



S-Line Rail Link Biodiversity Corridor Field Guide

PRODUCED IN PARTNERSHIP WITH
THE CITY OF JACKSONVILLE

SUPPORTED WITH FUNDING BY



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Other versions of this guide and resources for parents and educators can be found on the Groundwork Jacksonville website, including:

- A full-color digital packet designed to be viewed on screens or tablets.
- Other activities on the Emerald Trail, including volunteering opportunities.

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This guide was developed in 2022 by Shanell Davis-Bryant & Alexia Maier for Groundwork Jacksonville.

*Diagrams and graphics in this guide marked "AM" were created by Alexia Maier.

FLORIDA STANDARDS:



The following Florida standards have been met or partially addressed by the content contained in this guide:

SC.7.E.6.6	SC.7.E.6.6	SC.912.L.17.8
SC.7.P.10.1	SC.7.N.1.5	SC.912.L.17.16
SS.8.G.4.5	SC.7.P.10.1	SC.912.L.17.10
SC.912.N.1.6	SC.8.N.2.2	SC.912.L.17.12
SC.912.N.1.7	SC.912.L.14.7	
SC.912.L.17.17	SC.912.L.14.53	
SC.912.N.1.7	SC.912.N.2.2	
SC.912.L.17.7	SC.912.L.14.10	
SC.912.L.17.15	SC.912.L.17.2	
SS.912.C.2.10	SC.912.N.1.2	
SP.PK12	SC.912.E.6.6	

ORGANIZING FIELD TRIPS & RENTING GEAR

To schedule a field trip to the S-Line with Groundwork Jacksonville, email at least 1 month in advance GroundworkJacksonville@gmail.com.

You can request supplies for a trash cleanup event from the City of Jacksonville by registering at <https://jaxnhorg.coj.net/#/>. If contacted at least 1 month in advance, you can request bags or borrow grabbers from Groundwork Jacksonville.

The bee vision camera (Kolari Vision) can be rented from Groundwork Jacksonville! Reserve the bee vision camera at least 1 month in advance. Availability varies based on demand.

There are no bathrooms present on the S-Line. When organizing your field trip, consider having bathroom breaks before or after your visit. Having lunch at a nearby location is a great option. Please reserve your spot at the chosen venue within a reasonable timeframe.

Herb & Spice Garden



An herb and spice garden can be a sensory experience. Make sure to pay attention to what you see, feel, and smell.

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Activity: Look around the herb and spice garden. There are many plants in the beds to observe. Which one is your favorite? Take a small piece of one of the plants. How does it feel? Is it fuzzy, smooth, or woody? Crush it between your fingertips. What does the herb or spice smell like? Flip forwards to the plant species list to identify the plant.

Flip to page 4 to find the Sensory Garden Workbook for more activities.

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Herbs and spices have many practical uses. Herbs are very aromatic and are often used in making food and drink. Many herbs and spices are used to make blends of herbal teas. Herbs are also used medicinally and in the making of perfumes. You may use some of the herbs in this garden to fragrance your home in the form of essential oils.

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Fun fact: Many herbs have properties that repel mosquitoes. Some farmers use herbal extracts to repel mosquitoes so that they do not bite their livestock. Recent research has found that lemongrass, which is present in the Herb and Spice Garden, is an effective mosquito repellent (Baldacchino et al., 2013).

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Take-Home Activity: Make crispy herb-roasted potatoes at home!

Ingredients:

- 2 lbs potatoes, washed and cut into quarters
- ¼ cup olive oil
- 4 cloves garlic, minced
- 1 tsp fresh rosemary, minced
- ½ tsp fresh thyme, minced
- Salt and pepper to taste

Directions:

Preheat oven to 425 degrees F. On a large sheet pan, toss the potatoes with olive oil and the all ingredients. Place the potatoes cut-side down and roast for 20 to 35 minutes, flipping halfway through. Cook until they are tender and brown. Bon appétit!

Herb & Spice Garden Sensory Workbook



When you first enter the area of the S-Line Biodiversity Corridor's Herb & Spice Garden, take a moment to be still. What is the first thing you hear? Describe that sound in the space below and how it makes you feel.

Next, check out the herb garden. What colors do you see? Are any of the plants flowering? If so, note the colors of the flowers in the space below.

Great job! Now, go to the garden beds and pick any herb or spice. Write down a few adjectives (descriptive words) to describe the texture of the stem and leaves of the plant in the box below.

Crush the leaves of the plant between your fingers to release the oils from the oil glands. How does the plant smell? Does the smell remind you of something familiar?

Great job! If you haven't yet, you can identify the herb or spice on the next page.

