



# 2025-2026 DISCOVERY CENTER EDUCATOR'S GUIDE



discovery  
center

[www.explorethcdc.org](http://www.explorethcdc.org)

(615) 890 - 2300



# OVERVIEW

Discovery Center provides fun and effective, informal learning experiences that reinforce classroom learning. Located adjacent to 22 acres of spectacular wetlands, Discovery Center is full of exciting exhibits and wildlife to explore - both inside and out.

Our goal is to make the Discovery Center an extension of your classroom with premier hands-on and inquiry-based learning. All Field Study objectives and programming is carefully vetted to correlate with up-to-date TN state educational standards. We can adjust our curriculums to meet the needs of your group.

## Our Mission

Engaging Curious Minds to Fuel the Future

## Our Vision

To build a community with the courage to ask thoughtful questions, the drive to find creative solutions, and the confidence to implement positive change

## Our Values

Fun & Play, Diversity & Inclusion, Creativity, Transformative Learning, Curiosity

## 2025/2026 Key Updates!

- We have realigned our content to the NEW 2025 Science Standards!
- We have simplified the booking process! Let our team suggest the best program for your needs!
  - Pick your format: Self-Guided, Guided, Mobile, or Science Assembly.
  - Pick your standard cluster: Life Science, Physical Science, Earth & Space Science, Engineering, or Computer Science.
  - Let us know your preferred dates.
  - Our team will find the best alignment for your grade level and will provide you with options that work for you.
- If you already know exactly what you want, just let us know! We can adjust most field studies to meet most grade levels.

## Self-Guided Field Study

Explore the Discovery Center at your own pace. We have exhibit guides to help you make the most of your time.

## Guided Field Study

Guided Field Studies include an instructor-led field study plus Discovery Center exploration. Our goal is to make the Discovery Center an extension of your classroom with premier hands-on and inquiry-based learning.

## Mobile Field Study

Hands-on lessons presented in your classroom! Mobile Labs: Learning on the Go! is a great way to bring the Discovery Center resources to your classroom or site.

## Science Assembly

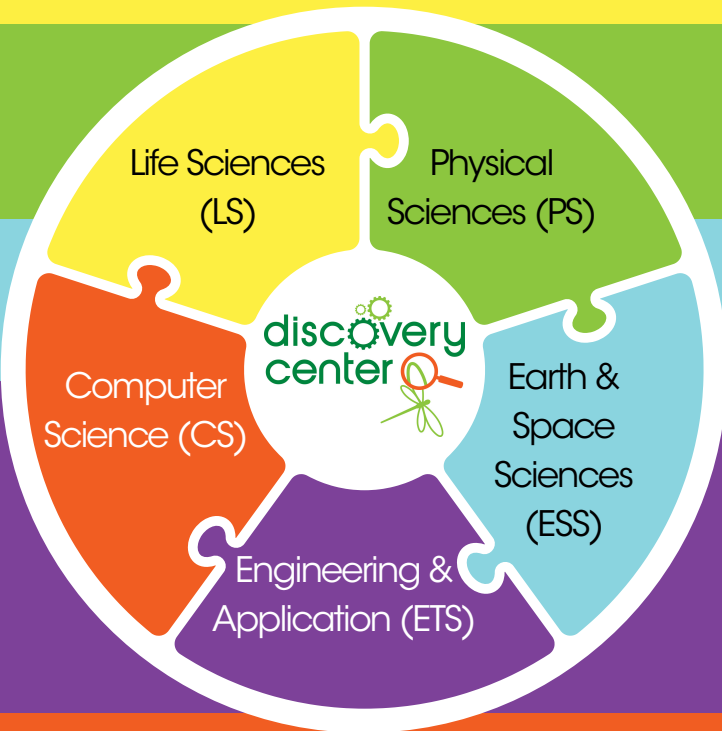
We know how to wow a crowd! Allow us to amaze your students in a large group with our a la cart Science Assembly (Physical Science only).



# FIELD STUDIES

- We have carefully curated guided lessons that help to engage students through inquiry-based and hands-on learning in key areas for each grade level. We want to be an extension of your classroom to support our future generation of STEAM enthusiasts!
- You will find a summary of our options below. The pages that follow contain detailed descriptions with standard alignments. Most of our field study options can be done at the Discovery Center or at your location.
- We know you have a lot on your plate! To save time, you can simply let us know which standard cluster you want to focus on and we can recommend options that will best align with your grade level standards.

