

MARIE SELBY BOTANICAL GARDENS

SCHOOL PROGRAMS GUIDE: DOWNTOWN SARASOTA CAMPUS



WELCOME TO MARIE SELBY BOTANICAL GARDENS!

Extend your classroom with a journey through Marie Selby Botanical Gardens' Downtown Sarasota campus! We offer guided school tours and virtual explorations with complementary curricular packets for school groups from September-May, and self-guided explorations throughout the year. Our signature programs are standards-aligned and offer something for every grade level. For more information, please visit selby.org, or email schools@selby.org.

Our mission: To provide bayfront sanctuaries connecting people with air plants of the world, native nature, and our regional history.

SIGNATURE VIRTUAL EXPLORATIONS FOR K-12

Marie Selby Botanical Gardens' virtual explorations consist of pre-recorded virtual tours and complementary curricular packets for area educators who might not be able to travel to the Downtown Sarasota and Historic Spanish Point campuses. They can also be used to augment a self-guided tour. Each

curricular packet thoughtfully combines numerous instructional standards in social studies, science, math, and language arts. Virtual explorations are free of charge. To book a virtual exploration, please visit selby.org/dsc/dsc-school-teacher-programs/fieldtrips/, or email schools@selby.org.

Downtown Sarasota Campus Virtual Garden Tour (grades K-5)

This exploration features a pre-recorded video tour of Marie Selby Botanical Gardens' Downtown Sarasota campus (approx. 15 minutes). The tour is a brief introduction to the Gardens and the fascinating plants and habitats found there—from the rainforest to the desert to our favorite local superstars, the mangroves.

This virtual tour is complemented by several downloadable curricular packets that support multiple science, math, and language arts standards through explorations of native plants, rainforest conservation, butterfly metamorphosis, plant adaptations, and more! Activities in the curricular units can be modified by teachers for at-home virtual learning or extended to address additional standards.

Specific standards and benchmarks addressed are referenced within each PDF unit.

Where Land Meets Sea: Mangroves and Estuaries Virtual Tour (grades 6-12)

Created especially for middle and high school life science classes, this exploration focusing on estuaries and mangroves will broaden students' understanding of Southwest Florida's coastal wetlands and Sarasota Bay, and our interconnectedness with these precious ecosystems.

This exploration features two pre-recorded video tours (approx. 15 minutes each). Students will virtually stroll along Selby Gardens' beautiful bayfront to discover the unique traits that allow mangroves to survive and thrive in coastal conditions, and explore how the maze of the mangrove root system contributes not only to coastal wetland ecosystems, but also to nearby ecosystems as well. Students will then virtually hop aboard the *Carefree Learner* (Sarasota High School's floating classroom) for an investigation of the beautifully biodiverse Sarasota Bay, discover the living and non-living elements of an estuarine ecosystem, and have an up-close and personal encounter with some of the creatures who call this important estuary home.

Accompanying this virtual tour is a K-12 curricular unit exploring the unique contributions and environmental vulnerability of these amazing ecosystems.

Archaeology and Indigenous Peoples at Historic Spanish Point Campus Virtual Tour (grades 3-5)

Designed for 3rd-5th grade students, this exploration introduces students to archaeology and the Indigenous peoples who inhabited the area beginning approximately 5,000 years ago.

This exploration features a pre-recorded video tour (approx. 25 minutes) of the important archaeological features at Marie Selby Botanical Gardens' Historic Spanish Point campus. Students will learn how early peoples lived and built their societies in Florida. They will also learn about the science of archaeology and how archaeologists study the ancient past.

Accompanying this virtual tour is a downloadable curriculum packet with six interdisciplinary activities—including a simulated archaeological excavation—which can be done in the classroom or modified for online learning from home.

Pioneer Life at Historic Spanish Point Campus Virtual Tour (4th grade)

Designed for 4th grade students, this exploration introduces students to what we know about pioneer life at the Historic Spanish Point campus.

This exploration features a pre-recorded video tour (approx. 33 minutes) of the Guptill House, Pioneer Boatyard, and Packing House at Marie Selby Botanical Gardens' Historic Spanish Point campus. Students will learn about what attracted pioneers to what is now the Historic Spanish Point campus and what their day-to-day lives were like. Students will also learn about the research methods used to gather information about pioneer life.

This exploration is accompanied by an interdisciplinary curricular unit, with seven activities that thoughtfully combine numerous instructional standards in social studies, science, math, and language arts. Students will analyze primary sources like historians do, build boats to sharpen both STEM and financial literacy skills, and even learn about the delicious science behind churning butter!