Plant Species in the Herb & Spice Garden



Salvia rosmarinus
Rosemary



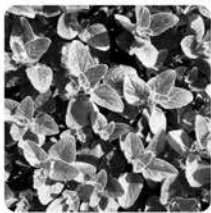
Allium schoenoprasum
Chives



Mentha spicata
Spearmint



Tagetes lucida
Mexican tarragon



Origanum vulgare
'Aureum'
Creeping oregano



Ficus carica
Fig tree



Cymbopogon
Lemongrass



"Herbs and Spices in the Florida Garden" by Salinas, Brown, & Stephens

Visit <https://edis.ifas.ufl.edu/publication/vh020> to read about:

- What herbs are
- How to prepare an herb garden
- Propagating herbs (making baby plants from cuttings!)
- Herbs and spices you can grow in Florida

Bioswales



After a heavy rainfall, where does all of the stormwater go? Depending on where you live, the path that water takes looks different. In urban areas, the density of development makes it more difficult for stormwater to be absorbed into soil and waterways; without the presence of stormwater management systems, urban areas can be prone to flooding. As stormwater runs over hard surfaces (like concrete,) it collects matter in its path– fertilizer from yards, oil from leaking cars, candy wrappers, and other trash littering our communities. Simply stated, bioswales add capacity to our sewer systems by holding and filtering stormwater. Bioswales are long troughs that have been dug into the earth for the purpose of slowing down, absorbing, and conveying stormwater from one area to another (Natural Resources Conservation Service, 2005). They help to manage the flow of water from heavy rains or other weather events, which prevents the water from accumulating in one place. This protects both the built environment and the habitats of nearby wildlife. When water flows into a bioswale, it carries with it pollution and contaminants, such as pesticides and litter. The plants that are present in bioswales, which are typically tall grasses native to the area, can act as filters for these materials. These plants also protect the surrounding environment from erosion, because they slow down fast-moving water.

Bioswales are great assets to communities. In addition to managing stormwater runoff and protecting surrounding areas, they can also be visually appealing. Similar to bioswales, some people plant rain gardens in depressions that hold water in their neighborhoods or yards that serve the same purpose. In some cases, flowering shrubs are planted. Bioswales can also reduce costs to communities, including cleanup, maintenance, and infrastructure costs (NRCS, 2005). These costs are reduced when the need for building, maintaining, and repairing structures such as curbs and gutters is eliminated.

Plant Species in the Bioswale



Iris versicolor
Blue Flag Iris

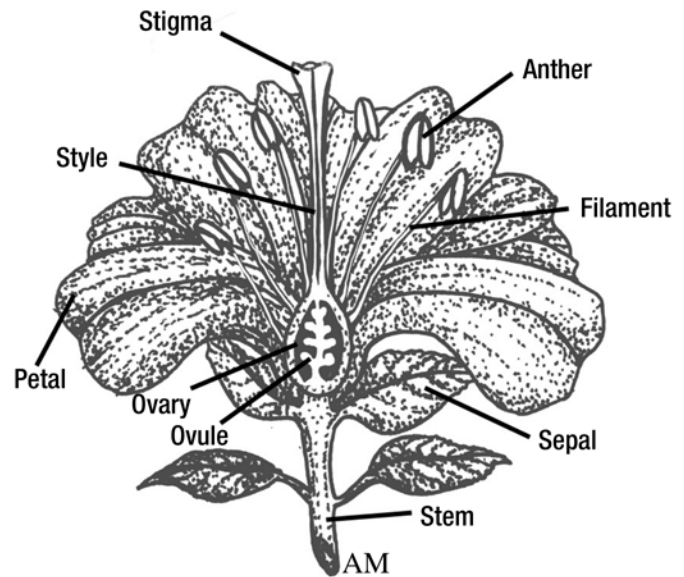


Sparina bakeri
Sand Cordgrass



What is pollination?

Pollination is a process that occurs when grains of pollen are moved from the male anther part of a flower to the female stigma part of a flower. This is what allows plants to create offspring (United States Forest Service, n.d.-b). For some plants, this means that pollination must occur for them to make seeds, fruits, or saplings. For a plant to produce offspring, the pollen that the stigma receives has to be from the same species of plant. A species is a group of plants or animals that are similar and can produce young plants or animals (National Geographic Society, 2019).



What are pollinators?

A pollinator is any organism that aids in the movement of pollen from the anther to the stigma of a flower (National Park Service, 2018). Pollinators collect pollen from angiosperms, or, plants that produce flowers. Many organisms assist in pollination, such as bees, butterflies, birds, wasps, moths, and even bats. There are pollinators, like bees, that collect pollen intentionally (NPS, 2018). Other pollinators such as birds and butterflies unintentionally collect pollen when they fly from flower to flower to drink nectar. The pollen sticks to the bodies of pollinators and rubs off on the stigma of other flowers.

