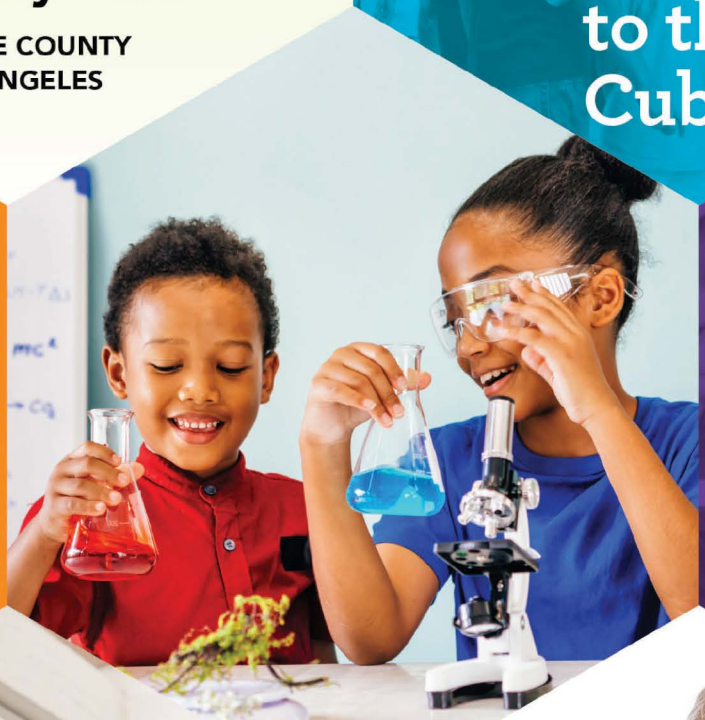
DiscoveryCube

ORANGE COUNTY
LOS ANGELES

Come to the Cube...



the Cube comes to you!

inspire educate impact

Grades Pre-K through 12

# Education

Field Trips • Workshops • Assemblies

# It's been said that science that isn't hands-on isn't science at all.

Science is not just a collection of facts. Facts are a part of science, but science is much more. It includes observing what is happening, predicting what might happen, and testing theories and understanding their outcomes. Children learn science best and understand scientific ideas better if they can explore and investigate and experiment. Hands-on science can also help children to think critically and gain confidence in their own ability to solve problems.

The hallmark of Discovery Cube is the impact that our hands-on, highly immersive exhibits, workshops, and assemblies have on children by allowing them to be completely engaged in the experience. We teach STEM programs to over 300,000 students and teachers each year both on-site at Discovery Cube Orange County and Los Angeles, and off-site in six counties across Southern California.

If you want to be inspired, challenged, and confident in your STEM teaching and programming, please join us for a professional development session, bring your students on a field trip, or have us come to your school to present a workshop or assembly. Thank you for your dedication to the education of children and for your support of Discovery Cube!

**Tina Rolewicz**
Vice President, Education
Discovery Cube

# Discovery Cube Programs

## Field Trips

A field trip to Discovery Cube is an exciting opportunity for students and teachers to share in the fun of an interactive learning experience. Field trips are grade level specific and correlated with Next Generation Science Standards (NGSS). Each field trip includes exciting new STEM videos featuring live-action performers, puppets, and animation to help students discover and understand science concepts.

The experience also includes activities and hands-on learning that can be used in the classroom pre- and post-field trip. In addition to the chosen field trip program, groups are free to explore the entire science center and the various themed areas.

## Science-to-Go

If you can't bring your students to the science center, we bring Discovery Cube to you! Students will enjoy an engaging science program in the comfort or their own classroom or school auditorium. Science-to-Go programs include the following:

- **Workshops:** Created for up to 35 students and conducted in a classroom setting for a smaller, hands-on science experience.
- **Assemblies:** Created for up to 150 students and conducted in an auditorium setting for a dynamic and fun science experience.

## Environmental Programs

Discovery Cube partners with a variety of agencies to offer **FREE** water, waste, and recycling programs to students in specific service areas. These programs are conducted at the school site, are grade-level specific, and correlate with NGSS and Environmental Principles & Concepts. Please contact us to find out which programs are available in your area.