SIGNATURE GUIDED PROGRAMS

Selby Gardens' guided school tours at the Downtown Sarasota campus consist of a docent-led general Gardens tour along with one of the following hands-on field study options. We are happy to tailor any of the programs in support of unique student needs and interests, or for a different grade level than those suggested. Have a special class project in mind? Contact us to discuss the possibilities!

To book a guided school tour, please visit selby.org/dsc/dsc-school-teacher-programs/fieldtrips/, or email schools@selby.org. Please note: Our guided school tour program relies on a cadre of trained volunteers, so we are unable to guarantee docent availability for every date and time requested—please book as far in advance as possible.

Butterfly and Caterpillar Exploration (grades K-2)

Inspired by Eric Carle's story of the Very Hungry Caterpillar, children are led in the "dance of the butterfly" on the grassy mansion lawn adjacent to the butterfly garden. Using a kaleidoscope lens to simulate butterflies' vision, students investigate caterpillar and butterfly host plants. Learning that caterpillars eat and butterflies drink from certain plants demonstrates the balance required both when designing a butterfly garden and supporting butterfly life cycles.

Look at Those Leaves! Leaf Lab (grades K-5)

In this interactive hands-on study, students will observe both the intricacy and diversity of leaves found amongst Selby Gardens' unique plant communities. Using the senses of sight, touch, and smell, students will explore and describe the exterior features of the leaves, and create a colorful nature craft featuring their special leaf. Inquiry-driven discussions throughout the lab include: the function of leaf veins, simple vs. compound leaf structure, vascular vs. nonvascular plants, and the purpose of varying leaf shapes.

Bromeliad Tank Investigation (grades 3-12)

Using simple tools, students will work in pairs extracting water and micro-organisms from bromeliad tanks. As students transfer the water into transparent collection cups, they reveal a world of biodiversity living within the bromeliad. Using both Magiscopes and hand lenses to magnify the "mini-beasts," young scientists will discover the many creatures that depend on the micro-habitat of a bromeliad tank. Saving a bromeliad today may save a frog tomorrow!

Perfectly Positioned Petals: Flower Dissection (grades 3-5)

Who doesn't like to take things apart to see how they work? In this engaging hands-on lab, students will participate in a flower dissection activity to discover its anatomy and learn how each part functions and contributes to its reproduction. Students will gain a greater understanding of the process and importance of pollination.

Fantastic Florida: Native Plant Discovery (grades 3-12)

Florida is home to unique and intricate ecosystems, including the mangrove forests and estuaries that line much of our coastlines. In this field study, students will identify plants such as mangroves, sea grapes, sea grasses, and other Florida natives living along our coast and learn the benefits of estuaries and adjoining mangrove forests. Leaf sorting and bark rubbing activities will help students identify the three types of mangroves native to Florida.

Where Land Meets Sea: Mangroves and Estuaries Exploration (grades 6-12)

Created especially for middle and high school students to extend a field trip on the *Carefree Learner*, this field study focusing on mangroves and estuaries will broaden students' understanding of the coastal wetlands of Florida and our societal interconnectedness with these precious ecosystems. Students will discover the unique traits that allow mangroves to survive in a coastal environment, and explore how they contribute to coastal ecosystems and human well-being. The tour concludes at our dock on Hudson Bayou, where students will board the *Carefree Learner* (Sarasota High School's floating classroom). For student groups not booked on the *Carefree Learner*, please see our similar "Fantastic Florida" exploration.

Sustainability and Green Technologies: Harnessing the Power of the Sun (grades 9-12)

Created for high school biology, environmental science, and marine science students, this exploration is designed to inspire the next generation of environmental leaders and innovators. Students will compare photosynthesis and photovoltaic systems, exploring how models found in nature can be used to develop new technologies that contribute to a more sustainable future. Students will investigate the concept of sustainable design through "building" their own sustainable city. Pre- and post-visit lesson plans investigating photosynthesis and careers in renewable energies complement this campus tour.

SELF-GUIDED (TEACHER-LEAD) TOURS

All subjects can be taught in a garden! Self-guided school groups can reach curricular goals, deepen understanding of classroom lessons, and support unique student needs and interests with a visit to explore our gardens. Enhance or build your visit around one of the seasonal offerings below, or choose the date that works best for you to explore and find inspiration in Selby Gardens' plants, wildlife, and remarkable views of Sarasota Bay.