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Fun fact: There are over three hundred species of bees native to the State of Florida (Florida Department of Agriculture and Consumer Services, n.d.).

Plant Species in the Pollinator Garden



Salvia rosmarinus
Coontie



Tickseed, C. leavenworthii
Coreopsis



Tradesantia ohiensis
Spiderwort



Tripsacum floridiana
Dwarf fakahatchee grass



Mimosa strigillosa
Sunshine mimosa



Conradina grandiflora
False rosemary



Tripsacum dactyloides
Fakahatchee grass



Yucca filamentosa
Yucca



Ulmus parvifolia
Chinese elm

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There are four primary groups of plants that are found on land, like angiosperms! There are also bryophytes, which are non-flowering plants, like mosses. Gymnosperms have unprotected fruits or ovaries, like the pine trees that drop pinecones! Plants with spores, however, are pteridophytes. One example of plants that are pteridophytes are ferns.

How to Build a Bee Hotel



You may have noticed painted boxes around the S-Line Biodiversity Corridor. These are bee hotels! You can build a bee hotel at home to attract pollinators to your family's garden for flowers and vegetables.

Step 1:

There are a few materials you will need in order to build your bee hotel.

- A container with an open side. This can be anything from a box to a can. Consider if it is made from a material that will last outdoors.
- Tubes. These can be dried bamboo reeds, paper straws, or rolled newspaper.
- Stems. You can use plant materials from many plants, such as lantana. If you need to trim a shrub, this is a good time!
- Fastening. You can use almost any type of string or tie.
- A tool to cut your tubes with, such as scissors. Consider what tool will be useful for cutting your chosen material, and have an adult present when using sharp cutting tools.

Step 2:

Make a small hole in the back of your house near the top. Thread your fastening through so that you can hang your bee hotel.



Step 3:

Place your tubes and stems horizontally inside the bee hotel. Pack them in until they fit snugly, but not too tight. Make sure to carefully cut them so that they end around an inch away from the entrance to your container so the inside is protected!

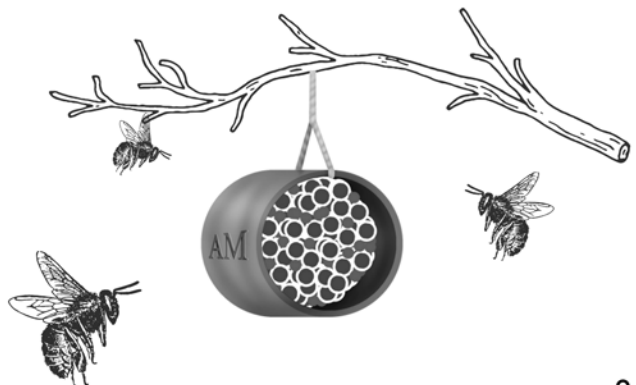


Step 5:

Hang your bee hotel at least 3 to 6 feet above the ground. A tree branch is a great spot!

Step 6:

Maintain your bee hotel by replacing your tubes and stems between seasons. (WikiHow Contributors, 2022).