**Three convenient ways to book today!**

- E-mail: groupsales@discoverycube.org
- Call: 714-913-5030
- Online: discoverycube.org/education-programs

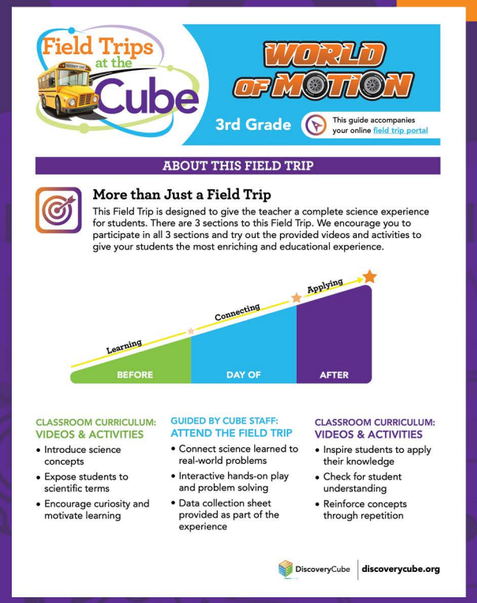
**ORANGE COUNTY** • 2500 North Main Street, Santa Ana, CA 92705
**LOS ANGELES** • 11800 Foothill Blvd., Los Angeles, CA 91342

# NEW Interactive Field Trips!

**Integrated with large-scale exhibits, includes pre- and post-visit content to extend student learning, and are loads of fun!**

Embark on an adventure in learning with our ALL NEW field trip experience! Each field trip includes exciting new STEM videos featuring live-action performers, puppets, and animation to help students discover and understand science concepts like never before.

The experience also includes activities and hands-on learning that can be used in the classroom pre- and post-field trip for a complete week-long science curriculum. At Discovery Cube, students will enjoy large-scale exhibits and an interactive NGSS-correlated workshop designed specifically for each grade level. Students will spend two to three hours exploring in a fun, learn-as-you-go environment. The post field trip experience includes an assessment to check understanding and learning.


Field Trips at the Cube

WORLD OF MOTION

3rd Grade

This guide accompanies your online field trip portal

ABOUT THIS FIELD TRIP

**More than Just a Field Trip**

This Field Trip is designed to give the teacher a complete science experience for students. There are 3 sections to this Field Trip. We encourage you to participate in all 3 sections and try out the provided videos and activities to give your students the most enriching and educational experience.

Learning — BEFORE
Connecting — DAY OF
Applying — AFTER

CLASSROOM CURRICULUM: VIDEOS & ACTIVITIES
- Introduce science concepts
- Expose students to scientific terms
- Encourage curiosity and motivate learning

GUIDED BY CUBE STAFF: ATTEND THE FIELD TRIP
- Connect science learned to real-world problems
- Interactive hands-on play and problem solving
- Data collection sheet provided as part of the experience

CLASSROOM CURRICULUM: VIDEOS & ACTIVITIES
- Inspire students to apply their knowledge
- Check for student understanding
- Reinforce concepts through repetition

DiscoveryCube | discoverycube.org

# ROOTS and FRUITS

## FIELD TRIP

### Grades 1, 2, 3

Students in First, Second, and Third grades will participate in a field trip correlated with Next Generation Science Standards specific to their grade level. Science topics introduced are the following:

- Life Cycle of a Plant, Parts of a Plant, Plant Habitats, Pollinators, Water Conservation (grades 1-2 only), Composting (grade 3 only)

**Pre-Field Trip Activities Include:**

- Cube-created "The Great Dog-umentary" Video
- Pollinator Hotel Activity

**Field Trip Experience:**

- Guided small group lab time facilitated by a Discovery Cube demonstrator
- Time for science center exploration of the various themed spaces: Environment, Physics, Science of Hockey, Space, Water

**Post-Field Trip Activities:**

- Interactive follow up video to check for student understanding of science concepts and assess learning
- Celebration of achievements with certificates and badges
- Cube-created Musical Science Video and Every Drop Counts Scavenger Hunt for grades 1-2
- Cube-created Vermicomposting Video and Compost Recipe Activity for grade 3

# WORLD OF MOTION

## FIELD TRIP

### Grades 3, 4, 5

Students in Third, Fourth, and Fifth grades will participate in a field trip correlated with Next Generation Science Standards specific to their grade level. Science topics introduced are the following:

- Gravity, Friction, Potential and Kinetic Energy, Energy Transfer, Newton's Laws of Motion, Engineering Design