From lessons in the wetlands on biodiversity to time with our live animal ambassadors, our team specializes in life sciences. We engage students of all ages through multiple learning experiences.



Our Physical Science catalog is expansive with lessons from magnets and circuits to forces and states of matter. Kids get hands-on exploring physical science properties.

Our STAR Lab inflatable planetarium allows us to travel through space and time to unlock the wonders of the universe.

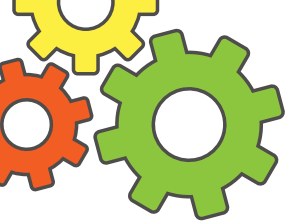
Beyond sharing the wonders of STEAM, we love to see kids take the steering wheel to tackle real world challenges. We believe that students are never too young to be problem solvers and offer engineering lessons starting in Pre-K. Each lesson engages students in the Engineering Design Process.

Students engage with our growing library of programable bots as they practice computational thinking!

## STEM/Science Nights

Discovery Center can help you take your family night to the next level. We'll bring information about our museum and upcoming programs along with a hands-on activity for your visitors to enjoy.





# FIELD STUDIES

Life Sciences



## Animals All Around (PreK - 5) (Guided or Mobile)

Reptiles, amphibians, mammals, and birds are part of our menagerie! Students learn through guided live animals encounters.

### Outcomes:

- Students analyze internal and external structures that support survival and adaptation to the environment.
- Students get to meet animals and learn about mammals, birds, reptiles, and amphibians.
- Students learn life cycles and classifications of animals and adaptations for survival.

### Standards:

- Kindergarten: K.LS1.3
- 1st Grade: 1.LS1.2
- **2nd Grade: 2.LS1.1, 2.LS1.2**
- 3rd Grade: 3.LS2.1
- 4th Grade: 4.LS2.2
- 5th Grade: 5.LS3.1, 5.LS4.1



*Wetland Wonders: Boots*

## Wetland Wonders (PreK - 5) (Guided only)

(offered April - October)

Explore the urban wetlands that unique plants and animals call home. You can choose how the students discover with options for boots and wading in the creek or catch and release in the Lily pad Pond. Then decide how your group will see different species by choosing between an animal encounter, guided wetland walk, or focusing on life cycles.

### Outcomes:

- Students develop an understanding of how plants, animals, and nonliving things in an ecosystem interact with each other.
- Students analyze internal and external structures that function supporting survival along with how they adapt to their environment.

### Standards:

- **Kindergarten: K.LS1.2, K.LS3.1**
- 1st Grade: 1.LS2.3
- 2nd Grade: 2.LS2.1, 2.LS2.2
- 3rd Grade: 3.LS1.1, 3.LS4.1, 3.LS4.2
- **4th Grade: 4.LS2.3, 4.LS2.1, 4.LS2.2, 4.LS2.4**
- 5th Grade: 5.LS3.1, 5.LS4.1



**Standards in BOLD indicate strong alignment**



# FIELD STUDIES

Life Sciences



## Seeds to Plants (K- 1) (Guided or Mobile)

Watch your students' knowledge grow like a weed! Students make observations about plants through hands-on activities and exploration.

### Outcomes:

- Students will explore and observe plants and seeds, shapes, sizes, textures, and colors.
- Students will use various tools to support scientific inquiry, such as recording data and observations with multiple materials, making classifications, and predictions.
- Students will investigate plants, parts of the plant, life cycle of plants and identify measurable attributes of a plant.
- Students will explain the function of the roots, stem, leaves, flower, and fruit of a plant.
- Students will develop a contraption to ensure a plant's survival in a climate/habitat that lacks a certain element

### Standards:

- PreK: PK.PD5; PK.PD6
- Kindergarten: K.LS1.1
- **1st Grade: 1.LS1, 1.LS1.2, 1.LS2.2, 1.LS1.3**



*Dissection Lab: Frogs*

## Dissection Labs (K- 5) (Guided or Mobile)

Explore the parts of the body and functions of organs through hands-on investigations and dissections of real frogs (recommended for 3<sup>rd</sup> grade and up) or owl pellets. \*Dissection Labs are an upcharge from our typical field trip fee.

### Outcomes:

- Students will analyze internal and external structures that support survival and adaptation to the environment.
- Students will develop an understanding of how plants, animals, and nonliving things in an ecosystem interact with each other.
- Students will explore anatomy, paying close attention to the internal and external structures that support survival, growth, behavior, and reproduction.