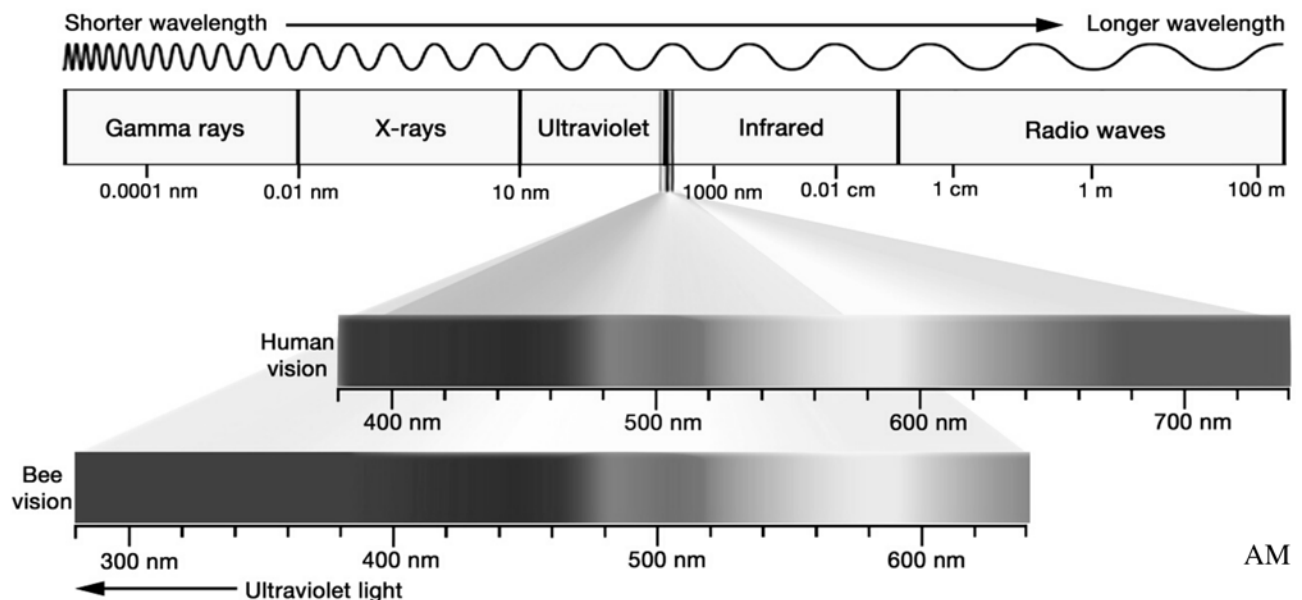
Seeing Like a Bee



What do bees see?

The colors an organism sees are determined by the wavelengths of the light and the organism's photoreceptors. While humans see light with wavelengths of around 390 to 750 nanometers in length, bees see from around 300 to 650 nanometers (Shipman, 2011). This allows bees to see other types of light, including ultraviolet light. Ultraviolet light is a type of electromagnetic radiation that possesses wavelengths of light that are too short to be detected by human eyes. Flowers have patterns only visible on the UV spectrum, which helps a bee to know where to land on a flower to get nectar. Bees are also able to see polarized light, or waves of light that only travel in one direction (Kraft et al., 2011). Using the uni-directional nature of polarized light, bees can remember which direction they need to travel to get back home to their hive. Bees are also able to communicate to other bees where sources of food are using the direction of polarized light in comparison to the food source's distance from the sun.

Approximate Differences in Vision on the Electromagnetic Spectrum





How do we know?

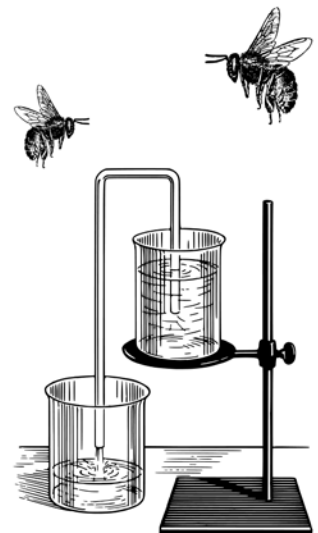
The study of how bees see originated in 1914 when Karl von Frisch observed that the petals of flowers pollinated by bees had such vivid colors, which he thought would only be useful for reproduction if bees had color vision (Cornell University, n.d.). To find out what colors bees were attracted to, he put colored papers under dishes filled with a sugar solution. After observing the behavior of the bees, he realized that they ignored red paper, while they visited the blue paper even when there was no sugar solution present. Frisch believed this meant bees could distinguish between the colors red and blue, but later it would be discovered that bees cannot see red, which has too long of a wavelength for their photoreceptors to sense (Cornell University, n.d.). He repeated the experiments utilizing color paper to confirm that bees could see orange, yellow, green, and violet, but not red. Another researcher, Alfred Kuhn, later tested if the bees could see ultraviolet light by splitting light with a prism, also utilizing paper squares of different colors in his experiments. Bees still pollinate red flowers—but only if they have ultraviolet patterns that attract the bees. The reddish colors seen in “bee vision” photographs contained within this guide indicate patterns of ultraviolet light.

The angle at which polarized light travels changes throughout the day as the sun moves across the sky; bees use this type of light to navigate. Bees dance to communicate to other bees where food sources are in relation to the direction of polarized light, and the direction of the dance changes throughout the day (Kraft, 2011). This is how we know that bees have a concept of time, and are able to keep track of it.

The only way we know how bees see is because of scientific inquiry, which consists of:

- 1) Formulating questions that can be answered by science
- 2) Constructing an investigation of those questions
- 3) Collecting the appropriate data
- 4) Evaluating the meaning of the data
- 5) Communicating the results of your evaluation

Coming up with questions, experiments, and interpretations of data are all creative processes. Let your creativity shine!