**Pre-Field Trip Activities Include:**

- Cube-created "Racecar Science" Video
- Digital Racecar Rally Activity

**Field Trip Experience:**

- Guided small group lab time facilitated by a Discovery Cube demonstrator
- Data collection worksheets with additional challenges for back in the classroom
- Time for science center exploration of the various themed spaces: Environment, Physics, Science of Hockey, Space, Water

**Post-Field Trip Activities:**

- Interactive follow up video to check for student understanding of science concepts and assess learning
- Celebration of achievements with certificates and badges
- Cube-created "Rubber Hits the Road" Video
- Paperback Racetrack Activity

# Programs at a Glance

Discovery Cube's STEM education programs provide students with grade-specific workshops and assemblies that correlate with Next Generation Science Standards. Each program presents concepts in an engaging and fun format to excite student curiosity, and experienced science educators teach all programs. We are committed to assisting teachers by providing a world-class science education for all students.

| | PK | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | High School |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Field Trips at the Cube** | | | | | | | | | | | |
| Visit Discovery Cube Orange County | x | x | x | x | x | x | x | x | x | x | x |
| Visit Discovery Cube Los Angles | x | x | x | x | x | x | x | x | x | x | x |
| **Science-to-Go Assemblies: Science fun created for large groups** | | | | | | | | | | | |
| Bubbles | | x | x | | | | | | | | |
| Motion Commotion | | | | | x | | x | | | | |
| Nature Connections | | x | x | | | | | | | | |
| Reaction Lab | | | | x | | | x | | | | |
| Science Magic | | x | x | x | x | x | x | x | | | |
| Super Cool | | | | x | | | x | x | | | |
| Watt's Current | | | | | x | x | | | | | |
| **Science-to-Go Workshops: Hands-on science fun right in the classroom** | | | | | | | | | | | |
| Buzzy Bees | | x | x | | | | | | | | |
| Diary of a Worm | | x | x | | | | | | | | |
| Electric Circuits | | | | | x | x | | | | | |
| Electric Motors | | | | | | x | | | | | |
| Engineering Design: Build a Nest | | | | | x | x | x | | | | |
| Engineering Design: Structures | | | | | x | x | x | | | | |
| Forces and Motion | | | | | x | | x | | | | |
| Fossils | | | | x | x | | | | | | |
| Owls Are a Hoot | | | | x | x | | | | | | |
| Pig Heart Dissection | | | | | | | | x | x | x | |
| Portable Planetarium | | | x | x | x | x | x | x | x | x | x |
| Science Rocks | | | | x | | x | x | | | | |
| Sound Exploration | x | x | x | | | | | | | | |

| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | High School |
|---|---|---|---|---|---|---|---|---|---|---|
| **Science-to-Go Assemblies: Science brought to you via a virtual platform with a live-action host** | | | | | | | | | | |
| Bubble Seasons | x | x | | | | | | | | |
| Pet Power | | | x | x | | | | | | |
| A Pollinator's Journey | | | | | x | x | | | | |

| | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| **Environmental Water and Resource Programs: FREE sponsored assemblies at your school** | | | | | | | | | |
| Waste, Recycling, and Environmental Education/ Field Trip: Orange County Waste and Recycling | | | | | | x | x | | |
| Waste, Recycling, and Environmental Education/Eco Challenge: City of Diamond Bar | | | | | | x | x | | |
| Waste, Recycling, and Environmental Education/Eco Challenge: City of Glendale | | | | | | x | x | | |
| Waste, Recycling, and Environmental Education/Eco Challenge: City of Irvine | | | | | | x | x | | |
| Waste, Recycling, and Environmental Education/Eco Challenge: City of Mission Viejo | | | | | x | x | x | | |
| Water Education: Eastern Municipal Water District | x | x | x | x | x | x | x | x | x |
| Water Education: Elsinore Valley Municipal Water District | x | x | x | x | x | x | | | |
| Water Education: Golden State Water Company | | | | | x | x | x | | |
| Water Education: Irvine Ranch Water District | x | x | x | x | x | x | x | x | x |
| Water Education: Jurupa | | | | | x | x | x | x | x |
| Water Education: Upper San Gabriel Valley Municipal Water District | | | | | x | x | x | x | |
| Water Education: Western Municipal Water District | | | | | x | x | | | |

All programs subject to change without notice.

**Three convenient ways to book today!**

- E-mail: groupsales@discoverycube.org
- Call: 714-913-5030
- Online: discoverycube.org/education-programs

# Field Trips at the Cube

## ORANGE COUNTY AND LOS ANGELES

### Fun with Colors (PK)
Science and art come together for young learners as they explore color mixing through this special addition activity to their self-exploration field trip.

