

2017-2018

Educator's Guide

Field Trip & Outreach Programs



*Visit our
newest
temporary
exhibits.*

711 N. Main St.
Rockford, IL 61103

815-963-6769

www.discoverycentermuseum.org

Fantastic Field Trips

Our interactive exhibits provide valuable hands-on experiences that match your curriculum and match up with Next Generation Science Standard Disciplinary Core Ideas. Visit Discovery Center Museum and teach a lesson your students won't forget!

Next Generation Science Standards: ESS2.BD, ESS3.B, ETS1.AB, LS4.CD, LS3.A, PS2.AB PS3.ABCD, PS4.ABC

Length: approximately 2 hours (longer for additional programs or lunchtime)

Basic Field Trip Cost: \$5 per students or chaperone (one free teacher per class)

Reservations: To begin the registration process, complete the online form at discoverycentermuseum.org/group-visit-request-form. For additional questions, you can also email fieldtrip@discoverycentermuseum.org. Our calendar fills well in advance. For the best choice of dates, please book 2-12 months before your planned visit.

Permanent Exhibits

Figure It Out

Flip, fold, and figure out patterns and relationships while exploring shapes and symmetry; sequences, shadows, and transformations. Use measurement and logic skills and connect to art, music, science, and society!

Simple Machines

Use a giant Archimedes' Screw to set in motion a whirlwind of activity on our transparent interactive wall. Lift yourself off the ground with a pulley and experience how to make work easier using simple machines.

Color and Light

Capture your shadow on a wall, impress an image on the giant pin-screen, encase yourself in a giant bubble, project a moving rainbow-image of your body, write with light, play with shadows and tease your brain!

Get the Message

Try your brush at virtual cave art, signal a crane operator, puzzle over expressions, send a message in Morse, decode a traffic sign, anchor the news and make the front page!

Ag-Zibit

Explore science and technology on the farm from simple machines to GPS and discover how agriculture affects all our lives everyday! Climb aboard the tractor, study live bees, gather eggs, milk the cows and more.

Air & Flight

Soar with science as you float a ball on an invisible cushion of air, see the mechanics of airplanes in action, feel a vortex, and experiment with wind.

Rockford Astronaut Janice Voss

Get a first-hand view of space flight, examine astronaut accessories, design your own mission patch, and find out what inspired Janice to reach for the stars.

Wild Weather

Touch a tornado, create the coriolis effect, model the swirl of planetary weather, measure the sun's shadow on the earth in real time, and build sand dunes.

Discovery Park

Navigate through the outdoor park to play with forces, motion, simple machines, optical illusions, and more! Availability is seasonal / weather dependent.

Body Shop

Get your muscles moving, measure your heart rate, test your strength and agility, play games with your brain, design a nutritious meal, examine genetic traits, see the inner workings of the human body, and more!

Power of Electricity

Turn body power into electrical power, feel the force and find the link between motion, magnets, and electricity! Harness the power of wind, assemble a circuit, dial up some solar energy, and witness stunning electrical phenomena!

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Team Up! Explore Science & Sports

Play virtual-reality soccer, clock the speed of your pitch, launch a tennis ball, try on sports equipment, measure bounces, and test for rotational inertia.

Tot Spot Gallery

This exclusive area allows children 6 years and younger to take the lead with exploration, imagination and creativity. Visit Ginny's House, work on the family car, take a trip on Engine #9, experiment with water, build something in the construction zone, and watch wind and gravity in motion. Our role-playing themes change throughout the year.

This year's schedule includes:

- OSF Children's Hospital - opening Oct. 26
- Nature Area - coming this winter!

Careers Kiosks **NEW!**

Learn about jobs from the people who do them! Computer kiosks feature videos, photos, and information for a variety of career fields, including scientist, chef, doctor, engineer, machine operator, baker, artist, graphic designer and many others. Graphic panels throughout the exhibit galleries feature people in occupations that relate to those exhibits.



Special Exhibits

Comets, Asteroids, Meteors

GREAT BALLS OF FIRE!