### Standards:

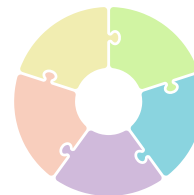
- Kindergarten: K.LS1.2, K.LS3.1
- 1st Grade: 1.LS1.2, 1.LS1.3,
- 2nd Grade: 2.LS1.1, 2.LS1.2
- **3rd Grade: 3.LS1.2**
- 4th Grade: 4.LS2.2
- **5th Grade: 5.LS4.1**

**Standards in BOLD indicate strong alignment**





# FIELD STUDIES



Physical  
Sciences

## Science Sampler (K - 5) (Guided or Mobile)

Students get hands-on as they explore physical science concepts. You get to choose two physical science experiences tailored to your grade level. Experiences include states of matter, magnets, circuits, forces, and light waves. (Best fit by grade level)

### Outcomes:

- Students will understand matter can exist in different states and has properties that can be observed- Chemical and physical change.
- Students will explore the effects of light with transparent, translucent, opaque, and reflective and gain a deeper understanding of light waves and bending of light.
- Students will explore push, pull, collision, and trajectory.
- Students will explore potential and kinetic and Newton's law of motion.
- Students will gain an understanding of electricity and the completion of circuits.

### Standards:

- **Kindergarten: K.PS1.2, K.PS1.1, K.PS4.1, K.PS1.3 (any)**
- **1st Grade: 1.PS4.1, 1.PS4.2 (Light)**
- **2nd Grade: 2.PS2.1, 2.PS3.1, 2.PS2.2 (Forces, Magnets)**
- **3rd Grade: 3.PS1.1, 3.PS2.1, 3.PS3.2, 3.PS3.3 (Magnets, Circuits)**
- 4th Grade: 4.PS4.2, 4.PS3.1 (Light, Forces)
- 5th Grade: 5.PS1.1, 5.PS2.1, 5.PS2.4 (States of Matter, Forces)



*Science Assembly: Bernoulli's Principle*

## Science Assembly (K - 5) (Mobile Only)

Prepare to be wowed with our science a la carte offerings. You get to choose two or more physical science experiences tailored to your grade level. Experiences include States of Matter, Light, Electricity, Bernoulli's Principle, and Gyroscopic Forces.

### Outcomes:

- Students will understand matter can exist in different states and has properties that can be observed- Chemical and physical change.
- Students will explore the effects of light with transparent, translucent, opaque, and reflective. Deeper understanding of light waves and bending of light.
- Students will explore push, pull, collision, and trajectory.
- Students will explore potential and kinetic and Newton's law of motion.
- Students will gain an understanding of electricity and the completion of circuits.

### Standards:

- Kindergarten: K.PS1.2 (States of Matter, Light)
- 1st Grade: 1.PS4.1, 1.PS4.2 (Light)
- **2nd Grade: 2.PS2.2 (Gyroscopic, Light)**
- **3rd Grade: 3.PS1.1, 3.PS2.1, 3.PS3.2 (Any)**
- 4th Grade: 4.PS3.1, 4.PS3.3 (Gyroscopic, Circuits)
- 5th Grade: 5.PS1.1, 5.PS2.4 (Gyroscopic, States of Matter)

**Standards in BOLD indicate strong alignment**





# FIELD STUDIES



Earth & Space  
Sciences

## STAR Tour (1 - 5) (Guided or Mobile)

Our STAR lab portable planetarium takes students on an exploration of the night sky during the day! Program topics inside the planetarium include the solar system, constellations, day and night cycles, and moon phases. For our planetarium to visit your location, we need an indoor space that is 15ft x 15 ft x 15ft.

### Outcomes:

- Student will observe planets and stars in the solar system using observational data to categorize the planets.
- Students will observe planets and stars in the solar system.
- Students will observe day and night patterns and shadows.
- Students will observe how stars and constellations appear to move from the Earth's perspective throughout the seasons.

### Standards:

- **1st Grade: 1.ESS1.1, 1.ESS1.2, 1.ESS1.3**
- 2nd Grade: 2.ESS1.1
- 3rd Grade: 3.ESS1.1
- 4th Grade: 4.PS3.3
- **5th Grade: 5.ESS1.1, 5.ESS1.6, 5.ESS1.2, 5.ESS1.3, 5.ESS1.4, 5.ESS1.5**



*Star Tour: Planets*

## Weather Whizzes (K, 3) (Guided or Mobile)

Explore the wonders of weather through hands-on demonstrations about warm and cold fronts, thunderstorms, lightning, and tornadoes.