### A Perfect Fit (K)
This guided 2-hour field trip features a special presentation about animal adaptations that allow different animals to survive and thrive in different environments.

### General Admission Groups
Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### Saving Water (K)
Through a science, music, and literature connection, students will learn about one of the most precious parts of our Southern California ecosystem - water!

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# Science TO GO

## THE CUBE COMES TO YOUR SCHOOL

Experience a hands-on adventure in science without leaving the classroom. The Cube comes to you with hands-on workshops and high energy assemblies correlated with NGSS and taught by an experienced science educator.

## ASSEMBLIES

### Bubbles (K)
Get ready to be amazed at the science behind bubbles. Join our bubbleologist as we explore how bubbles work. Investigate the properties of bubbles, from their colors and shapes to what keeps them from popping… and what makes them pop!

### Nature Connections (K)
Through exploration and volunteer interaction, students will learn about animal adaptations that can occur in various parts of the animal's body.

### Science Magic (PK & K)
Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

## VIRTUAL ASSEMBLY

### Bubble Seasons (K)
Bubbles are amazingly beautiful to look at, but they have many enemies. In this fun assembly, students will learn about light, seasons, and bubbles!

## WORKSHOPS

### Buzzy Bees (K)
Students investigate the fascinating world of insects! They will look at the external body parts of bees while discovering some of their amazing adaptations. The class concludes with the students making a take-home buzzing bee toy.

### Diary of a Worm (K)
This multidisciplinary workshop focuses on Doreen Cronin's storybook, Diary of a Worm. Students will investigate live worms and make a personalized worm carrier.

### Sound Exploration (PK & K)
Explore the world of sound through the interaction of science and literature. Hands-on experiences will engage students with various sound making instruments and help them understand how sound travels.

Grade 1

# Field Trips at the Cube

## ORANGE COUNTY AND LOS ANGELES

### Roots and Fruits

ALL NEW guided 2½ - 3-hour field trip features a special workshop highlighting the Discovery Market and focusing on the Life Cycle of a Plant, Parts of a Plant, Plant Habitats, Pollinators, and Water Conservation.

### Call of the Wild

This guided 2-hour field trip features a special presentation where students will use their vocal cords as they learn how animals make sounds and how babies are similar to, and different from, their parents.

### General Admission Groups

Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### Topography and Our Water

Through a connection between science, music, and literature, students take a journey to imagine what life would be like without water.

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# Science To Go

## THE CUBE COMES TO YOUR SCHOOL

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## ASSEMBLIES

### Bubbles

Get ready to be amazed at the science behind bubbles. Join our bubbleologist as we explore how bubbles work. Investigate the properties of bubbles, from their colors and shapes to what keeps them from popping… and what makes them pop!

### Nature Connections

Through exploration and volunteer interaction, students will learn about animal adaptations that can occur in various parts of the animal's body.

### Science Magic (PK-6)

Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

## VIRTUAL ASSEMBLY

### Bubble Seasons

Bubbles are amazingly beautiful to look at, but they have many enemies. In this fun assembly, students will learn about light, seasons, and bubbles!

## WORKSHOPS

### Buzzy Bees

Students investigate the fascinating world of insects! They will look at the external body parts of bees while discovering some of their amazing adaptations. The class concludes with the students making a take-home buzzing bee toy.

### Diary of a Worm

This multidisciplinary workshop focuses on Doreen Cronin's storybook, Diary of a Worm. Students will investigate live worms and make a personalized worm carrier.

### Portable Planetarium

**Rocky the Robot Looks for Life**

Through an immersive planetarium experience, students will learn about the four things needed for survival: water, sunlight, air, and food. Once explored on Earth, they will embark on a journey in search of these elements in our solar system.

### Sound Exploration

Explore the world of sound through the interaction of science and literature. Hands-on experiences will engage students with various sound making instruments and help them understand how sound travels.

Grade 2

# Field Trips at the Cube

## ORANGE COUNTY AND LOS ANGELES

### Roots and Fruits

ALL NEW guided 2½ - 3-hour field trip features a special workshop highlighting the Discovery Market and focusing on the Life Cycle of a Plant, Parts of a Plant, Plant Habitats, Pollinators, and Water Conservation.

