



Student Programs and Teacher Resources



Standards-based and year round

Active, plant-based learning

Science, literacy, art and math

School groups

Scout troops

Home schoolers

BotaniCool®



What will you see when you visit the Garden?

Our **Eleanor Armstrong Smith Glasshouse** is a spectacular 18,000 square foot, crystal-peaked conservatory featuring more than 350 species of exotic plants and 50 species of butterflies, insects, birds and other animals.



10 acres of outdoor gardens, where you'll experience:

- The **Japanese Garden's** evergreens and gentle rock forms
- The fragrance and beauty of more than 50 varieties of roses in our **Mary Ann Sears Swetland Rose Garden**
- Our **Western Reserve Herb Society Garden**, one of the finest public herb gardens in the world
- The **CK Patrick Perennial Garden's** perennials that thrive in sun and shade, providing a colorful and ever-changing vista throughout the year
- The principles of parallel evolution in woodland environments in our **Woodland Garden**
- The tranquility of our **Elizabeth and Nona Evans Restorative Garden**; designed for people with various disabilities, with an emphasis on fragrance, touch, and aesthetics
- And much more!

Bring your students for an experience they will never forget!

TABLE OF CONTENTS

Page

- 3-4** Grades PreK-2
- 5-6** Grades 3-5
- 6** Scout Programs
- 7-12** Grades 6-8
- 8-11** Ohio Academic Content Standards Alignment
- 12** Teacher Membership
- 13** Grades 9-12
- 14-15** Pricing and Registration

PROGRAMS

- 1 hour structured programs where students actively search for data
- Each begins with a brief classroom component at the Garden
- Receive pre-visit literature sources and post-visit activity ideas on chosen topic
- Reserved time in Hershey Children's Garden for discovery & play (April-October)
- Minimum group size: 10 students

Plants and Me Investigation

Grades Pre K-2

Plants surround us in our daily life. The clothes we wear, the food we eat, and even the chairs we sit in come from plants. Explore the diversity of plants in our lives. This Investigation takes place outside in fall, spring or summer.

Classification Investigation

Grades Pre K-2

Is it living or non-living? Is it a plant or an animal? Based upon characteristics of living and non-living things, students are investigators in the spiny desert and cloud forest finding the answers to these questions.

Plant Parts Investigation

Grades 2-4

Plants need air, water, sunlight and nutrients to live and grow and have special structures to help them do that. We'll discuss these structures and locate them in the spiny desert and cloud forest. Then, each student constructs his or her own terrarium to take back to school to observe. (Please provide one 20 oz. bottle for each student.)

INDEPENDENT STUDY

- Self-guided visits to the Garden
- Lead your students and present lessons to match the pace of your class
- Structure your visit around what your students are currently learning
- We greet your class, introducing the glasshouse and the plants and animals they will see

TEACHER KITS

Supplement classroom learning by borrowing a *BotaniCool*® Kit. Most contain curricula, pictures, books, activities and materials to enhance your students' knowledge of the subject. Each Kit may be borrowed for three weeks and is renewable by request. Kits are created using the Ohio Academic Science Content Standards and are available at no charge to Teacher Members. A \$25 refundable deposit is required for non-members.

Spiny Desert and Cloud Forest Teacher Kit

All ages

Includes books about and pictures of plants and animals your students will see when they visit Cleveland Botanical Garden.

Seeds, Indeed! Teacher Kit

Grades PreK-1

Sort and plant seeds and learn what makes a seed a seed.

Books included:

- *The Tiny Seed*
- *Oh Say Can You Seed*
- *The Carrot Seed*

Plants Parts and Functions Teacher Kit

Grades PreK-1

Roots, stems, and leaves are all parts of plants. Learn about them and their functions.

Books included:

- *Tops and Bottoms*
- *Have You Seen Trees*
- *Growing Vegetable Soup*
- *The Carrot Seed*

Plants and Me Teacher Kit

Grades PreK-2

People use plants everyday, all day. We eat them, wear them, and use them for shelter and beauty. Students learn about all the ways we interact with plants.