Supplemental curricula and self-guiding activities are available for download at selby.org/dsc/dsc-school-teacher-programs/complementary-curricula/. To book a self-guided school tour, please visit selby.org/dsc/dsc-school-teacher-programs/fieldtrips/, or email schools@selby.org. Please note: All homeschool groups and youth groups with mixed age levels are self-guided, as are all summertime visits.

The Orchid Show (all ages, seasonal feature)

Celebrate orchids in their many forms during The Orchid Show! Running for six (6) weeks in October and November, and reimagined in a new theme each year, The Orchid Show will amaze visitors with never-before-seen displays of hundreds of living orchids that feature the plant family's dramatic diversity of colors, shapes, and even scents, artfully composed in our Tropical Conservatory. This show will also give visitors to our Museum of Botany & the Arts a rare glimpse of treasures from the preserved and bibliographic research collections. Available Oct.-Nov. Contact us or see selby.org for dates.

Rainforest Masks of Costa Rica (all ages, seasonal feature)

Don't miss bringing your class to see our gallery of hand-carved and painted rainforest masks exclusively on display in Marie Selby Botanical Gardens' Museum of Botany & the Arts. These original works depict the vibrant and authentic Borucan culture of the central Costa Rican rainforest and provide a breathtaking glimpse into the flora and fauna of the rainforest. This show lends itself especially well to interdisciplinary studies including art, life science, social studies, Spanish, and economics. Available annually in January. Contact us or see selby.org for dates.

Jean & Alfred Goldstein Exhibition Series (all ages, seasonal feature)

This spectacular, annual Gardens-wide art-meets-horticulture exhibition series displays the work of major fine artists and relates them to nature and to the botanical collections at Selby Gardens. Each exhibition features the work of a different artist, examines their work through the lens of flowers and nature, and showcases dynamic horticultural interpretations of themes found in the artwork. Available February-June. Contact us or see selby.org for dates and artists.

Embracing Our Differences "Make-A-Day Of It"

Extend your field trip to the annual Embracing Our Differences exhibit held at Sarasota's Island Park with a short stroll along the bayfront to Selby Gardens' Downtown Sarasota campus! Embrace biological uniqueness and ecological bio-differences as your students enjoy the peaceful beauty of Selby Gardens. See the [Embracing Our Differences](https://selby.org/embracing-our-differences) website for dates.



PREPARE FOR YOUR VISIT!

All group visits must be scheduled in advance. Please contact us at least three weeks ahead of time to ensure the best chances of securing your preferred dates as well as a sufficient number of guides for guided groups.

Guided school tours at the Downtown Sarasota campus are available during the school year, September-May, Monday through Friday, dependent on guide availability. Self-guided explorations are available any time of the year. School tours run from 10 a.m. to 11:30 a.m.

For guided tours, the price is \$10 per student. For self-guided tours, the price is \$7 per student. Teachers are free, as is one (1) chaperone per 10 students. Additional chaperones (maximum three (3) per 10 students) are \$10 each. All members of the group must be included in a single payment.

GARDEN ETIQUETTE

Help us keep Selby Gardens' Downtown Sarasota campus healthy and happy!

Our plants are part of our research collection. Please do not touch the plants, or collect leaves, fruits, flowers, etc. Collecting things, even when on the ground, causes unwanted impacts to our Gardens as well as scientific work, especially when multiplied by lots of other people who wish to do the same thing. Plants may also be irritating, thorny, or poisonous. If students see something unique or beautiful, consider taking pictures, drawing, or writing about it instead!

Please do not reach into the koi pond. Bacteria and residues on our hands can make our beloved fish sick!

Guides may invite groups to run on the Great Lawn or explore the roots of the banyan trees, but otherwise, please walk on the sidewalks and do not enter planted areas or flower beds.

Please put electronic devices away during the guided portion of your visit.

FIELD TRIP FAQs

How many chaperones do we need?

We require at least one adult (teacher or other adult chaperone) per 10 students, to a maximum of three per 10 students.

Can a student/parent use their Selby Gardens membership for free admission?

Guided tours are special programs, and are not included in Selby Gardens membership. All members of a guided group must pay for a guided experience, regardless of membership status. For a self-guiding group, Selby Gardens memberships may be used.

What time do we need to arrive?

Check-in is from 9:45 to 10 a.m. Please ensure the whole group arrives at this time. Our staff and volunteers are on fixed schedules and cannot wait for late arrivals.

