

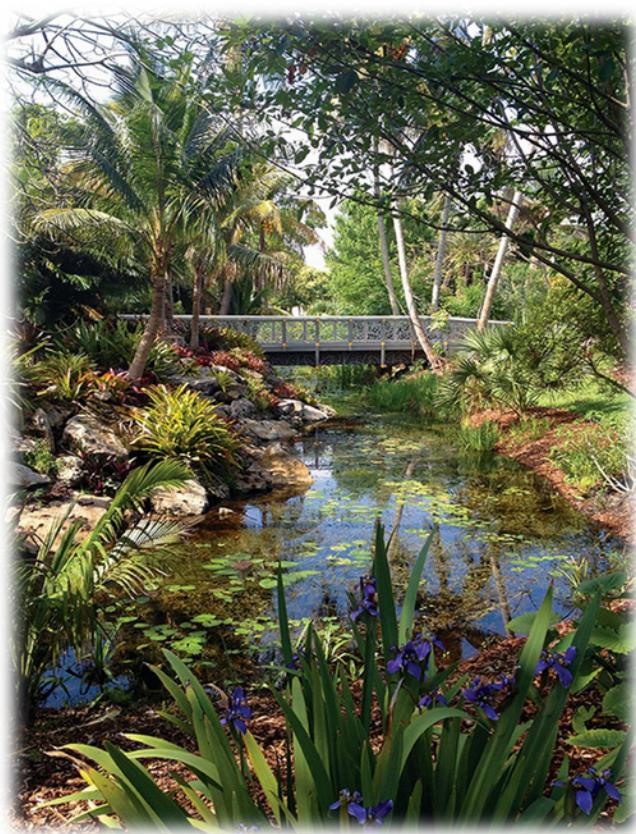


Teacher Garden Guide



Your Treasure Trek program will take you on a self-guided tour through Mounts Botanical Garden. The Garden is a 20-acre living plant museum with 25 specialty gardens.

It is Palm Beach County's oldest and largest public garden with over 2,000 species of tropical and subtropical plants from 6 continents, including plants native to Florida, exotic trees, tropical fruit, herbs, citrus, and palms. It was named in honor of Marvin U. "Red" Mounts, who served Palm Beach County farmers for over 40 years. He established and cared for a collection of fruit trees to provide local families with vitamin rich food sources that were lacking in their diets, essentially leading to improved health for many in our community.



What is a Botanical Garden?

It is kind of like a zoo for plants. Also known as botanic gardens, they are a place where a wide variety of plants are cultivated for scientific, educational, or ornamental purposes in order to be studied or seen by the public. Although there is some study of the plants in Mounts Botanical Garden, it is mainly for public display.



What will you see when you come to the Garden?

Mounts Botanical Garden is laid out with 25 unique garden areas. Each garden is a living exhibit with plants chosen specifically to tell a story to visitors. Our Gardens are examples of what you can plant in home gardens that will survive our challenging subtropical climate.



Some examples of our gardens

Fragrance Garden ~ a colorful, elegant garden for the senses. A beautiful space filled with softly scented leaves and heavily perfumed tropical flowers.



Herb Garden of Well Being ~ designed by renowned herbalist Holly Shimizu, this premier garden showcases herbs and spices from the tropics and subtropics that are used for cooking, medicinal purposes, flavoring, teas, ceremonies, and health.

Trial Garden ~ an area where plants are grown to see how well they will perform year round for the average gardener in our climate. You're sure to see lots of flowers and groupings of smaller plants in this garden.



Sun Garden of Extremes ~ this garden features plants that actually need extremes such as excessive heat, full sunlight, low soil moisture, and drying winds in order to perform their best. It is a great example of how you can give the feeling of a lush green landscape with minimal use of water.

Tropical Forest ~ even on the hottest of Florida days, a tropical shade garden can be 10 degrees cooler than the surrounding areas because it blocks the sun's rays which cools the air and ground. You will see great variation in size, color, and texture of the foliage in this area.



Garden Nursery

Behind the Edible Garden is our nursery, a place where plants are propagated and grown to a useable size. At Mounts Botanical, our Nursery is used to raise plants for the Garden, as well as a place where visitors can purchase plants for their own gardens. A very dedicated team of staff and volunteers keep the nursery running by planting, watering, weeding, and generally maintaining a wide variety of rare and unusual plants as well as very popular specimens.



Special Structures in Our Nursery



A **misty house** is a place where special care is given to plants with damaged roots or no roots at all. Root systems are vital to plant health because they are where the majority of nutrient absorption occurs. Most gardens propagate plants from cuttings because it is an easy and inexpensive

way to get new plants from the ones they already have. Plant cuttings have no root systems so they need to spend a few weeks in the mist house absorbing all of their water through their leaves until their root systems have developed. Once they have healthy roots, plants can be potted and moved into the general nursery.