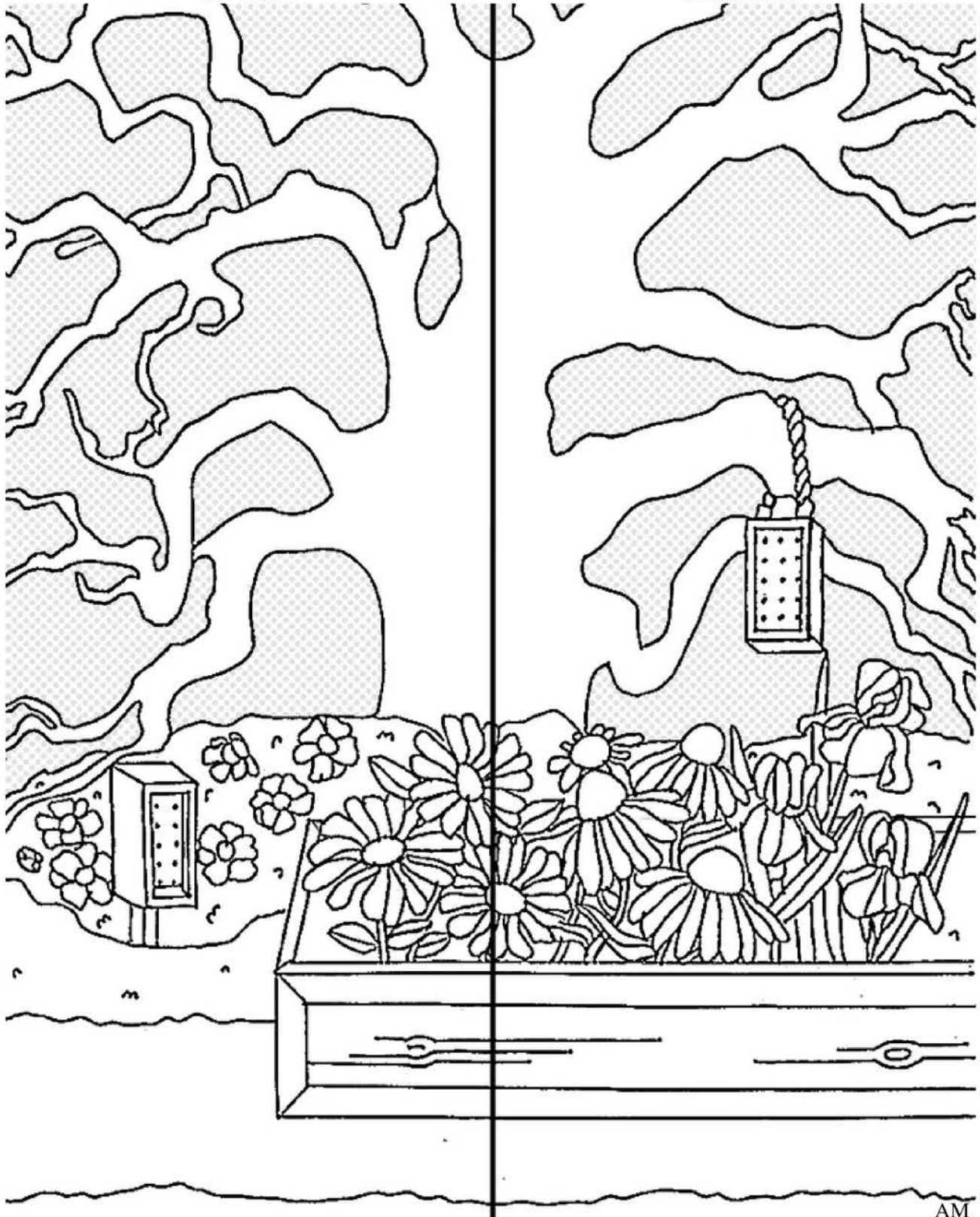
Seeing Like a Bee Coloring Workbook



Visit bit.ly/groundworkbeevision to view comparisons of human and bee vision. Color this page to represent humans and bees see differently!

Bee Vision

Human Vision



Pollinator Garden Workbook



Are the flowers blooming in the pollinator garden during your visit? If they are, take part in this activity! Refer to the diagram of the parts of a flower on page __ of this guide.

The parts of a flower are similar to human organs; their structure relates to their function. Take a moment to select a flower from the pollinator garden. Flowers with a similar shape to the one displayed on the diagram will make this activity easier, but you may challenge yourself by using a flower of a different shape!

A) First, let's test your knowledge: circle the classification of plants that flowering plants belong to:

bryophytes

pteridophytes

gymnosperms

angiosperms

B) Now, locate the anther of the flower you are observing in the Pollinator Garden. Do you notice anything about the stamen that may give you a clue to its function? What is it covered in? Write what you think in the space below.