### Outcomes:

- Students will explore weather measuring tools.
- Students will discuss storms and their causes.
- Students will observe models of lightning and tornadoes.

### Standards:

- **Kindergarten: K.ESS2.1, K.ESS.3.2**
- 3rd Grade: 3.ESS.2.2, 3.ESS.2.1

**Standards in BOLD indicate strong alignment**





## BioDiversity (4 - 6) (Guided or Mobile)

Take a look at how macroinvertebrate biodiversity in streams can determine water quality with a small group experiment. Students also discuss and learn about water quality testing through hands-on activities.

### Outcomes:

- Students will define biodiversity.
- Students will discuss water quality and impacts of water quality on species biodiversity.

### Standards:

- **4th Grade: 4.LS2; 4.ESS3**
- 6th Grade: 6.LS2; 6.LS4

## Invasive Plant Eradicators (4 - 6) (Guided or Mobile)

Work as a team of environmental engineers to develop a machine to rid a wetland habitat of invasive plants. Students learn about a common invasive plant in the Murfree Spring Wetlands and discuss the impacts invasive plants can have on an environment.

### Outcomes:

- Students will discuss native versus invasive species.
- Students will learn different ways invasive species can impact an ecosystem.
- Students will be able to utilize the three step design process to meet a real-world problem that includes specified criteria and constraints.

### Standards:

- **4th Grade: 4.LS2; 4.ETS1.1**
- 5th Grade: 5.ETS1.1
- 6th Grade: 6.LS2; 6.LS4; 6.ESS3; 6.ETS1

## Solar Scientists (4 - 6) (Guided or Mobile)

Perform an experiment to see how the amount or color of light affects how much energy is produced by a solar cell.

### Outcomes:

- Students will discuss renewable and non-renewable energy sources.
- Students will design and test different solutions that impact energy transfer.

### Standards:

- 4th Grade: 4.ESS3
- **6th Grade: 6.ESS1; 6.ETS1**





# FIELD STUDIES



Engineering,  
Technology &  
Application

## Eco Engineers (Grades 2 - 5) (Guided or Mobile)

Energize your students with this exploration of engineering. Using a variety of materials and their knowledge, students will build their own relocation containers to help rescue a beaver in the wetlands. As students iterate through this design challenge, they gain first-hand experience in the design process.

### Outcomes:

- Students will be able to design and build a device that uses different types of mechanisms to capture an animal.
- Students will be able to explain design considerations.
- Students will be able to utilize the three step design process to meet a real-world problem that includes specified criteria and constraints.

### Standards:

- 2nd Grade: 2.ETS1.1, 2.ETS1.3
- **3rd Grade: 3.ETS1.1, 3.ETS1.2**
- **4th Grade: 4.ETS1.1**
- 5th Grade: 5.ETS1.1



*Eco Engineers*

## Engineering with the 3 Little Pigs (Ages 3 - 1<sup>st</sup> Grade) (Guided or Mobile)

We meld literacy and engineering by studying some iconic characters. Students engage in the engineering design process and practice failing and retrying by building a house with commonly found materials and attempting to blow it down.

### Outcomes:

- Students will engage in scientific inquiry through the process of asking questions, investigating, and constructing explanations.
- Students will solve a problem using the three-step design process.

### Standards:

- **PreK: PK.PD.5; PK.PD.6**
- **Kindergarten: K.PS1; K.ETS1.1**
- 1st Grade: 1.ETS1.2, 1.ETS1.3



**Standards in BOLD indicate strong alignment**



# FIELD STUDIES

Computer  
Science



## Computational Thinking (1 - 5) (Guided or Mobile)

Students learn the basics of computational thinking through an unplugged computer science activity and progress to programming BeeBots to collect pollen.

### Outcomes:

- Students will be able to break down a bigger coding challenge into small parts.
- Students will be able to work collaboratively to create an algorithm for their part.

### Standards:

- 3rd: CS.3.AT2, CS.3.PC1, CS.3.PC2, Math.3.NBT.A2

## SCIENCE & STEM NIGHTS

Discovery Center can help you take your family night to the next level. We'll bring information about our museum and upcoming programs along with a hands-on activity for your visitors to enjoy.

## ACCESSIBILITY

Discovery Center is committed to providing opportunities for ALL children to play, explore, and grow no matter their physical, behavioral/sensory, financial, or other needs. We have highlighted a few of our accommodations below. Check out the full story at <https://exploredc.org/plan-your-visit/accessibility/>

**Assistive Technology Check-Out:** Several types of assistive technologies are available for check-out during your visit.