Books included:

- *The Little Red Hen*
- *Grandpa's Garden Lunch*
- *Flower Garden*
- *Nobody's Mother's In Second Grade*

Plant and Animal Interactions Teacher Kit

Grades 2-4

Explore the interdependence of life in a deciduous forest community

Books included:

- *The Gift of the Tree*
- *One Small Square: Woods*

Life Cycles of Plants Teacher Kit

Grades 2-4

Explore the pattern of change that occurs during the life cycle from seed to seedling to mature plant.

Books included:

- *The Seasons of Arnold's Apple Tree*



photo: Sara Guren



photo: Molly Nook

PROGRAMS

- 1 hour structured programs where students actively search for data
- Each begins with a brief classroom component at the Garden
- Receive pre-visit literature sources and post-visit activity ideas on chosen topic
- Reserved time in Hershey Children's Garden for discovery & play (April-October)
- Minimum group size: 10 students

Plant Parts Investigation

Grades 2-4

Plants need air, water, sunlight and nutrients to live and grow and have special structures to help them do that. We'll discuss these structures and locate them in the spiny desert and cloud forest. Then, each student constructs his or her own terrarium to take back to school to observe. (Please provide one 20 oz. bottle for each student.)

Interactions Investigation

Grades 4-5

Insects eat plants, plants grow on other plants, and some insects protect plants. Students learn of the many relationships between plants and animals, as well as those that occur in differing habitats.

Food Chains and Webs Investigation

Grades 5-8

A biome is a community of plants and animals living together in a certain kind of climate. These organisms interact and ultimately obtain their energy from the sun. We'll explore the similarities and differences between our spiny desert and cloud forest, and how that compares with right outside our door in Northeast Ohio. Then explore interactions in our two biomes where a plethora of producers and consumers are found.

INDEPENDENT STUDY

- Self-guided visits to the Garden
- Lead your students and present lessons to match the pace of your class
- Structure your visit around what your students are currently learning
- We greet your class, introducing the glasshouse and the plants and animals they will see

TEACHER KITS

Supplement classroom learning by borrowing a *BotaniCool*® Kit. Most contain curricula, pictures, books, activities and materials to enhance your students' knowledge of the subject. Each Kit may be borrowed for three weeks and is renewable by request. Kits are created using the Ohio Academic Science Content Standards and are available at no charge to Teacher Members. A \$25 refundable deposit is required for non-members.

Spiny Desert and Cloud Forest Teacher Kit

All ages

Includes books about and pictures of plants and animals your students will see when they visit Cleveland Botanical Garden.

Plant and Animal Interactions Teacher Kit

Grades 2-4

Explore the interdependence of life in a deciduous forest community.

Books included:

- *The Gift of the Tree*
- *One Small Square: Woods*

Life Cycles of Plants Teacher Kit

Grades 2-4

Explore the pattern of change that occurs during the life cycle from seed to seedling to mature plant.

Books included:

- *The Seasons of Arnold's Apple Tree*

Seedfolks Teacher Kit

Grades 4-9

Paul Fleischman's wonderful book *Seedfolks* is set in Cleveland, and explores a community coming together through gardening.

Includes:

- Classroom set of *Seedfolks*
- Lesson ideas binder
- *Eyewitness: Plant* video
- Seeds to plant

Photosynthesis Teacher Kit

Grades 5-8

Investigate photosynthesis and the unique ability of plants to produce their own food. Students perform experiments to determine the necessary components for photosynthesis.

The Board of Directors gratefully acknowledges the following sources of support for Cleveland Botanical Garden's school programs:

Celia S. Weatherhead Fund

Clara DeMallie Sherwin Education Fund

Garden Clubs Transportation Fund

The Hershey Foundation

The Martha Holden Jennings Foundation

Ohio Environmental Education Fund

SCOUT PROGRAMS

Looking for a fun new way for your scout troop to earn their plant-based badges? Let the experts at Cleveland Botanical Garden help! Our talented staff of educators provides hands-on activities to meet your troop's specific badge requirements. With each program, Cubs, Tigers, Bears, Daisies, Brownies and Juniors explore our Glasshouse and outdoor gardens to complete their plant discovery experience.

Scout programs are available April 1– October 31.

Call 216-707-2841 to schedule your visit.