Where do we go when we arrive at the Downtown Sarasota campus?

Buses should drop students off in front of our Welcome Center, where you will be met by Selby Gardens' staff or volunteers. The Welcome Center is the building with the green awning on the west (right-hand) side of Palm Avenue.

Where do buses park?

A staff member or volunteer will greet your group when you arrive and assist in directing your driver to a bus parking spot. If the bus will stay on-site during your visit, bus drivers are welcome to enjoy the Downtown Sarasota campus free of charge.

Will my class stay together for guided tours?

Small groups of 10-15 get the most out of a guided experience, and are best able to stick together while walking through the Gardens. Please divide students into groups of no more than 15.

What are our lunch options?

School groups are welcome to bring bagged lunches to enjoy picnic-style on the lawn. Please bring blankets or sheets to sit on. We have air-conditioned storage space if needed, but no refrigeration is available. All lunch trash must be packed out.

May we stay and explore Selby Gardens or work on our own projects after the guided tour?

Absolutely! Please note that chaperones must stay with their groups at all times. Due to space limitations and safety considerations, we ask that you limit groups visiting the Tropical Conservatory or Payne Mansion to five students at a time, accompanied by a teacher or chaperone.

May we visit the Garden Shop or Selby House Café?

Yes! Please remember that the Garden Shop and Selby House Café are part of Selby Gardens and chaperones must stay with their groups at all times. Due to space limitations, please limit groups visiting the Garden Shop and Selby House Café to five students at a time, accompanied by a teacher or chaperone.

What is your rainy day policy?

Selby Gardens is open rain or shine. We may, however, close the campus temporarily during lightning or severe storms. Please dress for the outdoors! If you prefer to cancel in the case of inclement weather, we will do our best to reschedule you, but cannot guarantee a booking. There is no cancellation fee.

If you have another question or need to change

plans: Email us at schools@selby.org, or call 941.366.5731 ext. 273.

TEACHER TALKING POINTS ABOUT MARIE SELBY BOTANICAL GARDENS' DOWNTOWN SARASOTA CAMPUS

The information on these pages will help you orient yourself to Selby Gardens' Downtown Sarasota campus and provide details about many of the interesting plants in our collections. On your self-guided tour you may mix and match the fol-

lowing sections to fit the flow of your tour, or use these points to launch further research! A map of the Downtown Sarasota campus can be found at the end of this guide, or at selby.org/wp-content/uploads/selby-map-1.pdf.

Map Point #1: Welcome Center/ Admissions

- Our mission: To provide bayfront sanctuaries connecting people with air plants of the world, native nature, and our regional history.
- Welcome to Marie Selby Botanical Gardens' Downtown Sarasota campus! A Selby Gardens representative will greet you in front of the Welcome Center and let you into the Gardens through the south gate.
- The Downtown Sarasota campus encompasses 15 acres and is a respected world center for tropical plant research, conservation, and education, as well as an orchid showplace enjoyed by over 200,000 visitors yearly.
- Here at Selby Gardens there are two categories of plant collections, research and display. Living research collections are accessioned, databased, and labeled. Display collections are maintained for the purpose of creating an attractive display in the public areas of the gardens. As you walk around the gardens, you may notice metal tags with the name of a plant and a bar code. These tags help our horticulturists and botanists keep track of each plant and its scientific significance.
- Something that sets Selby Gardens' Downtown Sarasota campus apart from other botanical gardens is that we specialize in the research, culture and display of epiphytic plants. Epiphytes are plants that grow upon other plants without harming them—epiphytes are not parasites. Here in Florida, due to our semi-tropical climate, we have an opportunity to observe dozens of species of epiphytes in their natural habitat. Many of the most recognizable epiphytes in our area are orchids, ferns, and bromeliads.

Map Point #2: Garden Shop

- The Garden Shop carries an ever-changing assortment of botanically inspired gifts, books, collectibles, and plants for sale.
- Please limit groups visiting the Garden Shop to five students at a time, and ensure that a chaperone is with each group.

Map Point #3: Tropical Conservatory

- The Tropical Conservatory is one of eight greenhouses at Selby Gardens. It looks and feels like a tropical rainforest, which is where many of its show-stopping orchids and bromeliads were collected by Selby Gardens' research and conservation scientists.

