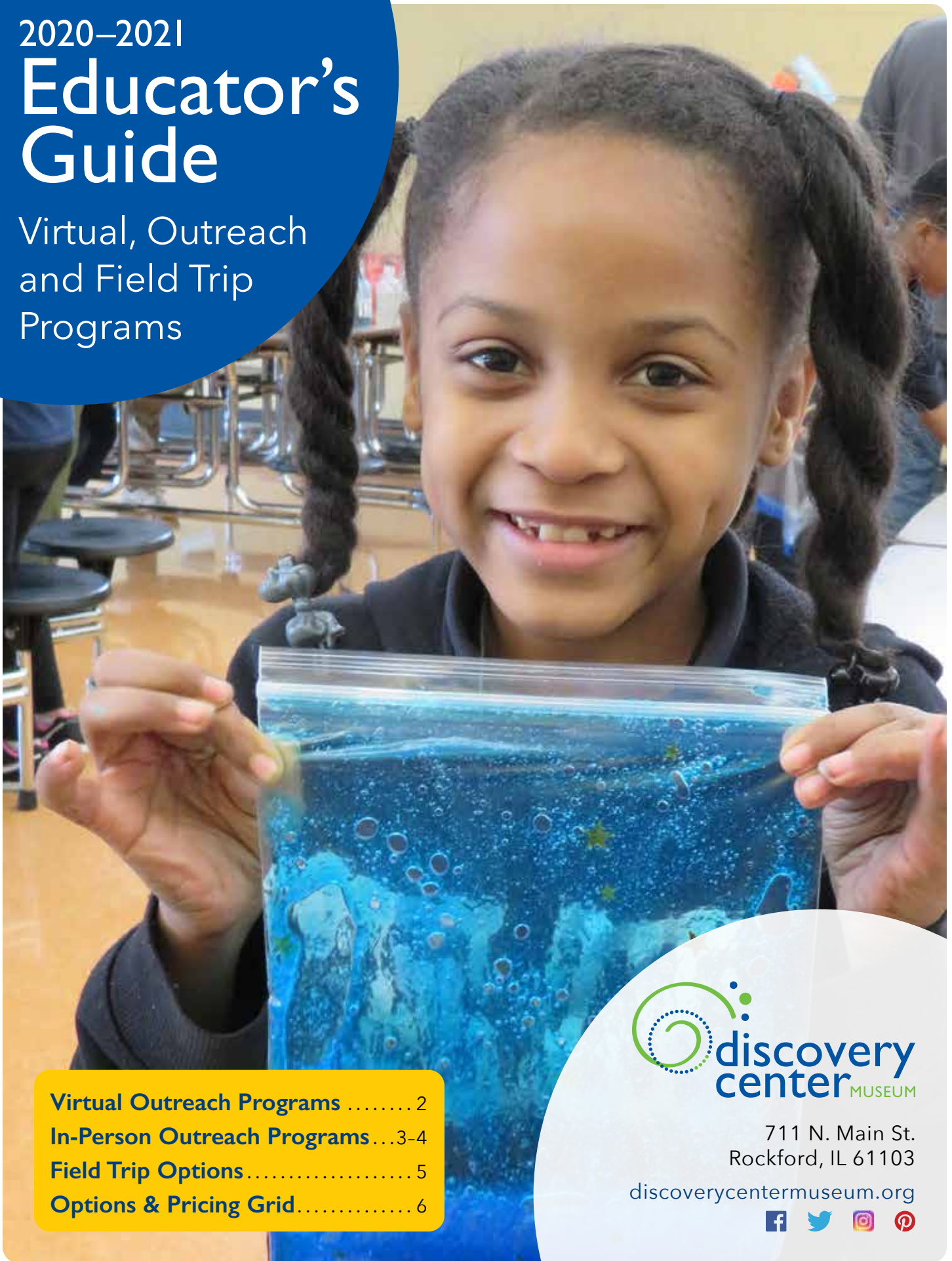


2020–2021

# Educator's Guide

Virtual, Outreach  
and Field Trip  
Programs



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[discoverycentermuseum.org](http://discoverycentermuseum.org)



Whether you take your students to Discovery Center or bring Discovery Center to your classroom, our educators have countless ways to enhance your curriculum, inspire your students, and bring STEM to life! Our field trips, in-person outreach, and virtual programs contain educational activities and resources for learners of all ages and are created to inspire and excite people about science.