A **shade house** is a structure that protects plants that cannot tolerate full sunlight and intense heat. These plants are naturally found under large trees where the shade from the canopies keep them cool. Our shade house is enclosed in woven material that reduces the amount of direct sunlight on the plants while still allowing moisture and air to pass through. This keeps our shade loving plants happy and healthy alongside their sun loving neighbors.



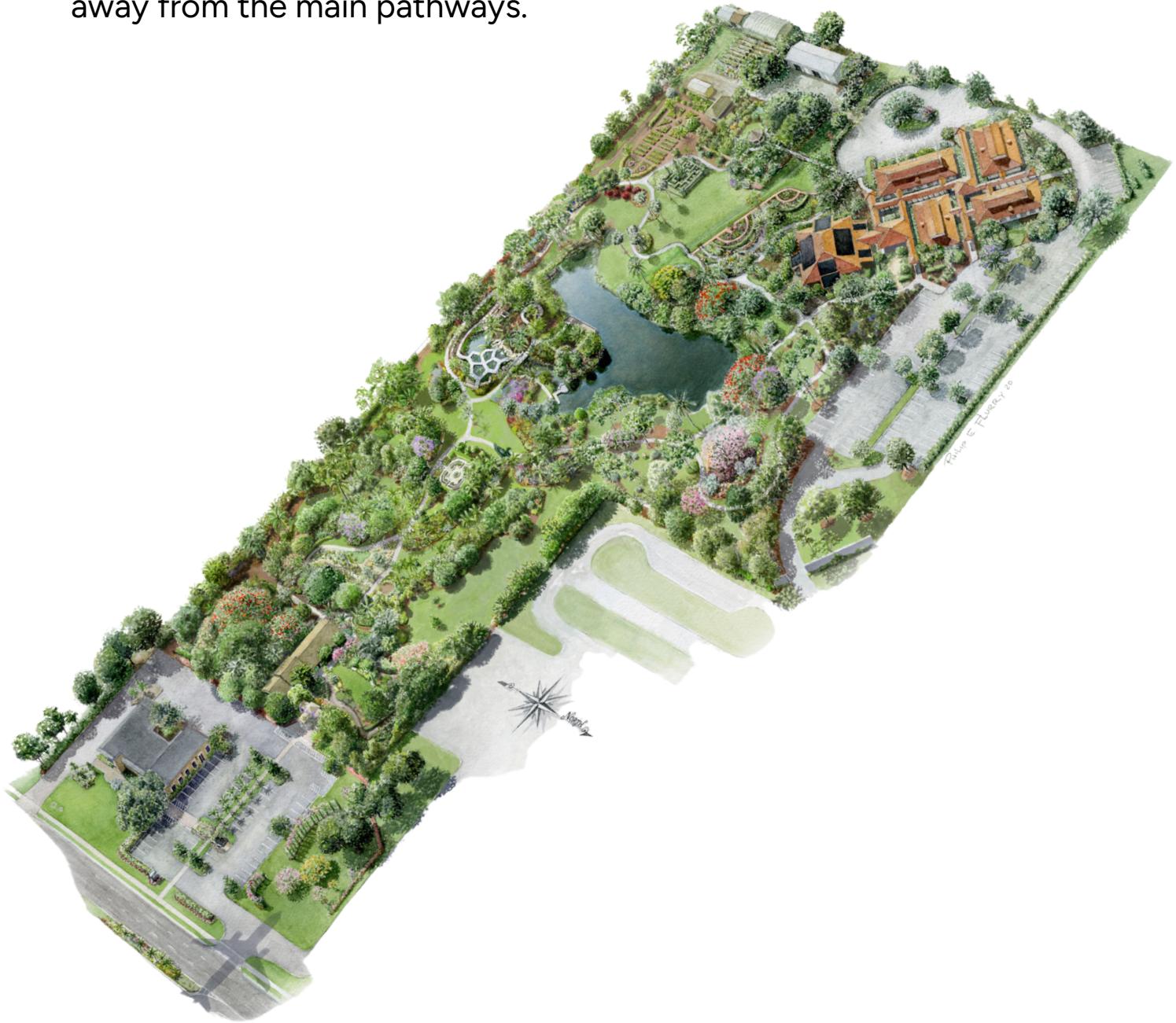
Who Will I See Working in the Garden?

You may wonder who is responsible for the health and maintenance of our Garden. Mounts Botanical has a number of horticulturists on staff who spend their days maintaining and managing our exhibits. Horticulturists who work in a botanical garden care for plants from all over the world so they need expertise in many different areas such as garden cultivation, botany, plant and soil science, and landscape design.