- To maintain rainforest temperatures and humidity, the Tropical Conservatory is heated by a gas furnace in the winter and cooled by fans pulling air through wet pads in the summer.
- More than 200 expeditions to the tropics and subtropics have contributed to the plant collections at Selby Gardens. The living collection includes more than 14,000 accessions in more than 1,200 genera representing some 200 plant families, or 1/3 of all plant families on Earth.
- Selby Gardens scientists have discovered and/or described some 2,000 plant species new to science.
- Many of these plants are sensitive and valuable to science. For the safety of the collection, we ask that you limit groups visiting the Tropical Conservatory to five students at a time, accompanied by a teacher or chaperone.

Map Point #4: Sho Fu Bonsai Exhibit

- Bonsai (pronounced "bone-sigh") is an ancient Asian art form that began in China and then spread to Japan.
- The goal in Bonsai is to create a miniature representation of an old tree or forest of trees.
- Bonsai can be made from many kinds of trees, but those with smaller leaves are more adaptable. The branches and roots are trimmed regularly to keep them small. A bonsai artist sometimes uses flexible wire to train branches.
- Some bonsai are kept for many years and passed down from one generation to the next.

Map Point #5: Cycads

- On both sides of the path are ancient cone-bearing plants known as "cycads." They may look like palms but they are not. In fact, they aren't closely related to any other plant group on earth! Prehistoric cycads shared the planet with dinosaurs more than 240 million years ago. Their "modern" relatives arose as recently as 12 million years ago. There are about 300 species of cycads currently living today. They are considered living fossils.
- Cycads are either male or female; producing distinct cones. The sex of young plants cannot be determined until the cones form on the mature plants. Smaller, slender male cones produce pollen. Larger female cones are covered with velvety fuzz. Once mature, female cones will crumble open to reveal brightly colored (usually red or orange) seeds.

- An unusual Florida native cycad is the coontie (*Zamia integrifolia*, formerly known as *Zamia floridana*). Indigenous peoples removed a toxic chemical from the roots and used the plant's starch to produce a kind of flour for bread and porridge. The name, "coontie" is derived from a Seminole phrase meaning white root or white bread. Coontie has become a popular Florida landscape plant, which has encouraged the comeback of the rare atala butterfly that uses coontie as a larval host plant.
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Map Point #6: Fern Garden

- There are more than 12,000 species of ferns worldwide; 164 species reside in Florida.
- Like cycads, ferns are ancient plants that first evolved more than 300 million years ago. The ferns on Earth today evolved relatively recently—only in the last 70 million years.
- A tree fern is not a tree! It does not have the specialized tissues that produce "wood." The "trunk" is really an upright rhizome, where in most ferns, the rhizome is underground.
- Resurrection fern, *Pleopeltis michauxiana*, is a common native fern. It is an epiphyte and grows green and lush after a rain. To conserve moisture during dry periods, the leaves curl and turn gray-brown. The fern can be dormant for up to 40 years.

Map Point #7: Koi Pond

- Koi are Japanese carp and are closely related to goldfish. They can live 30-60 years. Some have been reported up to 200 years old and priced at thousands of dollars. Koi can be like family heirlooms, passed down through generations.
- Please do not put your hands into the pond. The fish have no teeth, but the oils and germs on human hands can be a health hazard for them.
- The floating islands provide shade and protection for the fish from birds of prey.

Map Point #8: Bamboo Garden

- Bamboo is one of the planet's most useful plants—its stems can provide shelter, food, clothing, musical instruments, bicycles, and more!
- Bamboo is an important crop worldwide for food as well as handicraft and building materials because it is fast-growing.
- There are now about 14 different species of tropical bamboo in this garden.
- Tropical bamboos are "clumpers" that form clusters of stems, as opposed to the "runners" from temperate climates. We have planted tropical bamboos because they are better suited to our Florida climate, and will not spread unpredictably.
- There are over 1600 species of bamboo in the world, ranging in height from a few inches to more than 100 ft.
- Most species of bamboo bloom infrequently. It could take anywhere between 50-150 years. When bamboo does bloom, all individuals of the same species bloom around the world at the same time (over the course of several years) and then they die. We do not know when ours will bloom.

- Marie Selby planted bamboo along the waterfront to block the view of developing Bird Key.