## 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*.

**REGISTRATION:** To begin the registration process, complete the online form at [www.discoverycentermuseum.org/outreach-request-form](http://www.discoverycentermuseum.org/outreach-request-form). For additional questions, you can also email [outreach@discoverycentermuseum.org](mailto:outreach@discoverycentermuseum.org) or call our Outreach Request Line at 815-972-2844. Our calendar fills well in advance. For the best choice of dates, please book at least 2 weeks before your planned event. **Discovery Center policies may change as COVID-related CDC, state and local health guidelines evolve. Check our website or email us for the latest information.**

## Virtual Outreach – All new!

Discovery Center is excited to offer a brand-new interactive learning experience—Virtual Outreach! With the help of technology, Pre-K to Grade 8 students will enjoy live, interactive exploration of a STEM topic designed to spark interest in science and inspire students to learn more.

### Hands-On Science

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 30 participants maximum

**Cost:** \$140 (\$70 for each additional class\*).

Travel fees may apply.

#### Slime & Chemistry

**Grades:** K-8

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

NGSS: ETS1.ABC, PS1.AB, PS3.B



#### 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.

NGSS: ETS1.ABC, PS1.A, PS4.AB

#### Fling and Wing

**Grades:** 2-6

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

NGSS: PS2.AB, ETS1.C

#### Good Vibrations \*\*\*

**Grades:** K-6

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

NGSS: PS2.AB, PS4.A

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

### Astronomy Shows

We'll show you the moon and stars with our brand new Virtual Astronomy Shows! Presentations are tailored to your grade level and unique to this traveling program.

**Grades:** K-8

**Length:** 45 minutes up to 30 participants

**Cost:** \$150 (\$60 for each additional show\*)

NGSS: ESS1.AB



#### Navigating the Night Sky

**Grades:** 2-8

Learn how to assemble your own star wheel and how to navigate the night sky tonight! What cool things do you think you can discover if you look up?

#### Greek Mythology: Ancient Stories in the Stars

**Grades:** K-8

Come listen to some very old tales and explore the world of heroes, monsters, and demi-gods hidden among the stars with these stories inspired by the classic Greek myths.

#### Our Solar System

**Grades:** K-8

Take a trip through our local stellar neighborhood and get to know the planets closest to us. Learn some fun facts about the planets in our solar system, take a (safe) look at the nearest star, and find out what NASA has been up to lately.

#### Our Place in the Universe

**Grades:** 2-5

This live presentation walks students through the patterns found in our night sky. Learn how to navigate the ecliptic line and where the stars go during our day time sky.

### Science Shows

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

**Grades:** K-8

**Length:** 30-45 minutes Up to 95 Computers

**Cost:** \$300 (\$250 additional show\*).

#### 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!

NGSS: 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!

NGSS: ESS3.A, PS1.AB, PS2.B, PS3.ABCD

#### Forces in Motion

Amazing feats come together to weave the story of Newton's Laws of Motion in this compelling program! From collisions to physics games, this is one memorable science lesson!

NGSS: ETS1.ABC, PS2.AB, PS3.ABC



\* 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.

# In-Person Outreach

## 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 30 participants maximum

**Cost:** \$140 (\$70 for each additional class\*).

Travel fees may apply.



### Slime & Chemistry

**Grades:** K-8

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

NGSS: ETS1.ABC, PS1.AB, PS3.B

### Magnetic Attractions

**Grade:** 3

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

NGSS: PS2.AB, ETS1.AC,

### Engineering Challenge

**Grades:** 3-8

Design and construct your own parachute to safely descend your person without crashing onto the floor.

NGSS: ETS1.ABC, PS2.AB, PS3.AB

### 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.

NGSS: ETS1.ABC, PS1.A, PS4.AB

## Early Childhood 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:** Pre-K

**Length:** 30-45 minutes 20 participants maximum

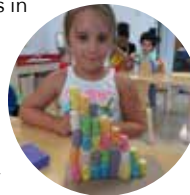
**Cost:** \$110 (\$50 for each additional class\*)

Travel fees may apply.