- Noise-Reducing Headphones
- Transition Timers
- Weighted Vests
- Easi-Grip Loop Scissors and Triangular Crayons

**The Chill Zone:** Discovery Center's sensory calm-down space.

**Wheelchair Access:** The Discovery Center building is fully ADA-accessible, and we have worked to make as many exhibits fully accessible as possible. Many areas in our outdoor exhibits – including the wetlands walkways – are also accessible.



**Standards in BOLD indicate strong alignment**



# FIELD STUDY: KNOW BEFORE YOU GO

## TEACHING TEAM



We are so excited for your trip to the Discovery Center! Please review and share the following information with your teaching team.

### Check-in

### Scheduled Events

### Exploration

### Check-Out

### Check-in

- When you arrive students should **REMAIN ON THE BUS**.
- Send the **lead teacher** in to check in at the front desk. At the Front Desk, lead teacher will provide payment and get the wristbands for your school personnel. The lead teacher should be ready with...
  - Number of students
  - Number of school personnel
  - Number of prepaid chaperones
  - Groups by Teacher Name
- Our field trip coordinator will then give directions for student unloading and lunches. We will have a bin for lunches and jackets as needed. Because of limited storage space, please do NOT bring student backpacks.

### Scheduled Events

- Groups - depending on your trip size, we will organize you into groups. Groups will travel together throughout the day.
- Based on your itinerary for the day, you will be guided to scheduled events by group.
- Stations - We can hold 1-2 classes per station and will run 2 stations simultaneously.
- Lunch - We have set aside **30 minutes for your lunch**. Please be sure that you are ready for lunch when it is your time as we often have schools scheduled back to back.

### Exploration

- During your exploration time, you have several options for organizing your play. We recommend the following:
  - Split large groups so that some are exploring the 1<sup>st</sup> floor while others are exploring the 2<sup>nd</sup> floor.
  - For maximum fun, ensure a 1:6 chaperone to student ratio. Encourage chaperones to engage with students.
  - Take advantage of the Wetlands - You can go on a wetland walk or explore Murfree Springs or detour to Nature Play outside past the lunch area for some outside fun.
  - Ask the front desk for an exhibit guide for a deeper dive into the learning goals of each exhibit.

### Check-Out

- When you are ready to head out, let our front desk know. They can make an all call announcement for your group. Buses can pull up to the front door for short time periods for loading.

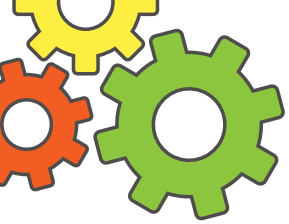




### Policies

- Arrival: Please arrive on time. **If you are late, your program may be shortened.** Often, another tour is scheduled to begin when your tour ends.
- Payment: School payment is required before or on the day of the visit.
  - The cost for a Field Study is between \$9.00 and \$15.00 per person depending on the program.
  - All school personnel attending with your group will receive free admission.
  - Additional Chaperones can prepay through the school to receive the chaperone discount.
  - Adults with Discovery Center memberships are free, but children with memberships must pay the field study rate. Chaperones must bring their membership cards in order to be admitted for free.
  - **Any chaperones that do not pay through the school must pay the regular daily admission rate.**
- Format: Guided field studies include an instructor-led field study consisting of stations (number of stations may vary based on field trip theme) plus exploration in the museum. We reserve the right to split or combine classes to create an even number for education stations. We reserve the right to combine schools to effectively maximize museum space and staff. **Self-Guided Field Studies only include exploration of museum.**
- Exploration: All field studies includes exploration time within the museum. During exploration time, students must be chaperoned in small groups. **Please maintain a 1:6 adult to child ratio.** Your teachers may choose to allow them to play in certain exhibits/floors for a time period and then move onto another exhibit/area or have free exploration of the whole museum for the entire exploration time. Splitting classes between floors is suggested for large groups for the best experience.
- Lunch: Should you decide to have lunch at the Discovery Center, you may use the tables at the covered patio.
  - Guided Field Studies **will be scheduled a 30 minute lunch period.** Please be ready for your lunch as groups are typically scheduled back to back.
  - In the event of inclement weather, indoor eating areas will be made available after all regularly scheduled programs have finished. Please help us by thoroughly cleaning the area before you leave. We have compost, recycling, and trash bins available.
- Cancellation/ No-Show: Groups may cancel or reschedule up to two (2) weeks prior to the scheduled program without incurring a fee. **Groups that cancel within fourteen (14) days or groups that No-Show will be charged a \$50.00 cancellation fee.** An invoice for this fee will be mailed directly to the school. Additionally, if any changes need to be made in regards to the number of students attending please let us know so we ensure that we have sufficient staff and supplies available. If you need to cancel due to school being out for weather or illness please talk with the scheduling department to reschedule your trip at no cost.