Map Point #9: Banyans and other fig species

- The fig genus (*Ficus*, family Moraceae) comprises more than 1,000 species of trees, shrubs, and vines.
- Several of our large species of *Ficus* were planted by Marie Selby's gardener, Grover Yancy, in the 1930s. The banyans at the entrance to the Children's Rainforest Garden were first planted as three trees, but now they appear as many more.
- Aerial prop roots grow down until they meet the ground, thickening into woody trunks. Old trees can spread out laterally using these prop roots to cover a wide area.
- These large spreading stems help to physically support the tree as well as to access more nutrients from the soil.
- Moreton Bay fig, *Ficus macrophylla*, is the tall majestic tree south of the banyans with the large octopus-like buttress roots
- All banyans are figs, but not all figs are banyans.
- In an Indian dialect, banyan means "grocer/merchant." Traditionally, these trees provided a shaded place for meetings or for merchants to sell their goods. Eventually "banyan" became the common name of the tree itself.
- *Ficus aurea* is a strangler fig widespread in Florida and the Caribbean region.
- The seeds of strangler figs germinate in a tree canopy, or the "boots" of palms. Their roots eventually grow long enough to reach down into the ground. They may achieve sufficient size and vigor to surround and overwhelm their host, sometimes killing it in the process, hence the common name "strangler fig."
- Several of these figs can be seen at Selby Gardens, particularly on cabbage palms that are resistant to the stranglers.

Map Point #10: Ann Goldstein Children's Rainforest Garden

- Opened in 2013, the Ann Goldstein Children's Rainforest Garden offers a delightful space for discovery, exploration, learning, and PLAY!
- Rainforests are made of up to four vertical layers, each with its own unique inhabitants and light regimes. From bottom to top: the forest floor, the understory, the canopy, and finally the emergent layer. Our rainforest represents all but the emergent.
- Half of the entire world's plant and animal species are found in rainforests, which are high in epiphyte (air plant) diversity.
- The size of the world's rainforests has shrunk to half of what it was just 50 years ago. The better we understand the living world, the better we are able to conserve it for future generations.
- Selby Gardens' botanical research focuses on the New World tropics and subtropics: Florida, the Antilles, and Central and South America. However, we also have a large collection of specimens from the rainforests of Africa and Asia. Our rainforest displays extend from the Tropical Conservatory, through the Cycad, Fern, and Bamboo Gardens, to the Ann Goldstein Children's Rainforest Garden.

Map Points #11-13: Historic Selby House (Café and Kid's Corner)

- We have many people to thank for this lovely garden; especially Marie and William Selby who bought the property in 1920. When Marie Selby passed away in 1971, she left the property to the community as a botanical garden for all to enjoy.
- This house was originally intended to be temporary until a larger home was constructed. Once Marie and William Selby moved in, they decided not to build the mansion they originally planned and continued to live here.
- Although wealthy enough to construct an ornate mansion, they preferred a simple life. They were avid outdoors people who loved nature.
- The area known as Kid's Corner was originally the Selby's garage.

Map Point #14: Succulent Garden

- A succulent is a plant that has thick, fleshy leaves and/or stems, which is an adaptation to an arid climate.
- Surprisingly, many rainforest plants such as orchids and bromeliads have similar adaptations because they perch on other plants, rather than live in soil, and as such have limited access to water.
- Some well-known succulents include aloe, agave, yucca, kalanchoe, and cacti.
- Not all plants with spines are cacti, and not all cactuses have spines!
- The cactus family is one of about 40 plant families that have succulent species.
- To replicate an arid environment, the succulent garden has no irrigation. Growth in sandy soil and on mounds allows for quick drainage.

Across from Map Point #16: Bo or Bodhi Tree

- *Ficus religiosa*, from southern Asia, has a long cultural association with both Buddhists and Hindus. It is believed that Buddha sat under a bo tree for seven (7) years to reach enlightenment.
- The leaves of the tree make a beautiful, meditative sound in the wind, which is sometimes associated with running water or rainfall.
- The leaves have a pointed "drip tip" that enables water to run off quickly; discouraging algae growth and enhancing the plant's ability to photosynthesize.
- Selby Gardens' bo tree was downed in Hurricane Gabrielle in 2001 and propped back up with the use of a floating crane. As you can see, it has recovered beautifully!

