golf (All Ages)

Nine hole portable science themed miniature golf course with a twist. Test your science skills by playing our Get STEAMED miniature golf course. Each hole has science questions at that allow players to take strokes off their score if they get them correct. This portable nine whole course can be customized to your space and has LED battery powered lights so can be set up and play after dark. Minimum space required for set up is 400 square feet. Can be setup indoors or outdoors.



Edgerton Center Facilities and Services

Strobe Alley

Strobe Alley features the life and work of Harold "Doc" Edgerton. The Alley is the home of Edgerton's historic photographs, including the famous "Milk Drop Coronet" and the "Bullet through Apple" photos, as well as his laboratory equipment and information about his work at MIT and explorations with Jacques Cousteau. There are also hands-on exhibits that show Doc's work with the electronic strobe flash as well.

The Theatre and Demonstrations

Visitors of all ages enjoy the experience of our live interactive science demonstrations presented by the Edgerton Center's lead educators in our theatre. Each demonstration will get everyone excited about learning science with unique experiments and audience participation. The demos can be done for small groups or entire schools and are great supplements to classroom learning. Two demonstrations are included in the price of field trips to the center. Edgerton On The Move Programs can be just one demo up to a Science Explosion event that includes up to 10 Demonstrations and labs over two days.



Explorit Zone

The Explorit Zone was created based on Harold "Doc" Edgerton's philosophy to "...teach people in such a way that they don't realize they are learning until it is too late." The Zone does this with interactive exhibits that are designed to provide insight into hands-on STEAM (Science, Technology, Engineering, Art and Mathematics) principles. Our Zone puts STEAM into students' hands by letting them explore, imagine and create as they play and find answers to questions.



Discover-It Zone

A lower level continuation of the Explorit Zone. This space add an additional floor of fun, interactive exhibits to explore.

Traveling Explorit Zone

This is a smaller traveling version of the Explorit Zone that we bring to you. It has over 25 hands-on STEAM activity stations students can rotate through. Typically, it is set up on twelve to fifteen tables in a decent sized room or location that works best

for your school or organization's event. The Traveling Explorit Zone can be set up for small groups or entire schools including Family Nights where parents and siblings can participate as well.

Hands-On Lab Activities

The Edgerton Explorit Center offers hands-on lab activities both at the Center in Aurora and offsite with our Edgerton On The Move Programs. Lab descriptions and suggested age ranges are listed in the lab section on pages 4 & 5. Labs can be added to a field trip for an additional \$2.50 per student or can be part of an EOTM program and fall under the pricing packages listed on page 7. Labs may be limited to the number of students that can be in a session depending on time and space. Please contact us if you have any questions.



Edgerton On the Move (EOTM)

Offsite program packages

Offsite Demonstrations or labs

- First demonstration or lab: \$375
- Each additional demonstration or lab: \$150

Science Discovery Day: \$1,850

- Full day of STEAM activities for an entire school
- Choose from any combination of six demonstrations and/or labs for the event
- Traveling Explorit Zone setup for entire program

Family Night Program: \$950

- Includes one demonstration
- Traveling Explorit Zone setup for up to 2 hours
- No labs available with this program

Portable Planetarium: \$400 (half day) or \$800 (full day)

- Half day consists of up to four half hour shows done every 45 minutes
- Full day is up to eight half hour shows done every 45 minutes
- Requires open space at least 20 feet per side with 10 foot ceilings

Science Explosion 2 Day Event: \$2,900

- Up to ten demonstrations and/or labs of your choice
- Gym set up with traveling Explorit Zone for both days
- Family night with traveling Explorit Zone on one of the nights

Get STEAMED Portable Miniature Golf

Nine hole portable science themed miniature golf course with a twist. Science questions at each hole that allow players to take strokes off their score if they get them correct. Course has LED battery powered lights so can be set up and play after dark. Minimum space required for set up is 400 square feet. Can be set up indoors or weather permitting outdoors.

- Up to 4 hours: \$500
- Up to 8 hours: \$1,000

***Round Trip mileage will be in addition to EOTM programming fees.**

**** Educators leave Aurora no earlier than 6:00am and return no later than 11:00pm. Depending on your requests, lodging may be necessary. This cost is in addition, and is not included in the EOTM price.**



Traveling
Explorit Zone



Slime Lab



EOTM Demo



We Bring Programming To You

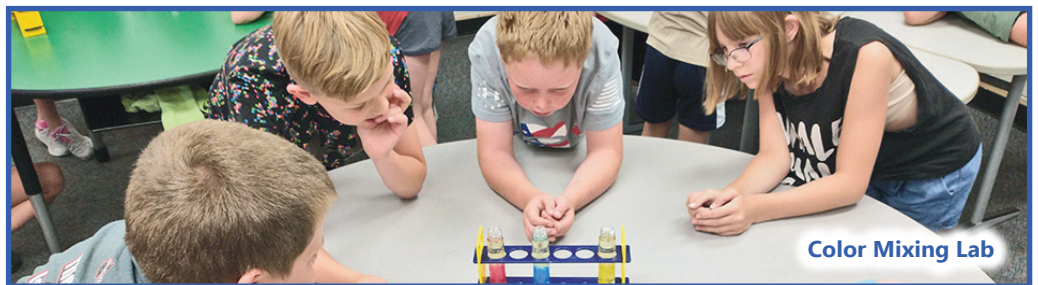
Edgerton Explorit Center Demonstrations & Labs

Demonstrations: offered on and offsite

- Arctic Blast (States of matter)
- Amazing Bubbles (Science of bubbles)
- FUNDamentals of Science (Describe, classify, understand)
- Sparks (Electricity)
- Spaceflight Explorers (Space)
- Raptorology (Science of Raptors)
- Portable Planetarium (Space)
- Stopping Time (Strobe light physics)
- Go Show! (Newton's laws of motion)
- Good Vibrations (Sound)
- ABC'S of Chemistry (Chemistry)

Labs: offered on and offsite

- Color Mixing
- Dino Excavators
- Density Tubes
- Nest Engineering
- Slime
- Owl Eyesight Lab
- Grass Heads
- Stomp Rockets
- Glitter Blood
- Flashlights
- Owl Pellet Dissection
- Soda Can Catapults
- Mallonaut Spacesuit Building
- Marble Machines
- Spectroscopes
- DNA



Edgerton Explorit Center Field Trips

Group rate: \$8.00 per person (\$100 minimum)

*Includes two 30-minute demonstrations

*Each additional demonstration @ \$2.50 per student

*Labs @ \$2.50 per person (\$50 minimum fee)

* Explorit Zone and new lower level Discover-It Zone time to explore hands-on interactive exhibits.

Field trip and Edgerton On The Move registration available online at www.edgerton.org.

For questions contact us at mary@edgerton.org or by calling 402-694-4032.

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