Great Balls of Fire: Comets, Asteroids, and Meteors

Dates: September 30 - January 14

Length: 45 minutes

Cost: \$6/person (\$5 museum admission + \$1 special exhibition)

There's more in outer space than stars and planets! Take yourself on an astronomical adventure as you climb into a "spaceship" and blast off to the asteroid belt and Jupiter on a mission to gather data about asteroids and comets. Role play as an "explorer-in-training" to gather data about differences in asteroids, meteors, and comets.

Interactive experiences will help students:

- Find out where comets come from and how they are formed.
- Experiment with the forces that influence the path of an object through the solar system.
- Determine the positioning of asteroid belts and comets when you create a solar system of your own, and
- Judge whether those Hollywood movie scenes are science or fiction.

Meanwhile, find out what happens back on Earth with an interactive look at meteors and impacts through a variety of experiences. Did the catastrophic event that did-in the dinos come from outer space, and could it happen again? Find out if meteor showers are caused by chunks of rock or bits of dust. Get the scoop on important NASA missions, and perform scientific tests to see if a suspected rock is a fallen meteorite...or a "meteor wrong".

Premier Sponsor:  WOODWARD

Next Generation Science Standards: ESS1.A, ETS1.ABC, PS1.A, PS2.AB, PS3.B, PS4.BC

Great Balls of Fire Focused Field Trip

Grades: 2-8

Length: 45 minutes

Cost: \$50/class (up to 30 students)

Available: September 30 - January 14

Observe how different forces affect the motion of a moving object in our solar system! Create craters, modify trajectories, model a gravity assist, and explore orbiting objects.



Curious George™: Let's Get Curious!

Dates: January 27 - May 13

Length: 45 minutes

Cost: \$7/person (\$5 museum admission + \$2 special exhibition)

Curious George **Let's Get Curious!**

Students will find themselves transported to the neighborhood in which Curious George lives with his friend, "The Man with the Yellow Hat." Here they will encounter a variety of activities that invite them to learn like that mischievous monkey: through direct experience and a variety of problem solving opportunities. Through this process of inquiry, children's thinking becomes more visible and the value of creative solutions shines. Key concepts in science, technology, engineering and math are woven and layered throughout the exhibit.

Next Generation Science Standards: ETS1.ABC, PS2.AB, PS3.AC

Illinois Early Learning and Development Standards: 7.A.ECabc, 7.C.ECab, 9.A.ECde

George's Curiosity Lab

Grades: PreK-1st **Length:** 45 minutes

Cost: \$50/class up to 30 students

A short *Curious George* video clip serves as the introduction to a perfect problem for children to solve. Teamwork plus trial and error lead to a solution in this enjoyable activity about gravity, ramps, and ingenuity as children experiment with engineering and key science concepts. At the end of the session, you get to take a *Curious George* book back to school with you!



Programs to Enhance Your Field Trip

Focused Field Trips

Add on to your visit and focus your students on a science theme. Each engaging workshop features activities, investigations and demonstrations that match your curriculum goals and reinforce science concepts.

Length: 45 minutes

Cost: \$50/class up to 30 students

Simple Machines

Grades: 2-8

An engaging overview of simple machines takes off as students experiment with wheel and axle, gear assemblies, pulley contraptions, and more.

Next Generation Science Standards: PS2.AB, PS3.C

Color and Light

Grades: K-8

Explore the properties of light, fool your vision, dissect a rainbow, experiment with invisible light and create your own kaleidoscope.

Next Generation Science Standards: ETS1.ABC, PS1.A, PS4.AB

Physics of Fun

Grades: 1-8

Students make use of engineering skills as they design and test their own roller coasters in this exploration of kinetic and potential energy.

Next Generation Science Standards: ETS1.ABC, PS2.AB, PS3.ABC

Microscopic Adventures

Grades: 3-8

Use real microscopes, prepare slides, and investigate the world of the very small. Examine cell structures and locate living organisms in unexpected places.

Next Generation Science Standards: ETS1.ABC, LS1.A, PS1.A, PS4.AB

Wild Weather

Grades: K-8

Witness the water cycle and see how this process leads to sun and storms! Instant clouds and touchable lightning unlock the complex phenomena of weather!