### Balancing Act

Children explore balance while developing fine and gross motor skills in this topsy-turvy class.

IELDS: 2.A.ECa, 13.B.ECa, 19.A.EDb, 19.B.ECb



### We Can Build It

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

IELDS: 7.A.ECb, 7.C.ECa, 9.A.ECd, 9.A.ECe

### Rainbow of Colors

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.

IELDS: 10.A.ECa, 11.A.ECa, 12.E.ECa, 25.A.ECd



### Shapes and Patterns

Explore math skills we use in our everyday lives as we investigate how shapes and patterns can make new pictures, and geoboards can make other fun shapes.

IELDS: 8.A.ECa, 8.A.ECb+, 9.A.EC, 9.A.ECa, 9.A.ECb, 9.A.ECd

## Science Carts

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

**Grades:** 1-8

**Length:** 45 minutes 30 participants 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!

NGSS: ESS2.CD, ESS3.B, PS1.AB, PS3.AB

### Electricity Cart \*\*

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

NGSS: ETS1.ABC, PS2.B, PS3.AB

Sponsored by 

### Sounds of Science

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

NGSS PS2.AB, PS4.A

### Simple Machines \*\*

**Grades:** 2-8

Discover how simple machines give you a mechanical advantage and get the scoop on force and motion by learning about simple machines hidden in the items around you!

NGSS: ETS1.ABC, PS2.AB, PS3.AC



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

\* 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.

## In-Person Outreach continued

### Assembly Programs

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

**Grades:** K-8

**Length:** 30-45 minutes

**Participants:** Capacity subject to local health department social distancing guidelines.

**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!

NGSS: 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!

NGSS: ESS3.A, PS1.AB, PS2.B, PS3.ABCD

#### *Forces in Motion* \*\*

Amazing feats come together to weave the story of Newton's Laws of Motion in this compelling program! From collisions to physics games, this is one memorable science lesson!

NGSS: ETS1.ABC, PS2.AB, PS3.ABC

### 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.

#### *Blast Off* \*\*

**Grades:** 1-6

Explore forces and motion with these paper rockets that launch using air power, and fly so far they hit the gym wall!

#### *Build It Bigger* \*\*\*

**Grades:** K-6

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

#### *Fling and Wing*

**Grades:** 2-6

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

#### *Good Vibrations* \*\*\*

**Grades:** K-6

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

#### *Engineering Adventure*

Grades K-8

Design and construct your own parachute to safely descend your person without crashing onto the floor.

### 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**

**Length:** 60-90 minutes

**Participants:** Capacity subject to local health department social distancing guidelines.

**Cost:** \$400; Travel fees may apply.

**2-5 stations**

**Length:** 30-60 minutes

**Participants:** Capacity subject to local health department social distancing guidelines.

**Cost:** \$250; Travel fees may apply.



#### *Outer Space*

Launch a rocket, explore an exoplanet, and space out in the Solar System! Take on an engineering challenge by designing a spacecraft, a Mars rover, or a lunar base.

NGSS: PS2.A, PS3.C, ETS1.A, ETS1.ABC, ESS1.AB

#### *Whoosh*

Experiment and play with the amazing properties of air! Create flying contraptions, fold a kite that can fly inside, launch a rocket, and more!

NGSS: ETS1.ABC, PS1.A, PS2.AB, PS3.AB

#### *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!

NGSS: 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.

NGSS: ESS2.C, ETS1.ABC, LS1.AD, PS1.A, PS2.AB, PS4.AB

IELDS: 8.A.ED a, 12.D.EDa, 19.A.ECd



Discovery Center policies regarding face coverings and social distancing may change as COVID-related CDC, state and local health mandates evolve. Check our website or email us for the latest information.

\* 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.