Cost:

Scouts up to grade 5: \$3.00

Scouts in grades 6-8: \$6.00



photo: Sara Guren

PROGRAMS

- 1 hour structured programs where students actively search for data
- Each begins with a brief classroom component at the Garden
- Receive pre-visit literature sources and post-visit activity ideas on chosen topic
- Reserved time in Hershey Children's Garden for discovery & play (April–October)
- Minimum group size: 10 students

Food Chains and Webs Investigation

Grades 5-8

A biome is a community of plants and animals living together in a certain kind of climate. These organisms interact and obtain their energy from the sun. We'll explore the similarities and differences between our spiny desert and cloud forest, and how that compares with North-east Ohio. Then explore interactions in our two biomes where a plethora of producers and consumers are found.

Symbiotic Relationships Investigation

Grades 6-7

Plants and animals interact with one another through symbiotic relationships, and some organisms have become so adapted to each other that neither could survive without the other. Students explore two vastly different biomes, unearthing some of these "isms": mutualism, commensalism, etc.

Plant Adaptations Investigation

Grades 7-8

Fuzzy leaves, small leaves, large leaves, strange leaves. You see them all as you study the myriad of plant adaptations in the spiny desert and cloud forest.

INDEPENDENT STUDY

- Self-guided visits to the Garden
- Lead your students and present lessons to match the pace of your class
- Structure your visit around what your students are currently learning
- We greet your class, introducing the glasshouse and the plants and animals they will see

TEACHER KITS

Supplement classroom learning by borrowing a *BotaniCool*® Kit. Most contain curricula, pictures, books, activities and materials to enhance your students' knowledge of the subject. Each Kit may be borrowed for three weeks and is renewable by request. Kits are created using the Ohio Academic Science Content Standards and are available at no charge to Teacher Members. A \$25 refundable deposit is required for non-members.

Spiny Desert and Cloud Forest Teacher Kit

All ages

Includes books about and pictures of plants and animals your students will see when they visit Cleveland Botanical Garden.

Seedfolks Teacher Kit

Grades 4-9

Paul Fleischman's wonderful book *Seedfolks* is set in Cleveland, and explores a community coming together through gardening.

Includes:

- Classroom set of *Seedfolks*
- Lesson ideas binder
- *Eyewitness: Plant* video
- Seeds to plant

INVESTIGATIONS	Plants and Me (Gr K-2)	Classification (Gr K-2)	Plant Parts (Gr 2-4)	Interactions (Gr 4-5)	Symbiotic Relationships (Gr 6-7)	Food Chains and Webs (Gr 5-8)	Plant Adaptations (Gr 7-8)	Plant Structure, Function & Classification (Gr 10-12+)	Evolution & Adaptation (Gr 10-12+)	Patterns in Nature (Gr 9-12+)
English Language Arts										
Acquisition of Vocabulary										
Benchmark A	*	*	*	*	*	*	*	*	*	*
Benchmark E					*			*	*	*
Reading Process										
Benchmark A	*					*				
Benchmark C				*						
Benchmark E	*			*						
Reading Applications: Informational and Technical Text										
Benchmark A			*			*				
Benchmark D			*							
Reading Applications Library Text										
Benchmark B	*			*						
Benchmark E				*						
Writing Applications										
Benchmark A			*							
Writing Conventions										
Benchmark A								*	*	*
Benchmark B								*	*	*
Benchmark C					*		*			
Research										
Benchmark A	*	*	*							
Benchmark B	*	*								

INVESTIGATIONS	Plants and Me (Gr K-2)	Classification (Gr K-2)	Plant Parts (Gr 2-4)	Interactions (Gr 4-5)	Symbiotic Relationships (Gr 6-7)	Food Chains and Webs (Gr 5-8)	Plant Adaptations (Gr 7-8)	Plant Structure, Function & Classification (Gr 10-12+)	Evolution & Adaptation (Gr 10-12+)	Patterns in Nature (Gr 9-12+)
Communication: Oral and Visual										
Benchmark A	*	*	*	*	*	*	*	*	*	*
Benchmark B	*	*	*							
Benchmark C			*							
Fine Arts										
Visual Art: Creative Expression and Communication										
Benchmark A										*
Visual Art: Analyzing & Responding										
Benchmark C										*
Visual Art: Connections, Relationships & Applications										
Benchmark B										*
Pre-K OACS met by our programs are as follows:										
Plants and Me										
English Language Arts (ELA)- II, Indicators 1 and 3; ELA-III, Indicators 3, 6, and 9; ELA -X, Indicators 1 and 2										
Social Studies (SS)-III, Indicator 7; SS-VI, indicator 1; SS-VII, Indicator 1										
Science (S)-II, Indicators 1 and 3; S-V, Indicators 1, 2, and 5										
Classification										
English Language Arts (ELA)- II, Indicators 1 and 3; ELA -X, Indicator 1										
Math (M) - III, Indicator 2; M - V, Indicator 1										
Science (S) - III, Indicator 3; S - V, Indicators 5 and 7										