Map Point #17: Steinwachs Family Foundation Mangrove Walkway

- This area features Florida native coastal plants including sea grape and mangroves.
- Mangroves are not a particular species of tree, but rather a varied group of salt-tolerant shrubs and trees that grow along many tropical coastlines worldwide.
- Mangroves represent one of the most productive ecosystems in Florida, providing food and a safe haven for many birds, fish, and other coastal and marine creatures.
- Mangroves filter pollutants and play a major role in stabilizing shorelines and preventing erosion.
- State and local regulations have been enacted to protect Florida's mangrove forests.
- There are three (3) species of mangroves in Florida (and they are not closely related to one another!). They can be found intermixed or sometimes with a zonal distribution.
- Red mangroves can live directly in salty or brackish water by filtering salt out at the roots. They have arching prop roots that stabilize them in the shifting tides. They are also known as "walking trees" because their roots look like legs that have allowed them to walk out into the water. Another notable feature are their long, green, torpedo-shaped propagules, which are seedlings that have germinated while still on the plant. They can be seen in late spring and summer.
- Black mangroves have "pneumatophores," which are pencil-like roots that stick up vertically to obtain oxygen when the tide is high. The backs of black mangrove leaves are whitish and salty. Excreting salt through their leaves allows them to survive in salt or brackish water. The flowers of the black mangroves produce excellent nectar for honeybees.
- White mangroves are identifiable by holding a leaf up to light to see little black pits along the edge of the leaves. These little black pits are called "domatia" and are home to tiny arachnids, whose role in mangrove ecology is unknown. White mangrove leaves also have a small pair of nodular nectar glands found at the base of the leaf.
- 80 percent of all the world's seafood starts life in a mangrove "nursery."

Map Points #18 & 19: Palm Grove

- Various palms grow along the bay, from mid-point to north end of Selby Gardens.
- Palms are unusual trees! They don't develop growth rings annually, and their stems stop adding width once they mature. Palms are monocots, which means they are more like grasses, corn, and irises than oaks or redwoods.
- The coconut palm, *Cocos nucifera*, is one of the most popular and well-known palms. It may live as long as 100 years, producing fruits from about 6-10 years old until 80 years of age.
- The fruit takes a year to ripen. Each fruit contains just one seed—a nut filled with a layer of white coconut "meat," and a salty-sweet, watery liquid. It is one of the largest seeds in the world.
- Produced from the fruits, coconut oil is used for cooking and in a wide range of beauty products. Coconut "milk" and coconut water have become increasingly popular health drinks.

Map Point #21: Tidal Lagoon

- Selby Gardens' tidal lagoon was installed in 1997.
- This project addressed the need to re-establish coastal habitats along the Sarasota Bay front as well as to serve a storm water retention function. The lagoon intercepts and filters polluted storm water runoff, allowing it to percolate through vegetation and sediment before flowing into the bay.
- Lagoons are shallow coastal bodies of water separated from the ocean by barrier islands lying parallel to the shore. Tidal currents passing through inlets between the islands transport water into and out of the lagoons.
- Each tidal wetland has its own tidal pattern, which makes it unique.
- Tidal wetland species experience variations in salinity, oxygen levels, temperature, and wave energy. These species have adapted to these reliable tidal patterns.
- As you walk the shell path around the lagoon towards the bay, notice the bald cypress and its characteristic “knees” protruding from the soil. These knees or pneumatophores are cone-shaped extensions of the root system protruding from the ground. The knees are believed to function as the trees' means of obtaining oxygen for the roots during flooded conditions. They are also effective in tripping our guests so please be careful and enjoy!
- The lagoon is home to a variety of wildlife, including many water birds. This area regularly attracts great blue herons, snowy egrets, and yellow-crowned night herons.

Map Point #22: Hardwood Hammock

- Plant communities are classified or named based on their physical characteristics. The different species of plants present, the soil type, annual rainfall, and average annual temperature are all important characteristics used to identify a plant community.
- This area of the Downtown Sarasota campus was developed to mimic a hardwood hammock.
- The plants in this hammock community are able to tolerate periods of heavy rain followed by long dry periods.
- The soil is a well-drained mix of sand and organic material from fallen leaves and plant material decaying on the ground.
- The plants forming the canopy are dominated by hardwood trees that shade much of the area.
- The sub-canopy is composed of shade tolerant shrubs and terrestrial ferns. The ground cover can be sparse due to the dense shade of the canopy and sub-canopy.
- Vines are common, climbing to the tops of the canopy trees to reach sunlight.
- Epiphytes are also commonly found growing on the bark of the larger trees. If you look up, you may find ball moss (*Tillandsia recurvata*), Spanish moss (*Tillandsia usneoides*), Bartram's airplant (*Tillandsia bartramii*), cardinal airplant (*Tillandsia fasciculata*), giant airplant (*Tillandsia utriculata*), Florida butterfly orchid (*Encyclia tampensis*), mistletoe cactus (*Rhipsalis baccifera*), and resurrection fern (*Pleopeltis michauxiana*).
- Hammocks are important plant communities that provide food and shelter for many animals such as migrating birds, small mammals, snakes, and frogs.