Getting Around the Garden

There are many discoveries to be made in a botanical garden and to get the most out of your visit, you should take your time and look closely at everything around you. There is no need to stay on the concrete paths, journey across the grass and mulch walkways to find the less visited areas of the Garden. Your map will help you get around the Garden and show you where you can find special points of interest. As you can see, there are lots of hidden areas to explore away from the main pathways.



How to Interpret Garden Signage



Throughout the Garden, signs located at the base of the plants and trees will help you to identify what specimens you are looking at.

The large name at the top of the sign is the Common Name, which is what most people commonly use to refer to the plant. Using only common names to refer to plants and animals can make it difficult for scientists from different places to differentiate between closely related species because the same plant can have many different common names. Therefore, every living thing on earth has been given a two-part Scientific Name that is used worldwide. This system is called binomial nomenclature. The second name you see on the garden sign is the plant's scientific name. The first word of the scientific name is the genus of the plant, and it is always capitalized. The second name is the specific epithet of plant species and it is not capitalized. The scientific name is always italicized when printed. The bottom part of the sign will give you information about the plant such as what it looks like, where it is native to, and if it has cooking or medicinal uses.



Common Name

Scientific Name

Description & General
Informations

What is there to do at a Botanical Garden?

There is always something going on at a botanical garden and you are guaranteed to find something new every time you visit. Our extensive collection of plants and trees bloom at different times of the year and many of our larger specimens shed their leaves during the cooler months.



The Royal Poinciana's deep red flowers appear in the summer and the incredible Silk Floss Tree blooms in fall.



Birds migrate through the Garden during seasonal changes, and we have an influx of butterflies in our butterfly garden every spring.



The vegetable garden is always changing as the different vegetables and fruits have different growing seasons. You can take gardening classes, cooking classes, attend camp programs, and even have a sleepover with your scout group. Botanical gardens are a wonderful destination for the whole family year round.



Extended Activities

- Watch this video about vertical farming:
https://www.youtube.com/watch?v=-_tvJtUHnmU
- Watch this video on horticulture.
<https://www.youtube.com/watch?v=a-ETT6FP5VM>
- Watch these two videos about mosaiculture at the Atlanta Botanical Garden.
https://www.youtube.com/watch?time_continue=72&v=slhW7Epq_D8
<https://www.youtube.com/watch?v=G6OveqOvE3E>
- Watch this CPALMS video about composting and decomposers.
<https://www.cpalms.org/Public/PreviewResourcePerspectivesVideo/Preview/166572>

Grades 3-12

- Work in small groups to create your own scavenger hunt in your classroom, playground or school. Come up with clever ways to give your clues; such as riddles, rhymes, or codes.
- Play New York Botanical Garden's online game; Plant Hunters. Includes informational videos throughout the game. <http://www.nybg.org/planthunters/pano.html>
- Check out this full year of K-5 garden lesson plans: Growing Minds Farm to School - Includes reading suggestions to go with the lessons. <https://growing-minds.org/garden-lesson-plans/>

Grades 3-5

- PBS Learning Media Florida lesson plan on plants and photosynthesis. Includes video, interactive, handouts and discussion questions.
<https://florida.pbslearningmedia.org/resource/thnkgard.sci.ess.photosyn/think-garden-photosynthesis/>

Grade 3

- Check out this CPALMS lesson plan; What Does Your Garden Grow? Students use environmental data to determine which plants are best for a school garden in Florida.
<https://www.cpalms.org/Public/PreviewResourceLesson/Preview/50913>
- What Type of Soil is Best for Growing Seeds? Hands on STEM experiment by Steamsational: <https://www.steamsational.com/seed-sprouting-science-experiment/>

Grade 4

- CPALMS lesson plan: Gardening in Schools. Students rank potting soil using a variety of factors. <https://www.cpalms.org/Public/PreviewResourceLesson/Preview/48158>
- Watch this science experiment./ demo on soil erosion:
<https://www.pinterest.com/pin/256845984976693892/>

Grade 5

- CPALMS lesson plan: Save the Plants. Students design a system to water plants using rain water. <https://www.cpalms.org/Public/PreviewResourceLesson/Preview/49710>
- Lesson Plan: The Function of Plant Structures: how these structures help plants get what they need to grow. <https://betterlesson.com/lesson/631762/the-function-of-plant-structures>