C) Locate the pistil and ovary of the flower. These parts of the flower have important functions for plants whose flowers eventually become fruits. Can you guess what their functions are? You may want to refer to what you know about human reproductive anatomy when formulating your answer. Write it in the space below.

Great job! Find out the answers on next page.

Pollinator Garden Workbook Answers

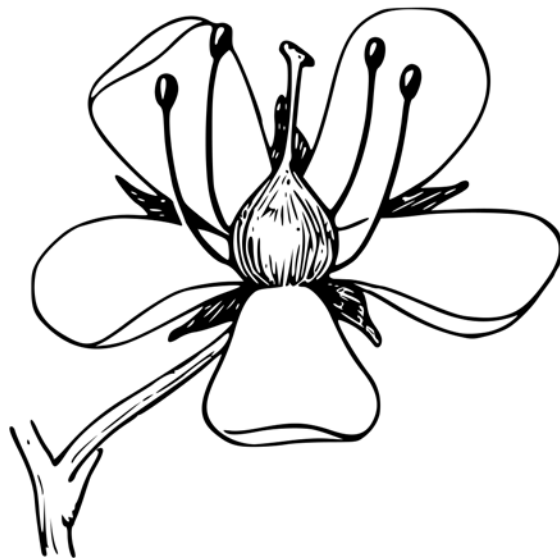


A) If you chose angiosperms, you would be correct! The word angiosperm comes from two Greek words: angeion, which means “vessel,” and sperma, which means “seed.” This makes sense when we look at flowers, especially sunflowers, who almost look like a fancy plate full of seeds.

B) The anther of the flower is where the stamen are, which produce pollen!

C) The pistil is where the ovules of the flower are produced. The ovary of the flower is the base of the style, which holds the stigma on top. An ovule will mature to become a seed, and the ovary matures into a fruit! These parts of the flower can be related to human anatomy because the human ovary releases eggs that become children if they are fertilized. For many flowering plants, pollination is the process that leads to fertilization and allows plants to multiply.

BONUS: Can you label any of the parts of a flower from memory? Try it out, here on the parts that you see! Hint: are any of the organs you know of not visible, here?



Stormwater Ponds



Retention vs Detention

Stormwater retention ponds store water throughout the year and gradually release it after rainfall occurs (Laramie County Conservation District, n.d.). The original purpose of stormwater ponds was to prevent flooding by storing water. More recently, retention ponds have found a new purpose: reducing pollution. Pollutants are removed by biotic (living,) and abiotic (non-living,) components of ponds through physical, chemical, and biological processes. When pollutants settle down to the bottom of a retention pond, they are eventually mixed in with and covered by sediments. Nutrients from stormwater help to feed the aquatic plants that act as a filter for pollutants. Microorganisms that live among these plants break down the organic matter of pollutants into usable material for other living organisms. The leftover material becomes sediment. Some non-organic matter undergoes the process of oxidation, which occurs when atoms in a material react with oxygen.

What are detention ponds? Detention ponds hold water for temporary periods before it goes downstream (Laramie County Conservation District, n.d.). Detention ponds are different from retention ponds because they do not hold water throughout the year. While detention ponds do not hold water long enough for materials to be broken down through chemical and biological processes, they typically hold water long enough that pollutants can settle at the bottom before the water moves on to other water bodies, like natural streams. The storage and release of water also helps to protect surrounding areas and streams from erosion. Like natural ponds, man-made ponds become a part of the ecosystem. Wildlife can use stormwater retention ponds in the same way that they do natural ponds. Man-made bodies of water also function to protect the biodiversity of plants, animals, and microorganisms as people continue to alter Florida's landscape. Because human development changes the path of stormwater runoff, the integration of stormwater management systems protects native wildlife from habitat loss resulting from flooding or other water damage.

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While people began building urban stormwater management systems as far back as 3500 BCE (over five thousand years ago,) the management of stormwater wasn't legally required in Florida until 1982 (Betrand-Krajewski, 2021; City of Jacksonville, n.d.-b).

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Stormwater Pond Planting

Stormwater pond planting is an important way to ensure that stormwater ponds reach their fullest potential. Without sufficient planting, the pond may fall short in contributing to its ecosystem in the form of reducing pollution, absorbing nutrients, and providing habitat for animals.

Stormwater Ponds



Stormwater Pond Planting (Continued)

Many factors must be considered for successful stormwater planting. Plants have different requirements for life; some like drier soil, some prefer wet soil, and some only live submerged in water. Stormwater pond planting requires a lot of planning, and consideration of which plants to place right along the water, and which to plant further away from the water. In addition, the size of the plants must be considered. Taller plants should be planted further from the pond, and shorter plants should be planted closer.