Map Point #23: Bromeliad Garden

- The Bromeliad Garden demonstrates the diversity of these interesting plants. There are 3,700 known species, with 16 Florida natives.
- Some bromeliads are terrestrial—growing on the ground. About half of bromeliads are epiphytic—living upon other plants without doing harm to or taking nourishment from the host plant.
- Notice the characteristic rosette-shaped cups or “tanks” in the center of the plants. Here you will find water stored for the plant that is also enjoyed by a variety of insects, frogs, lizards, birds, and other small animals; up to 250 micro-organisms can live in one bromeliad tank.
- The pineapple is the fruit of a popular terrestrial species of bromeliad, *Ananas comosus*.
- Spanish moss is neither Spanish nor a moss! It is a bromeliad, and related to . . . pineapples! Look for tiny green flowers in late spring.
- Spanish moss and other epiphytes do not harm trees! Epiphytes may appear to overtake trees that are in decline or have sparse leaves because more sun and rain are available than in a tree with dense foliage.

Map Point #27: Butterfly Garden

- Butterflies are attracted by the many colorful plants in this garden, which provide nectar (their food).
- The leaves of many plants provide food for the caterpillars to grow and thrive.
- As butterflies travel from flower to flower, they help with pollination by transferring the pollen they encounter.
- Butterfly life cycle: egg – larva (caterpillar) – pupa (chrysalis) – adult (butterfly).
- Inside the butterfly enclosure you can see the stages of metamorphosis or transformation: caterpillars munching on leaves, climbing to the top of the enclosure, forming chrysalises, and emerging as butterflies. How exciting!
- The emergent butterflies are released back into the garden where they will lay their eggs and the cycle continues.
- Common sightings include: swallowtails, monarchs, fritillaries, sulphurs, skippers, and buckeyes.
- Ideally, a butterfly garden should be sunny, sheltered from the wind, and provide damp areas where the butterflies can find water and rocks or other hard surfaces on which to sun themselves.
- A butterfly has no mouth! It drinks through its proboscis—a tongue-like, coiled, tubular feeding structure that can reach inside the flowers.

Map Point #28: The Payne Mansion

- Many visitors believe that this stately home was that of Marie and William Selby, but in fact it was home to Anne and Christy Payne, the Selby's neighbors. It is now the Museum of Botany & the Arts, which hosts a variety of botanically themed art exhibitions each year.



Apply today's admission fee to an annual membership!

Membership offers you free admission year-round to both campuses plus free admission to hundreds of reciprocal gardens in the US and Canada. Inquire at the Welcome Center or purchase online at selby.org.

Visitor Tips

- Please exit through the Welcome Center where you entered.
- In case of lightning, please proceed to the nearest building.
- The outdoor gardens are watered with reclaimed water. Please do not drink.

WELCOME CENTER

- 1 Admissions/Ticketing
- 2 Garden Shop

RAINFOREST

- 3 Tropical Conservatory
- 4 Bonsai Exhibit
- 5 Cycad Display
- 6 Fern Garden
- 7 Koi Pond
- 8 Bamboo Garden
- 9 Banyan Grove
- 10 Ann Goldstein Children's Rainforest Garden

SELBY HOUSE

- 11 Kid's Corner (closes at 4:30 p.m.)
- 12 Selby House Café
- 13 Selby Memorial

DESERT

- 14 Succulent Garden

GREAT LAWN

- 15 Gazebo
- 16 Schimmel Wedding Pavilion

MANGROVES

- 17 Steinwachs Family Foundation Mangrove Walkway

PALMS

- 18 Tropical
- 19 Coastal

EVENT CENTER

- 20 Event Center

NATIVE FLORIDA

- 21 Tidal Lagoon
- 22 Hardwood Hammock

DISPLAY GARDENS

- 23 Bromeliad Garden
- 24 Fragrance Garden
- 25 Butterfly Garden

PAYNE MANSION

- 26 Museum of Botany & the Arts (closes at 4:30 p.m.)
- 27 The Amicus Learning Center



Selby Gardens programs are sponsored in part by the State of Florida, Department of State, Division of Cultural Affairs, and paid for in part by Sarasota County Tourist Development Tax revenue.