Grade 6-8

- Kids Gardening lesson plan: Garden Literature: Discover Community Gardens with Seedfolks. Lesson plans and discussions revolving around the book Seedfolks written by Paul Fleischman. <https://kidsgardening.org/lesson-plan-garden-literature-lesson-seedfolks/>
- Kids Gardening lesson plan: Plants in Space. Multiple week project where students contemplate the challenges of growing plants in space with limited area and resources. <https://kidsgardening.org/lesson-plans-plants-in-space/>
- Check out Seed Sort on page 78: using a Dichotomous Key to sort beans. <https://cabarrus.ces.ncsu.edu/wp-content/uploads/2014/02/BeverlysHandsONchildrensGardenProject.pdf?fwd=no>
- Experimenting with phototropism and shoe box mazes: <https://www.kiwico.com/diy/Science-Projects-for-Kids/3/project/Plant-Light-Maze/2604>

Grade 6-12

- Kids Gardening lesson plan: Soil is Alive! Students investigate soil samples and explore the many organisms that call soil home. Includes background information, materials list for the lab, a food web graphic, videos, and worksheets. <https://kidsgardening.org/lesson-plan-soil-is-alive/>

Grade 9-12

- CPALMS Lesson Plan: Corn Conundrum. How do farmers adjust to our changing climate? Students work as a team to develop a procedure to select the best variety of corn under drier conditions predicted by models of global climate change. <https://www.cpalms.org/Public/PreviewResourceLesson/Preview/32177>
- Science and Our Food Supply: 110 page teachers guide developed through a partnership between the FDA and NSTA. Includes labs, games, videos, and activities. <https://www.fda.gov/media/90667/download>
- Collection of plant themed labs and activities by Cornell Institute for Biology: <https://blogs.cornell.edu/cibt/labs/plants/>

Common Core State Standards Grades 3 – 12

Grade 3

English Language Arts:

Strand LAFS.3.RL: Reading Standards for Literature

Cluster 2: Craft and Structure: 2.4

Strand LAFS.3.RI: Reading Standards for Informational Text

Cluster 1: Key Ideas and Details: 1.1

Cluster 3: Integration of Knowledge and Ideas: 3.7

Strand LAFS.3.W: Writing Standards (extended activities)

Cluster 2: Production and Distribution of Writing: 2.5, 2.6

Cluster 3: Research to Build and Present Knowledge: 3.7, 3.8

Strand LAFS.3.SL: Standards for Speaking and Listening

Cluster 1: Comprehension and Collaboration: 1.1, 1.2, 1.3

Cluster 2: Presentation of Knowledge and Ideas: 2.4, 2.5, 2.6

Strand LAFS.3.L: Language Standards

Cluster 2: Knowledge of Language: 2.3

Cluster 3: Vocabulary Acquisition and Use: 3.4



Grade 4

English Language Arts:

Strand LAFS.4.SL: Standards for Speaking and Listening

Cluster 1: Comprehension and Collaboration: 1.1

Strand LAFS.4.L: Language Standards

Cluster 1: Conventions of Standard English: 1.1, 1.2 (extended activities)

Cluster 2: Knowledge of Language: 2.3 (extended activities)

Cluster 3: Vocabulary Acquisition and Use: 3.4

Grade 5

English Language Arts:

Strand LAFS.5.SL: Standards for Speaking and Listening

Cluster 1: Comprehension and Collaboration

Strand LAFS.5.L: Language Standards

Cluster 1: Conventions of Standard English 1.1, 1.2 (extended activities)

Cluster 2: Knowledge of Language: 2.3 (extended activities)

Cluster 3: Vocabulary Acquisition and Use: 3.4

Common Core State Standards

Grade 6

English Language Arts

Strand LAFS.6.RL: Reading Standards for Literature

Cluster 1: Key Ideas and Details: 1.1

Strand LAFS.6.SL: Standards for Speaking and Listening

 Cluster 1: Comprehension and Collaboration: 1.1

Strand LAFS.6.L: Language Standards

 Cluster 1: Conventions of Standard English: 1.1, 1.2 (extended activities)

 Cluster 2: Knowledge of Language: 2.3 (extended activities)

 Cluster 3: Vocabulary Acquisition and Use: 3.4

Grade 7

English Language Arts

Strand LAFS.7.RL: Reading Standards for Literature

Cluster 1: Key Ideas and Details: 1.1

Strand LAFS.7.SL: Standards for Speaking and Listening

 Cluster 1: Comprehension and Collaboration: 1.1

Strand LAFS.7.L: Language Standards

 Cluster 3: Vocabulary Acquisition and Use: 3.4

Grade 8

English Language Arts

Strand LAFS.8.SL: Standards for Speaking and Listening

 Cluster 1: Comprehension and Collaboration: 1.1

Grades 9 & 10

English Language Arts

Strand LAFS.910.SL: Standards for Speaking and Listening

 Cluster 1: Comprehension and Collaboration: 1.1

Grades 11 & 12

English Language Arts

Strand LAFS.1112.SL: Standards for Speaking and Listening

 Cluster 1: Comprehension and Collaboration: 1.1