# Fantastic Field Trips

Our interactive exhibits provide valuable hands-on experiences that match your curriculum and align with Next Generation Science Standard Disciplinary Core Ideas. The thrill of exploration and discovery is built into every one of our 300 hands-on science and arts exhibits located inside Discovery Center and outside in our Rock River Discovery Park. Students can investigate the human body, experiment with power and electricity, learn about the science behind their favorite sports, explore color and light, delve into the science of farming, experience the power of simple machines, touch a tornado, fly a jet, drive a combine, and so much more. Visit Discovery Center Museum and teach a lesson your students won't forget!

NGSS: ESS2.BD, ESS3.B, ETS1.AB, LS4.CD, LS3.A, PS2.AB PS3.ABCD, PS4.ABC  
IELDS: 9.A.ECa, 11.A.ECe, 12.B.ECb, 12.D.ECb, 19.A.ECa, 19.A.ECb, 30.C.ECa

**Length:** Approximately 2 hours (longer for add-on programs)

**Basic Field Trip Cost:** \$5 per students or chaperone (all school staff members are free)

Discovery Center field trip policies may change as COVID-related CDC, state and local health guidelines evolve. Check our website or email us for the latest information. Masks and social distancing will be required for students, teachers and chaperones. We want to keep everyone safe!

**RESERVATIONS:** To begin the registration process, complete the online form at [www.discoverycentermuseum.org/group-visit-request-form](http://www.discoverycentermuseum.org/group-visit-request-form). For additional questions, you can also email [fieldtrip@discoverycentermuseum.org](mailto:fieldtrip@discoverycentermuseum.org). For the best choice of dates, please book at least 2 weeks before your planned visit.



## Programs to Enhance Your Field Trip

### STEM Labs

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:** \$55/class up to 30 students



#### Space Engineering

**Grades:** 2-6

Discover space science and get hands-on to see how gravity works in space. Land safely on the surface of a foreign world and engineer a space rover!



NGSS: PS3.ABC, ETS1.ABC, ESS1.A

#### Simple Machines (Demo Version)

**Grades:** 2-8

Discover how simple machines give you a mechanical advantage and get the scoop on force and motion by learning about simple machines hidden in the items around you!

NGSS: 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.

NGSS: ETS1.ABC, PS1.A, PS4.AB

#### Wild Weather

**Grades:** K-3

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!



NGSS: ESS2.CD, ESS3.B, PS1.AB, PS3.B

#### Slime & Chemistry

**Grades:** K-8

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

NGSS: ETS1.ABC, PS1.AB, PS3.B

#### Human Body Cart

**Grades:** K-8

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!

NGSS: LS1.AD, LS2.B

#### Robot Rendezvous

**Grades:** 3-5

Design bots and compile code as your students put their problem-solving skills to the test with our robots.

NGSS: 3-5-ETS1-1; ETS1-2; ETS1-3

Discovery Center field trip policies may change as COVID-related CDC, state and local health mandates evolve. Face covering and social distancing requirements may also be updated as guidelines evolve. Check our website or email us for the latest information.

### Special Temporary Exhibit

**Dates:** February 6–May 16

**Cost:** Additional costs may apply

**Grades:** K-8



#### Hot Wheels™: Race to Win™

To design, build, and test the fastest and safest speed machines, race teams use their skills in science, technology, engineering, and math. Learn how racing teams design full-size cars and tracks for both speed and safety. Become part of a dynamic racing team working together using the scientific process to build and test the fastest and safest cars and tracks on the planet.



#### FREE LESSONS OPTION!

In advance of a field trip, we will send you lessons suitable for grades 3-5 or 6-8 that encourage inquiry and STEM learning through play and hands-on activities matched to Next Generation Science Standards. The lessons are designed to complement the *Hot Wheels™: Race to Win™* exhibit. Lessons cover how physical forces influence the distance and speed cars can travel; how the concept of aerodynamics directly relates to design and influences the speed and distance cars can move; and how the physical science concepts of friction, speed, gravity, potential energy, and kinetic energy are used to design and test track layouts. Please note that schools will need to provide their own Hot Wheels cars, several lengths of track and connectors, and several 3-speed launchers.