Next Generation Science Standards: ESS2.C, ESS3.B, PS1.AB, PS3.AB

Slime & Chemistry

Grades: K-8

Measure, pour, and mix real chemicals to produce reactions, investigate solids, liquids, and gases, and concoct slime! †\$20 additional lab fee.

Next Generation Science Standards: ETS1.ABC, PS1.AB, PS3.B

Focused Field Trips for Younger Learners

Add on to your visit and focus your students on a science theme. Each engaging workshop features activities, investigations and demonstrations that match your curriculum goals and reinforce science concepts.

Length: 45 minutes

Cost: \$50/class up to 20 students

Senses of Science

Grades: PreK-K

Use touch, sight, and hearing as exploration tools! This hands-on class is the perfect environment for kids to ask questions, discover answers, and experience science.

Next Generation Science Standards: LS1.AD

All Shapes and Sizes

Grades: PreK-K

Students get a brain-workout with this assortment of patterns, puzzles, shapes, and sorting designed to stimulate creative thinking. Kids won't even realize they're doing math!

Next Generation Science Standards: ETS1.ABC, PS1.A

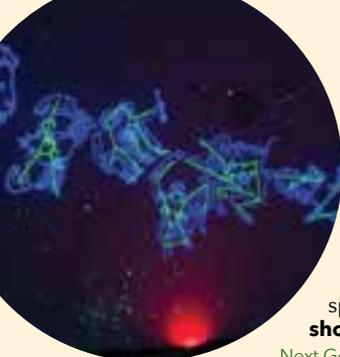
Light and Sound

Grades: PreK-K

Make a color viewer, experiment with shapes and shadows, and invent a sound maker for loud and soft, high and low!

Next Generation Science Standards: ETS1.ABC, PS4.AB





Discovery Planetarium

Experience the night sky in Discovery Center's planetarium! Pick a show tailored to your group's interest and ability level to explore planets, stars, space exploration and constellations. **These shows are designed for our in-house planetarium.**



Next Generation Science Standards: ESS1.AB, PS1.A, PS2.AB, PS4.BC

The planetarium is a gift from the Kiwanis Club of Rockford.

Length: 30 min **Cost:** \$30 per show up to 30 students **Grades:** PreK and up

Big Bird's Adventure

Recommended for grades PreK-1

Big Bird and Elmo explore the night sky and discover that we see the same phases of the moon as our friends across the world!

Discover the Night Sky

Recommended for grades 2-8

This live presentation walks students through the sky tonight and points out moon phases, planet locations, and constellation identification. Seasonal constellations are illustrated using stories from Greek mythology.



Earth, Moon, and Sun

Recommended for grades 3-8

The Native American mythical Coyote's incorrect notions about basic astronomy prompt explanations. Animation and real images come together to teach about daily motion of the sun, phases of the moon, seasonal changes in star locations, and eclipses.

Terrific Tuesdays

Presented by Discovery Center and Rockford Art Museum, this immersive and diverse experience expressively engages bodies and minds in science and art. Terrific Tuesday Basic Field Trips can accommodate 20 - 75 students and includes a 50-minute museum tour of either Discovery Center or Rockford Art Museum.

Time: 9:30 am-12:00 pm **Cost:** \$9/student; no cost for chaperones or teachers

Grades: K-6

Choose from these great themes and have your Tuesday date in mind when you contact us! Available November through March. For more information or to schedule, email Tuesday@discoverycentermuseum.org or call (815) 972-2826.

Light and Shadow

Break apart light, use paint to explore shades of color, and experiment with the qualities of light and shadow.

Next Generation Science Standards: ETS1.ABC, PS1.A, PS4.AB

Body Works

Learn how our insides work and create an art masterpiece that would make Picasso proud!

Next Generation Science Standards: LS1.ACD

Mixing It Up

From chemical surprises to amazing colors, we're mixing things up with outstanding results.

Next Generation Science Standards: PS1.AB, PS3.D



Loved the Tot Spot. It's perfect for kindergarten.
- Sally Bruns, South Prairie Elementary

Outreach Programs

Our Outreach Programs bring the excitement of science learning to you! Whether you are educating one small class or the entire school, we offer a wide variety of programs which meet the needs of your students, enhance your curriculum, and line up with Next Generation Science Standards Disciplinary Core Ideas. Some programs available in Spanish.