### Our Changing Earth

This guided 2-hour field trip features a special presentation inside our Planetary Research Station. Students will explore earthquakes and tectonic plate movement as they learn how one natural event can trigger another.

### General Admission Groups

Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### The Water Cycle

The Water Cycle is explored through literature and video with beautiful imagery to make the concept come alive for young learners.

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# Science To Go

## THE CUBE COMES TO YOUR SCHOOL

Experience a hands-on adventure in science without leaving the classroom. The Cube comes to you with hands-on workshops and high energy assemblies correlated with NGSS and taught by an experienced science educator.

## ASSEMBLIES

### Reaction Lab

Uncover the mysteries of chemical reactions as we explore glowing concoctions, extreme temperatures, and color-changing chemicals!

### Science Magic (PK-6)

Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

### Super Cool

This "cool" demonstration showcases liquid nitrogen and focuses on the three states of matter: gas, liquid, and solid.

## VIRTUAL ASSEMBLY

### Pet Power

Pets make great companions but it's important to understand how they evolved in order to make sure they stay healthy and safe. Students will learn how animals use special adaptations for their survival.

## WORKSHOPS

### Fossils

Discover which animals may have lived in your own backyard long, long ago, during this interactive lesson on California's past.

### Owls Are A Hoot

Students will explore the nocturnal owl including a close-up look at their feathers and feet. Other activities include dissecting an owl pellet and identifying bones to learn what owls eat.

### Portable Planetarium

**Rocky the Robot Looks for Life**

Through an immersive planetarium experience, students will learn about the four things needed for survival: water, sunlight, air, and food. Once explored on Earth, they will embark on a journey in search of these elements in our solar system.

### Science Rocks

Investigate the properties of rocks, study erosion and weathering, and compare soil samples. All participants will make their own take-home rock identification chart.

Grade 3

# Field Trips at the Cube

## General Admission Groups

Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## ORANGE COUNTY AND LOS ANGELES

### World of Motion

ALL NEW guided 2 ½ - 3-hour field trip features a special workshop highlighting the Raceway and focusing on Gravity, Friction, Potential and Kinetic Energy, Energy Transfer, Newton's Laws of Motion, and Engineering Design.

### Roots and Fruits

ALL NEW guided 2½ - 3-hour field trip features a special workshop highlighting the Discovery Market and focusing on the Life Cycle of a Plant, Parts of a Plant, Plant Habitats, Pollinators, and Water Conservation.

### Predicting Forces

This guided 2-hour field trip features a special presentation where students will learn about balanced and unbalanced forces as they observe and predict patterns of motion.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### Water Filtration

Students will learn about water filtration through the process of evaporation by watching a video and participating in an interactive assembly.

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# Science To Go

## THE CUBE COMES TO YOUR SCHOOL

Experience a hands-on adventure in science without leaving the classroom. The Cube comes to you with hands-on workshops and high energy assemblies correlated with NGSS and taught by an experienced science educator.

## ASSEMBLIES

### Motion Commotion

Students will learn about types of forces including gravity, momentum, and inertia, and how these forces affect the motion of an object.

### Science Magic (PK-6)

Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

### Watt's Current

Observe the power of electricity during a hair-raising presentation using a Tesla coil and electrostatic generator!

## VIRTUAL ASSEMBLY

### Pet Power

Pets make great companions but it's important to understand how they evolved in order to make sure they stay healthy and safe. Students will learn how animals use special adaptations for their survival.

## WORKSHOPS

### Electric Circuits

Students will design and build working circuits using components such as wires, batteries, bulbs, and speakers.

### Engineering Design: Build a Nest

Use a variety of materials to construct and test a nest that will hold the weight of a chicken egg. In addition, students will observe actual birds' nests and discover how certain bird behaviors help ensure survival of the young.

### Engineering Design: Structures

Conduct a series of challenges, tests, and trials building structures and bridges. Also, learn about the shapes that make structures the strongest.

### Forces and Motion

Students will use ramps, balls, measuring tapes, and other materials to understand the concepts of forces, motion, inertia, and gravity.

### Fossils

Discover which animals may have lived in your own backyard long, long ago, during this interactive lesson on California's past.

### Owls Are A Hoot

Students will explore the nocturnal owl including a close-up look at their feathers and feet. Other activities include taking apart owl pellets and identifying bones to learn what owls eat.