Grades 6-8 Continued

Photosynthesis Teacher Kit

Grades 5-8

Investigate photosynthesis and the unique ability of plants to produce their own food. Students perform experiments to determine the necessary components for photosynthesis.

Plant Cells and Parts Teacher Kit

Grades 6-8

Includes these 3D models (with keys to location of structures) for use with your students:

- Flower Model
- Plant Cell Model
- Leaf Structure Model
- Stem Model of Dicotyledon

Teacher Membership

A Teacher Membership to the Garden provides free borrowing privileges at our Ford Resource Room. The Resource Room is a professional enrichment center where you can access information, borrow instructional kits related to the Garden's school programs, and peruse lesson plans and activity books related to plants, gardening, and science.

Teacher Membership benefits also include:

- Unlimited free admission to the Glasshouse and Gardens
- 2 complimentary guest passes
- 10% discount at Cleveland Botanical Garden Store
- 10% discount at all Smith & Hawken retail stores as well as a wide range of top local nurseries and other purveyors of fine gardening goods
- Borrowing privileges from our Ford Resource Center and Eleanor Squire Library
- Subscription to the Bulletin, our membership magazine, and electronic newsletter
- Membership in the Reciprocal Gardens Program, providing various benefits at over 200 gardens and arboreta worldwide

Teacher Membership Rate: \$35

ADVANCED INVESTIGATION

- 1 hour structured programs where students actively search for data
- Begins with a brief classroom component at the Garden
- Receive pre-visit literature sources and post-visit activity ideas on chosen topic
- Minimum group size: 10 students

Patterns in Nature Investigation

Grades 9-12+

We begin with a tour and discussion of the many different colors and patterns found in the plants and animals at the Garden. Students observe and document nature, utilizing shape, line and texture, as well as learn about and look for Fibonacci sequences. Then students spend time drawing these life forms (basic art supplies included).

Plant Structure, Function and Classification Investigation

Grades 10-12+

Plants have adapted physically to a wide range of environments. Learn the structure and function of various plant parts, while using them as a basis for their classification into groups and subgroups. Study unique features of plants and use a dichotomous key to identify the plants in our biomes.

Evolution and Adaptation Investigation

Grades 10-12+

Students learn about a spiny desert and a cloud forest, focusing on the flora found in each. Based on leaf color, leaf size, flower color and shape, students evaluate the effects of water, light, and time on plant life in these two biomes. They compare the area of leaves in both biomes, drawing conclusions on the differences as well as reflect on how leaf color may be affected by the selective pressures in each biome.

INDEPENDENT STUDY

- Self-guided visits to the Garden
- You lead your students and present lessons to match the pace of your class
- Structure your visit around what your students are currently learning
- We greet your class, introducing the glasshouse and the plants and animals they will see

TEACHER KITS

Supplement classroom learning by borrowing a *BotaniCool*® Kit. Most contain curricula, pictures, books, activities and materials to enhance your students' knowledge of the subject. Each Kit may be borrowed for three weeks and is renewable by request. Kits are created using the Ohio Academic Science Content Standards and are available at no charge to Teacher Members. A \$25 refundable deposit is required for non-members.

Spiny Desert and Cloud Forest Teacher Kit

All ages

Includes books about and pictures of plants and animals your students will see when they visit Cleveland Botanical Garden.

Seedfolks Teacher Kit

Grades 4-9

Paul Fleischman's book *Seedfolks* is set in Cleveland, and explores a community coming together through gardening. Includes:

- Classroom set of *Seedfolks*
- Lesson ideas binder
- *Eyewitness: Plant* video
- Seeds to plant

Biodiversity Teacher Kit

Grade 10

Explore the diversity of various biomes, comparing them to the one in which live. Books include *Tree Finder* and *Fandex Field Tree Guides*. Includes a plant press.