To begin the registration process, complete the online form at discoverycentermuseum.org/outreach-request-form. For additional questions, you can also email outreach@discoverycentermuseum.org or call 815-972-2844. Our calendar fills well in advance. For the best choice of dates, please book 2-12 months before your planned event.

Hands-On Classes

Engage your brain and immerse your hands in science with our Hands-On Classes! Whether introducing a topic, reviewing for a test, or investigating for fun, every student will be excited about learning science and begging for more!

Grades: vary by topic **Length:** 60 minutes **Participants:** 30 maximum
Cost: \$140 (\$70 for each additional class*) Travel fees may apply.

Simple Machines **

Grades: 2-8

Investigate mechanical advantage and get the scoop on force and motion with hands-on practice using a giant lever, pulleys, and LEGO gears!

Next Generation Science Standards: ETS1.ABC, PS2.AB, PS3.AC



Zombies!

Grades: 3-8

Find out how the brain works, build a giant neuron, find the origin of an infectious zombie virus and create a cure for the undead.

Next Generation Science Standards: LS1.AD, LS2.B

Electric Circuits

Grades: 3-8

Demonstrate an understanding of circuits using our Snap-Circuit Kits that light bulbs, spin motors, and more!

Next Generation Science Standards: ETS1.ABC, PS2.B, PS3.AB

Sponsored by



Slime & Chemistry

Grades: K-8

Measure, pour, and mix real chemicals to produce reactions, investigate solids, liquids, and gases, and concoct slime!

Next Generation Science Standards: ETS1.ABC, PS1.AB, PS3.B



Engineering Challenge

Grades: 3-8

Design and construct your own contraption to fly, spin, or stay put, then test it in our vertical wind column.

Next Generation Science Standards ETS1.ABC, PS2.AB, PS3.AB

Sounds of Science

Grades: K-6

Get splashed by a sound, invent some wacky noise-makers, and use a straw to discover the connection between size and pitch.

Next Generation Science Standards PS2.AB, PS4.A ETS1.ABC

Junior Hands-On Classes

These hands-on experiences feature activities that allow our littlest learners to explore at their own pace with amazing materials which stimulate senses and excite minds!

Toddler classes available upon request.

Grades: PreK **Length:** 30-45 minutes **Participants:** 20 maximum
Cost: \$110 (\$50 for each additional class*) Travel fees may apply.

Can We Build It? New Activities!

Create a building, bridge, or road using a variety of materials with this new version of one of our most popular classes!

Illinois Early Learning and Development Standards: 7.A.ECb, 7.CECa, 9.A.ECde

Tinkering NEW!

Little fingers love to tinker so we'll give them the tools to explore! Construct a contraption, build a masterpiece, and design whatever your imagination creates.

Illinois Early Learning and Development Standards: 6.S.ECb, 7.A.ECc, 9.A.ECb, 13.A.ECda

Bugs NEW!

Build, sort, and play with bugs while we explore the tiny world of our smallest friends.

Illinois Early Learning and Development Standards: 7.A.ECa, 8.A.ECa, 12.A.ECa, 12.B.ECb

Color & Light NEW!

Explore the spectrum in this luminous class. Learn about the rainbow, mix some colors, and view the world in a different light using our color viewers.

Illinois Early Learning and Development Standards: 10.A.ECa, 11.A.ECa, 12.E.ECa, 25.A.ECd



Don't see quite what you're looking for? Contact us and our team of educators will work to meet your needs.

Portable Planetarium**

We'll bring you the moon and stars with our inflatable StarLab Portable Planetarium! Presentations are tailored to your grade level and unique to this traveling program.

Grades: K-8

Length: 45 minutes

Participants: 30 maximum

Cost: \$140 (\$60 for each additional show*) Travel fees may apply.

Show Themes: The Sky Tonight, Ancient Stories in the Stars, Native American Lore, Our Solar System.

Next Generation Science Standards: ESS1.AB



Science Carts

Roll science right into your classroom to maximize student participation and discussion!