### Portable Planetarium

Through an immersive planetarium experience, students will take a journey through the night sky. Students will explore our galaxy and learn about the planets, our moon, the stars, and constellations.

Grade 4

# Field Trips at the Cube

## ORANGE COUNTY AND LOS ANGELES

### World of Motion
ALL NEW guided 2 ½ - 3-hour field trip features a special workshop highlighting the Raceway and focusing on Gravity, Friction, Potential and Kinetic Energy, Energy Transfer, Newton's Laws of Motion, and Engineering Design.

### Earthquake!
This guided 2-hour field trip features a special presentation all about earthquakes and the changing shape of land over millions of years.

### General Admission Groups
Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### Moving Our Water
Students will take a journey to discover how water is transported to our dry and arid environment in Southern California for all to use.

**Three convenient ways to book today!**

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- Online: discoverycube.org/education-programs

# Science To Go

## THE CUBE COMES TO YOUR SCHOOL
Experience a hands-on adventure in science without leaving the classroom. The Cube comes to you with hands-on workshops and high energy assemblies correlated with NGSS and taught by an experienced science educator.

## ASSEMBLIES

### Science Magic (PK-6)
Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

### Watt's Current
Observe the power of electricity during a hair-raising presentation using a Tesla coil and electrostatic generator!

## VIRTUAL ASSEMBLY

### A Pollinator's Journey
Animal pollinator's are vital for our food supply. Students will learn how animals pollinate plants and the biology of a flower.

## WORKSHOPS

### Electric Circuits
Students will design and build working circuits using components such as wires, batteries, bulbs, and speakers.

### Electric Motors
Students make the connection between electricity and magnetism as they explore electromagnetic fields and build their own electric motor to take home.

### Engineering Design: Build a Nest
Use a variety of materials to construct and test a nest that will hold the weight of a chicken egg. In addition, students will observe actual birds' nests and discover how certain bird behaviors help ensure survival of the young.

### Engineering Design: Structures
Conduct a series of challenges, tests, and trials building structures and bridges. Also, learn about the shapes that make structures the strongest.

### Portable Planetarium
Through an immersive planetarium experience, students will take a journey through the night sky. Students will explore our galaxy and learn about the planets, our moon, the stars, and constellations.

### Science Rocks
Investigate the properties of rocks, study erosion, and weathering, and compare soil samples. All participants will make their own take-home rock identification chart.

Grade 5

# Field Trips at the Cube

**Eco Game Show** Compliments of OCWR (Orange County only)
This guided 2-hour field trip features a special presentation where students will engage in a series of one-minute challenges designed to help them remember to protect the Earth's precious natural resources by reducing, reusing, recycling, and properly disposing of unwanted items.

## ORANGE COUNTY AND LOS ANGELES

### World of Motion
ALL NEW guided 2 ½ - 3-hour field trip features a special workshop highlighting the Raceway and focusing on Gravity, Friction, Potential and Kinetic Energy, Energy Transfer, Newton's Laws of Motion, and Engineering Design.

### Sphere of Influence: A Volcano's Global Impact
This guided 2-hour field trip features a special presentation inside our Planetary Research Station. Students will discover how a volcanic eruption impacts the atmosphere, biosphere, geosphere, and hydrosphere.

### General Admission Groups
Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### Aquifers and Groundwater
With a focus on environmental sustainability, students will explore aquifers and their importance to our ecosystem and our lives.

**Three convenient ways to book today!**

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- Online: discoverycube.org/education-programs

# Science To Go

## THE CUBE COMES TO YOUR SCHOOL
Experience a hands-on adventure in science without leaving the classroom. The Cube comes to you with hands-on workshops and high energy assemblies correlated with NGSS and taught by an experienced science educator.

## ASSEMBLIES

### Motion Commotion
Students will learn about types of forces including gravity, momentum, and inertia, and how these forces affect the motion of an object.

### Reaction Lab
Uncover the mysteries of chemical reactions as we explore glowing concoctions, extreme temperatures, and color-changing chemicals!

### Science Magic (PK-6)
Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

### Super Cool
This "cool" demonstration showcases liquid nitrogen and focuses on the three states of matter: gas, liquid, and solid.

## VIRTUAL ASSEMBLY

### A Pollinator's Journey
Animal pollinator's are vital for our food supply. Students will learn how animals pollinate plants and the biology of a flower.

## WORKSHOPS

### Engineering Design: Build a Nest
Use a variety of materials to construct and test a nest that will hold the weight of a chicken egg. In addition, students will observe actual birds' nests and discover how certain bird behaviors help ensure survival of the young.