Layering the plants from short to tall prevents shade from being cast onto the pond so that aquatic plant life receives light. It also helps to preserve the view of the pond by keeping taller plants further away from the pond's edge. Stormwater ponds are located on a downward slope compared to their surrounding areas, so a tree planted closer to the pond and lower to the ground would block the pond from view. Ideally, planting contributes to both the health and aesthetic beauty of a community.

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Stormwater retention ponds are becoming increasingly important as urban areas in Florida continue to grow and develop - a process called urbanization. As the population of an area becomes more dense, humans change the physical environment of the area through building and other activities. Changes in the landscape of an area affect the path of stormwater runoff, which emphasizes the importance of stormwater management systems' role in determining the path of water through these urbanized areas. Not only do stormwater ponds protect urban areas from flooding and reduce pollution, but they also add value to communities.

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The Urban Water Cycle

The water cycle--also referred to as the hydrologic cycle--consists of three major processes: evaporation, condensation, and precipitation. The urban water cycle must consider the additional processes water must undergo in a setting where it cannot soak into the ground as much as it normally would in a natural environment. Infiltration and runoff become important in the urban water cycle, especially in terms of how effective the stormwater management of the area is. Instead of soaking into the soil of an area, stormwater in urban areas makes its way into stormwater management systems.

For an in-depth explanation of the terms and concept above within the context of stormwater management, visit: https://www.teachengineering.org/lessons/view/usf_stormwater_lesson01

Using the iNaturalist App



Use the iNaturalist app to identify different species of plants in the S-Line Biodiversity Corridor and around your home!

The iNaturalist app can help you to identify both plants and animals. In the app, you can keep a record of the various species you encounter and record your observations. In addition, you can use the app to share information about your area's biodiversity with scientists and researchers. The researchers and scientists can use data collected from the app in their research. These researchers may publish papers that contribute to the development of scientific knowledge, or lead to policy that protects the natural biodiversity of your region.

Visit [iNaturalist.org](https://www.inaturalist.org) or download the app directly from the Apple App Store or Google Play.

Join Groundwork Jacksonville's iNaturalist Project for the S-Line Biodiversity Corridor!

Did you know that there is an iNaturalist collection for the Biodiversity Corridor? Follow the steps below to contribute!

- 1) Download the iNaturalist App.
- 2) Under the "projects" tab, search "S-Line Biodiversity Corridor."
- 3) Join the project.
- 4) Record your observations at the S-Line Biodiversity Corridor!
- 5) Make sure that your observations are viewable for others by setting the geoprivacy function to "open."

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Planting an abundance of native plants reduces the ability of non-native invasive plants to proliferate. This protects native species of plants and the area's unique biodiversity.

Brownfields



A brownfield is a property where “the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant,” as defined by the Environmental Protection Agency (2017). When we think of recycling, we often think of things like paper, plastic, and metal. Another resource that can be recycled and used again is land! The process of revitalizing brownfields can be complicated by the land’s past uses, such as if it once housed a factory that disposed of toxic by-products incorrectly and contaminated the surrounding soil. Depending on the land’s history, the property can sometimes require the removal of soil or water contaminants before it can be repurposed.

There are many advantages to brownfield redevelopment. Land that was once a ruin can become an asset to its surrounding communities. One of the major barriers to brownfield redevelopment is cost; the process of removing contaminants from water and soil can be incredibly expensive. Thankfully, the Environmental Protection Agency awards grants toward brownfield cleanup initiatives. Over \$920 million has been awarded since 1995 Environmental Protection Agency (2017). According to the EPA, this activity has created over 100,000 new jobs and increased the property values in some areas surrounding brownfields by 5% to 13%. In 2015 alone, 10 grants were awarded for brownfield remediation in Florida (Environmental Protection Agency, 2017).

The S-Line Urban Greenway became Jacksonville’s first space to be dedicated for use as an urban bike path. The S-Line Biodiversity Corridor is an example of a brownfield that is being repurposed and revitalized. It is considered a brownfield because the land was once used as a railway. Revitalization of the S-Line, including the creation of the Biodiversity Corridor, provides the community with a place to enjoy the outdoors, grow, and learn.

Get involved!

There are many opportunities to get involved with the reclaiming of your local community. One of those opportunities would be supporting Groundwork Jacksonville, which oversees and maintains projects such as the redemption of the S-Line brownfield. Volunteers at Groundwork Jacksonville assist in service activities including creek cleanups and S-Line Biodiversity Corridor maintenance.