Grades: 1 - 8

Length: 45 minutes

Participants: 30 maximum

Cost: \$140 (\$60 for each additional class*) Travel fees may apply.

Weather Cart

Witness the water cycle and see how this process leads to sun and storms! Instant clouds and touchable lightning unlock the complex phenomena of weather!

Next Generation Science Standards: ESS2.CD, ESS3.B, PS1.AB, PS3.AB

Human Body Cart

Explore digestive, respiratory, and circulatory systems of the human body! See real lungs inflate, hang out with Mr. Guts, get your heart pumping, and more!

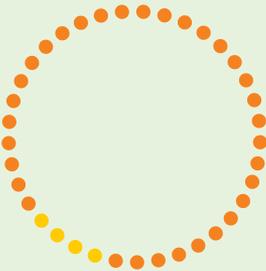
Next Generation Science Standards: LS1.AD, LS2.B

Electricity Cart **

Explore where our electricity comes from. Generate and transmit energy, and de"light" in static electricity.

Next Generation Science Standards: ETS1.ABC, PS2.B, PS3.AB

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* Additional program discount applies for programs of the same topic held on the same day at the same location.

** This program has a special space requirement.

*** Expanded age range available for younger participants.



Family Fun Programs

You provide tables and volunteers; we bring everything else! Ideal for schools, libraries, and community centers, these hands-on sessions feature activity stations of experiments, games, math, science, and make-and-take projects designed to engage and interest all ages!

6-10 stations

Program time: 60 - 90 minutes
Cost: \$350; Travel fees may apply.

Participants: 300 maximum

2-5 Stations

Program time: 30 - 60 minutes
Cost: \$250; Travel fees may apply.

Participants: 150 maximum

Disaster! **NEW!**

Erupt a mini volcano, experience the hair-raising effects of lightning, pack your survival gear and cure the zombie epidemic! Are you prepared?

Next Generation Science Standards: ESS2.B, ESS3.B, ETS1.ABC, LS1.AD, LS2.B, LS3.A

Storybook Science

Explore Science, Technology, Engineering, Art and Math paired with kids' favorite stories to spark their curiosity and engage their naturally scientific minds!

Next Generation Science Standards: ETS1.ABC, ESS1.A, PS2.AB, PS3.ABC

Fun & Games

Play games from around the world, create a mosaic masterpiece, fashion an intricate design, create 3-D shapes and more. Shhh: don't tell them it's math!

Next Generation Science Standards: ETS1.ABC, PS1.AB

Little Scientists

Manipulate magnets, compare colors, and fool with physics! Explore the world through activities designed for families with children grades PreK-2.

Next Generation Science Standards: ESS2.C, ETS1.ABC, LS1.AD, PS1.A, PS2.AB, PS4.AB

Chem-Tastic

Measure, mix, and pour real chemicals for amazing reactions including fizz, slime, and instant color changes! †\$100 additional lab fee.

Next Generation Science Standards: ETS1.ABC, PS1.AB, PS3.B

Assembly Programs

These dynamite demos feature experiments, investigations, and explanations woven together in a stimulating presentation.

Grades: K - 8

Length: 30-45 minutes

Participants: 150 maximum

Cost: \$300 (\$250 additional show*) Travel fees may apply.

The Liquid Nitrogen Show **

Excitement goes up as the temperature drops in this ultra-cold show!

Witness instant phase changes and identify the differences in states of matter as they succumb to the frigid world of liquid gas!

Next Generation Science Standards: PS1.AB, PS3.AB



The Captivating Chemistry Show

Solids, liquids, and gases combine to create chemical changes that look like magic. Chemistry becomes apparent using surprising reactions that create colors, fabricate foam, and explode!

Next Generation Science Standards: ESS3.A, PS1.AB, PS2.B, PS3.ABCD



The Fascinating Physics Show **

Amazing feats come together to weave the story of Newton's Laws of Motion in this compelling program! From Angry Birds to inertial basketball, this is one memorable science lesson!

Next Generation Science Standards: ETS1.ABC, PS2.AB, PS3.ABC

It was awesome! We had so many compliments, everyone wants us to do it again next year. [The presenter] was wonderful, everything went so smoothly. It was just fabulous.