### Engineering Design: Structures
Conduct a series of challenges, tests, and trials building structures and bridges. Also, learn about the shapes that make structures the strongest.

### Forces and Motion
Students will use ramps, balls, measuring tapes, and other materials to understand the concepts of forces, motion, inertia, and gravity.

### Portable Planetarium
Through an immersive planetarium experience, students will take a journey through the night sky. Students wil explore our galaxy and learn about the planets, our moon, the stars, and constellations.

### Science Rocks
Investigate the properties of rocks, study erosion, and weathering, and compare soil samples. All participants will make their own take-home rock identification chart.

Grade 6

# Field Trips at the Cube

## ORANGE COUNTY AND LOS ANGELES

### Surviving the Big One: Seismic Engineering

This guided 3-hour field trip features a special workshop experience where students will work in groups to design and construct a model wall that will remain standing after an earthquake.

### Compost Soup Compliments of OCWR (Orange County only)

This guided 2-hour field trip features a special presentation where students will learn how to compost through a microbe-packed, energetic show as they sort "trash" and arrange organics in an outdoor compost bin.

### General Admission Groups

Take as much time as you want to explore Discovery Cube through this self-exploration experience.

## FREE ENVIRONMENTAL PROGRAMS

Discovery Cube offers **FREE** environmental programs **at your school** with the support of local sponsors. Contact us to find out which programs are available in your area.

**Sample environmental water program:**

### Watersheds

Students will perform water quality tests on water samples to learn how we can ensure it is safe for drinking. They will understand that even though a resource is renewable, does not mean it is unlimited.

**Three convenient ways to book today!**

- E-mail: groupsales@discoverycube.org
- Call: 714-913-5030
- Online: discoverycube.org/education-programs

# Science To Go

## THE CUBE COMES TO YOUR SCHOOL

Experience a hands-on adventure in science without leaving the classroom. The Cube comes to you with hands-on workshops and high energy assemblies correlated with NGSS and taught by an experienced science educator.

## ASSEMBLIES

### Science Magic (PK-6)

Magicians are fun to see but they never tell the secrets to their magic. Scientists, on the other hand, love to share how things work. Students will be led through different "magic" tricks and illusions to find out the science behind them.

### Super Cool (6)

This "cool" demonstration showcases liquid nitrogen and focuses on the three states of matter: gas, liquid, and solid.

## WORKSHOPS

### Pig Heart Dissection (6-12)

Conduct a heart dissection guided by trained staff. Compare the pig and human heart while tracing the blood's pathway through the human circulatory system.

### Portable Planetarium (6-12)

Through an immersive planetarium experience, students will take a journey through the night sky. Students will explore our galaxy and learn about the planets, our moon, the stars, and constellations.

# Grades 7-12

## Field Trips at the Cube

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# DiscoveryCube ♥'s Teachers!

**Educators enjoy FREE admission to both Discovery Cube Orange County and Los Angeles campuses.**
Must provide school ID or copy of paystub for verification in person.

- Complimentary access to check out the science center before your classroom field trip.
- Join us for **Teachers Night Out**, a celebration of teachers and their commitment to education:
  - Engage with Cube-curated STEM activities
  - Enjoy complimentary food and drink
  - Be entertained by live science demos
  - Win raffle prizes
  - Walk away with STEM activity kits
  - Visit educational partner booths
  - Coming in early 2023

Teachers Night Out
Celebrating All Educators

# Thank you to our partners!

We salute our Platinum Level Annual Education Fund Partners, whose generous support impacts over 350,000 students annually through partnerships with local area schools, the majority of which are Title I. The Education Fund includes: Field Trip Scholarships, Outreach/School Based Programming, and Teacher Professional Development.

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Orange County Waste and Recycling
Los Angeles Department of Water and Power
Rancho Water
Upper San Gabriel Valley Municipal Water District
Waste Management Irvine
Western Municipal Water District

DiscoveryCube

**ORANGE COUNTY**
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Santa Ana, CA 92705

**LOS ANGELES**
11800 Foothill Blvd.
Los Angeles, CA 91342

Our Mission is to **INSPIRE** and **EDUCATE** young minds through engaging science-based programs and exhibits therefore creating a meaningful **IMPACT** on the communities we serve.

**714.913.5030 • discoverycube.org/education-programs**

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