Program Pricing

Investigations & Independent Studies (Programs)

preK -5th grade \$2.50 / student

6th - 12th grade \$5.50 / student

Scout Programs

Scouts up to grade 5: \$3.00

Scouts in grades 6-8: \$6.00

REGISTRATION INFORMATION

Payment

- Checks, credit cards, or purchase orders must be submitted prior to programs.
- Groups arriving with fewer than the required number of chaperones will be charged a \$25 penalty fee.

Deposit

- Your deposit is due 2 weeks prior to visit date and is deducted from the total cost of your visit.
- Failure to pay deposit 2 weeks prior to visit date results in the cancellation of your visit.
- Deposits are non-refundable, but are transferable should you need to reschedule your visit.
- Groups canceling OR rescheduling less than 24 hours prior to their visit lose their deposit.

Chaperones

- **Grades PreK-3:** One chaperone is required for every 5 students
- **Grades 4-8:** One is required for every 8 students
- **Grades 9-12:** One chaperone is required for every 10 students

Required chaperones are admitted free. Additional adults are charged the regular \$7.50 admission fee.

- Adult chaperones and leaders must remain with groups at all times.
- CBG reserves the right to ask groups not adequately chaperoned to leave, and/or charge inadequately chaperoned groups a \$25 fee.

Buses

- The maximum vehicle height in our parking garage is 7 feet, 2 inches.
- Vehicles are not permitted to park directly in front of the building; this is a fire lane. Nor are buses/large vans permitted in our parking garage. Instead, buses/large vans should pull forward through our turn-around, up to and even with the small glass structure on your right, not blocking our parking garage ramp. Cleveland Botanical Garden staff may also be present to show you where to park.
- Bus drivers are welcome to enter our facility while students are visiting.
- Anyone parking in our garage is responsible for payment.

Lunch

- In good weather, groups are to picnic on Wade Oval, outside the Garden grounds.
- Groups are not permitted to picnic on Garden grounds unless they have all purchased food from our Café.
- Please do not sit at the tables on the Terrace or in the Café unless you are purchasing food from our Café.
- In case of inclement weather, we have reserved a room indoors for your lunch which you are responsible for cleaning before you leave. We cannot provide refrigeration for school lunches, but can provide you with ice if requested.

Late Arrivals / Cancellations / No Shows

- Please call if your visit is delayed, as Staff will be meeting your group upon arrival.
- Arriving late shortens your scheduled time in the Glasshouse or Hershey Children's Garden, or both. These areas have limited capacities and groups are tightly scheduled. Only one group of 25 students is permitted in the Hershey Children's Garden at one time. We reserve a 30-minute time slot for each group of 25 students you have. If you arrive late, your Hershey Children's Garden visit will be shortened, rescheduled later in the day, or canceled.
- Failure to arrive on your scheduled visit date will result in a charge of the total admission rate for your group.
- If you need to reschedule your visit, please do so as soon as possible.
- Cancellations / Delays call 216-721-1600 X100.

Please review these guidelines with students before coming to the Garden:

- School visitors are expected to be respectful of all other guests at the Garden.
- All visitors are expected to behave in ways that keep people, plants, animals, and facilities safe. Running, jumping, climbing, and sliding are not safe, and Garden staff will interrupt such behavior.
- Leave toys and radios on the bus as they are not allowed in the Glasshouse.

To register for the *BotaniCool*® Programs listed in this brochure, please have the following information available:

- Your name
- Your school name, address and phone
- The name of the program(s) you have selected
- 1st and 2nd choice of dates
- # of participants and # of chaperones
- Method of transportation
- Method of payment

You may contact us via:

Phone: (216) 721-1600 ext. 100

Fax: (216) 721-1694

Email: BotaniCoolRegistrar@cbgarden.org

Mail: *BotaniCool*® Registrar, Cleveland Botanical Garden, 11030 East Boulevard, Cleveland, OH 44106

Please register at least 2 weeks prior to your program date.

www.cbgarden.org



11030 East Boulevard
Cleveland, Ohio 44106
Tel. 216.721.1600
Fax 216.721.1964

www.cb garden.org

Non-Profit Org.
U.S. Postage
PAID
Cleveland, OH
Permit No. 955