-Melissa F., Lake Mills, WI

Afterschool Enrichment / Science Club Activities

We bring the excitement of science learning to you! Our active programs provide all materials plus playful engagement for your students and family groups. Choose from these topics for hands-on science fun!

Grades: varies by topic

Length 45-60 minutes

Participants: 30 maximum

Cost: \$140 (\$70 each additional program*) Travel fees may apply.



Lots of LEGOs

Investigate gears and forces and use America's favorite bricks to construct a merry-go-round or windmill that really works! Recommended for grades 1-8.

Blast Off **

Explore forces and motion with these paper rockets that launch using air power, and fly so far they hit the gym wall! Recommended for grades 1-6.

Magnetic Attractions

Test to see what sticks, measure magnetic strength, and construct a magnetic contraption.

Recommended for grades K-2.

Thrill Ride **

Experiment with potential and kinetic energy as you invent a rollercoaster, and take a marble on a wild ride!

Recommended for grades 1-8.

Make the Connection

Mess around with circuits to make things light up, spin, and maybe even fly!

Recommended for grades 3-8.

Build It Bigger ***

Put together everyday objects and special materials to create bridges and towering structures.

Recommended for grades K-6.

Ooey Goopy Science

Solids, liquids, and gases come together to create amazing reactions and slippery slime.

Recommended for grades K-8.

Fling and Wing

Learn aerodynamic secrets as you assemble and launch some crazy shapes. You won't believe these gadgets fly!

Recommended for grades 2-6.

Good Vibrations ***

Get splashed by a sound, invent some wacky noise-makers, and use a straw to discover the connection between size and pitch.

Recommended for grades K-6.



Engineering Adventure ***

Design and construct your own contraption to fly, spin, or stay put, then test it in our vertical wind column.

Recommended for grades 1-8.

Rolling Ramps *** NEW!

Construct a crazy coaster or simulate a sensational slide with our set of ramps and balls of all sizes.

Recommended for grades K-2

[The instructor] was
AWESOME! She got through
to the kids and they loved her
and had a blast with the hands
on field trip.

-Michelle H, Rockford, IL

It was AMAZING and the
staff member in charge did a
phenomenal job!!

-Amber M., Rockford, IL



Options at Discovery Center					Please contact these people directly; email works best for us	
Grade level	Amount of time	Maximum participants	Fees	http://www.discoverycentermuseum.org/group-visit-request-form		
Regular Field Trip						
All	2 hours	120	\$5 / person			
Great Balls of Fire + Museum						
2-8	2 ½ - 3 hours	60	\$6 / person			
Curious George + Museum						
PreK-1	2 ½ - 3 hours	60	\$7 / person			
Great Balls of Fire FFT						
2-8	45 min	30	\$50 / class			
George's Curiosity Lab						
PreK-1	45 min	20	\$50 / class			
Focused Field Trip						
varies	45 min	30	\$50 / class	fieldtrip@discoverycentermuseum.org or call Hillary at 815-972-2826		
Focused Field Trip for Younger Learners						
PreK-1	45 min	20	\$50 / class			
Discovery Planetarium						
varies	30 min	30	\$30 / class			
Lunchroom						
All		60	\$10 / group			
Terrific Tuesday						
K-6	2-½ hrs	75	\$9 / student	tuesday@discoverycentermuseum.org or call Corinne, 815-972-2842		
Options for Outreach						
Hands-on Classes						
varies	1 hour	30	\$140 / \$70			
Junior Hands-On Classes						
PreK-2	30-45 min	20	\$110 / \$50			
Portable Planetarium						
K-8	45 min	30	\$140 / \$60			
Science Carts						
1-8	45 min	30	\$140 / \$60	outreach@discoverycentermuseum.org or call Jessica, 815-972-2844		
Family Fun Programs						
varies	30-90 min	300	\$250-\$450			
Assembly Programs						
K-8	30-45 min	150	\$300 / \$250			
After-school / Enrichment						
varies	45-60 min	30	\$140 / \$70			
Additional travel fees may apply.						

Our calendar fills well in advance. For the best choice of dates, please book 2-12 months before your event.