# FIELD STUDY: KNOW BEFORE YOU GO

## CHAPERONES



We are so excited for your trip to the Discovery Center!  
Below is information about your visit.

### Arriving to the Museum

- Please try to arrive to the museum 15 minutes prior to your group.
- When you arrive, you must check-in at the front desk before joining your student. Our staff will ask what school, grade, and teacher you are with to help you know where to meet your group when they arrive.
- Prepaid Chaperones will receive wristbands from the lead teacher when the school arrives. Chaperones who pay the day of will receive a wristband at the door. Wristbands must be worn for the duration of your visit.



### Field Study Guest Expectations

1. Follow all Discovery Center Rules:
  - **Stay Together** (kids and grown-ups)
  - Always use your **Walking Feet**
  - Return Exhibit items to their homes
  - Slide is **1 at a time, feet first, on your bottom**. Shout "All Clear!" when you've reached the end.
2. Engage and interact with the students and exhibits!
  - If you'd like an exhibit guide for ideas, ask the Front Desk.
3. Listen for the announcements and to your teachers.
  - Often times, Discovery Center has more than one Field Study group. Listening to the announcements and talking with the teacher can keep you on schedule.
4. Remember that you are sharing the space.
  - Our museum is still open for general admission during your Field Study, including babies and toddlers. Please keep students mindful of other guests that are exploring the museum.
5. **Tiny Town and LEGO Lab are closed to Field Trip students.**

**If you have questions, please ask a staff member! We're here to help.**

### Other Chaperone Details

- **Carpooling is strongly encouraged.** Additional parking is located behind Discovery Center.
- Chaperones must prepay through the school to receive the chaperone rate. Any chaperones that pay the day of may use their Discovery Center membership for entry or they must pay the regular admission rate.
- We **do not** have a restaurant or food available for purchase onsite other than small snacks and drinks. Please plan lunch with your group accordingly.
- Field Study guests also get a 10% discount in our Gift Shop!

# FIELD STUDY OVERVIEW

| Theme                     | Field Trip Topic                    | Pre-K           | K               | 1               | 2 | 3 | 4               | 5 | 6 |
|---------------------------|-------------------------------------|-----------------|-----------------|-----------------|---|---|-----------------|---|---|
| Life Sciences             | Animals All Around                  | Guided & Mobile |                 |                 |   |   |                 |   |   |
|                           | Wetland Wonders                     | Guided Only     |                 |                 |   |   |                 |   |   |
|                           | Seed to Plant                       | Guided & Mobile |                 |                 |   |   |                 |   |   |
|                           | Dissection Lab                      |                 | Guided & Mobile |                 |   |   |                 |   |   |
| Physical Sciences         | Science Sampler                     |                 | Guided & Mobile |                 |   |   |                 |   |   |
|                           | Science Assembly                    |                 | Mobile Only     |                 |   |   |                 |   |   |
| Earth & Space Sciences    | Star Tour                           |                 | Guided & Mobile |                 |   |   |                 |   |   |
|                           | Weather Whizzes                     |                 | Guided & Mobile |                 |   |   |                 |   |   |
| Engineering & Application | Biodiversity                        |                 |                 |                 |   |   | Guided & Mobile |   |   |
|                           | Invasive Iradicators                |                 |                 |                 |   |   | Guided & Mobile |   |   |
|                           | Solar Scientist                     |                 |                 |                 |   |   | Guided & Mobile |   |   |
|                           | Eco Engineers                       |                 |                 | Guided & Mobile |   |   |                 |   |   |
|                           | Engineering with the 3 Little Pigs  | Guided & Mobile |                 |                 |   |   |                 |   |   |
| Computer Scence           | Computational Thinking with Beebots | Guided & Mobile |                 |                 |   |   |                 |   |   |

## Ready to Book?

Scan the code or go to <https://explorethedc.org/plan-your-visit/field-trips/> to join our field trip waitlist! Someone on our team will get back with you within 3 business days to start your booking.