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

# Discovery Center Education Options and Pricing

	Program	Group Size Limit	Fees	Grade	
Virtual Outreach	Hands-On Science (Travel Fees Apply*)	Slime & Chemistry	30	\$140 / \$70	K-8
		Color & Light	30	\$140 / \$70	K-8
		Fling & Wing	30	\$140 / \$70	2-6
		Good Vibrations	30	\$140 / \$70	K-6
	*We will waive travel fee if school will pick up materials for program(s).				
	Astronomy Shows	Navigating the Night Sky	30	\$150 / \$60	2-8
		Greek Mythology	30	\$150 / \$60	K-8
		Out Solar System	30	\$150 / \$60	K-8
		Our Place in the Universe	30	\$150 / \$60	2-5
	Science Shows	Liquid Nitrogen	95 computers	\$300 / \$250	K-8
Captivating Chemistry		95 computers	\$300 / \$250	K-8	
Forces in Motion		95 computers	\$300 / \$250	K-8	
<p><b>To start the reservation process:</b>  <a href="http://www.discoverycentermuseum.org/education/stem-outreach/outreach-request-form">www.discoverycentermuseum.org/education/stem-outreach/outreach-request-form</a></p> <p><b>For questions:</b>  <a href="mailto:outreach@discoverycentermuseum.org">outreach@discoverycentermuseum.org</a>                      or call 815-972-2844</p>					
In-Person Outreach	Hands-On Classes	Slime & Chemistry	30	\$140 / \$70	K-8
		Magnetic Attractions	30	\$140 / \$70	3
		Engineering Challenge	30	\$140 / \$70	3-8
	Early Childhood	Color & Light	30	\$140 / \$70	K-8
		Balancing Act	20	\$110 / \$50	Pre-K
		We Can Build It	20	\$110 / \$50	Pre-K
		Rainbow of Colors	20	\$110 / \$50	Pre-K
		Shapes and Patterns	20	\$110 / \$50	Pre-K
	Science Carts	Weather Cart	30	\$140 / \$60	1-8
		Electricity Cart	30	\$140 / \$60	1-8
		Sounds of Science	30	\$140 / \$60	1-8
		Simple Machines	30	\$140 / \$60	2-8
	Assembly	Liquid Nitrogen	150	\$300 / \$250	K-8
		Captivating Chemistry	150	\$300 / \$250	K-8
		Forces in Motion	150	\$300 / \$250	K-8
	Science Club	Blast Off	30	\$140 / \$70	1-6
		Build It Bigger	30	\$140 / \$70	K-6
		Fling & Wing	30	\$140 / \$70	2-6
		Good Vibrations	30	\$140 / \$70	K-6
		Engineering Adventure	30	\$140 / \$70	K-6
Family Fun	Outer Space	300	\$400		
	Whoosh	300	\$400		
	Fun & Games	300	\$400		
	Little Scientists	300	\$400	Pre-K-2	
<p><b>To start the reservation process:</b>  <a href="http://www.discoverycentermuseum.org/education/stem-outreach/outreach-request-form">www.discoverycentermuseum.org/education/stem-outreach/outreach-request-form</a></p> <p><b>For questions:</b>  <a href="mailto:outreach@discoverycentermuseum.org">outreach@discoverycentermuseum.org</a>                      or call 815-972-2844</p>					
Museum Visits	Add Ons*	<b>Regular Field Trip</b>	<b>50</b>	<b>\$5 / person</b>	
		Space Engineering	30	\$55	2-6
		Simple Machines	30	\$55	2-8
		Color & Light	30	\$55	K-8
		Wild Weather	30	\$55	K-3
		Slime & Chemistry	30	\$55	K-8
		Human Body	30	\$55	K-8
		Robot Rendezvous	30	\$55	3-5
	*Group size may need to be smaller based on classroom space limitations.				
	Special Exhibit	Hot Wheels™: Race to Win™	50	Extra fee may apply	K-8
<p><b>To start the reservation process:</b>  <a href="http://www.discoverycentermuseum.org/group-visit-request-form">www.discoverycentermuseum.org/group-visit-request-form</a></p> <p><b>For questions:</b>  <a href="mailto:fieldtrip@discoverycentermuseum.org">fieldtrip@discoverycentermuseum.org</a>                      or call 815-972-2826</p>					