You can find more information about opportunities to volunteer at groundworkjacksonville.org/support/volunteer

Hogans Creek

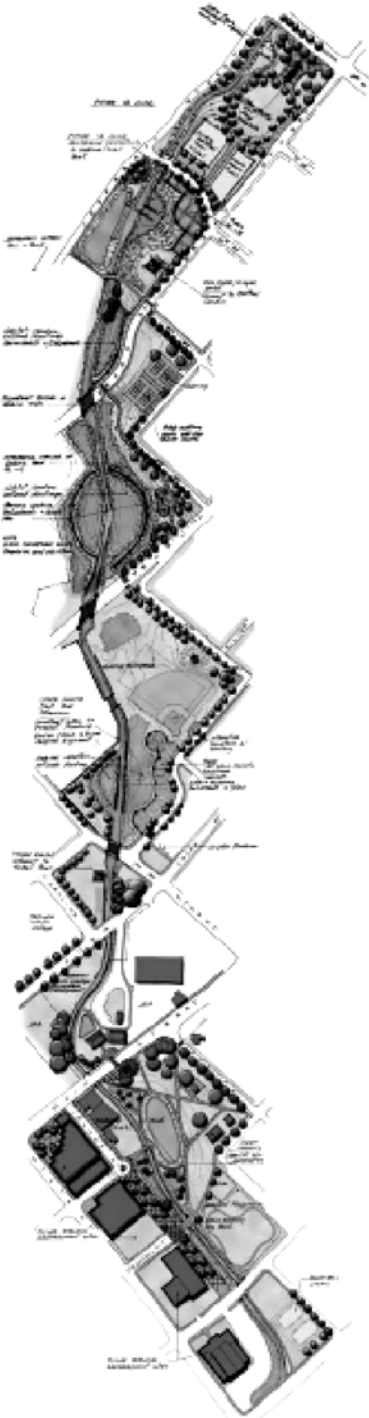


Hogans Creek flows from just north of the S-Line to the St. Johns River, near the stadium district. The creek played an important role in Jacksonville's early history, preventing the spread of the Great Fire that began at a downtown factory in 1901 to surrounding areas.

Hogans Creek existed as a polluted stream until 1927 when an election was held to decide if funds would be dedicated to the improvement of the creek (Jacksonville Historical Society, n.d.). Runoff from surrounding industries polluted the creek and often resulted in flooding. The election resulted in \$500,000—estimated to be around \$8,000,000 today—being set aside to engineer an underground duct for the creek. After two years of no progress, engineers claimed the funds were insufficient for the size of the requested duct. As a result, Henry Klutho drafted new designs for the creek and brought on an engineer to help bring them to fruition. The new designs focused on using architecture to improve the area. Concrete was used to add walls to the edges of the creek, but was also used to add aesthetic value in the form of railings and obelisks. A pump house was added downstream to maintain the water level (Jacksonville Historical Society, n.d.).

Hogans Creek runs through Springfield Park, which once contained a lake and many ornate street lights, which are now gone. In the 1960s, the lake was filled with the city's waste (Jacksonville Historical Society, n.d.). Despite the dreams, time, and money that had been dedicated to making Hogans Creek a place for the community to gather and enjoy the park's beauty, it had reverted back to an eyesore within only a few years.

As part of the master plan for the Emerald Trail, Groundwork Jacksonville is partnering with the City of Jacksonville, and the design/engineering firm Halff to restore Hogans Creek. The Hogans Creek Restoration plan has a goal of reducing flooding, improving water quality, and providing access to recreational opportunities along the creek. The restoration will make it possible for the community to enjoy the creek again and participate in fishing, kayaking, and other activities. Klutho's vision to make Hogans Creek a gem of Jacksonville will soon become a lasting reality. While Klutho tried to use architecture to direct the water, the creek's new revival will restore the creek's natural flow.



Above: *Hogans Creek Master Plan.*
Groundwork Jacksonville.

Trash Cleanup



The first step to participating in cleaning up your community is knowing how to do so safely.

When cleaning up trash and litter, please use the following recommendations as a guide:

What to wear

- Closed-toes shoes with thick soles
- Sun protection
- Bug spray
- Gloves
- Pants and long-sleeved shirts
- Consider the location of the cleanup. If near a roadway, wear bright-colored clothing or safety vests

Safety Behaviors

- Stay hydrated. Keep water nearby or on your person
- Have an adult present if you are under the age of 18
- Use the "buddy system;" stay with a friend or in a group
- Pay attention to your surroundings
- Bag the litter and do not over-fill a single bag
- Pay attention to what you are collecting. Do not pick up sharp objects like needles. Also avoid animals and questionable materials, such as unidentifiable objects
- Do not move heavy objects alone
- Stay out of areas with heavy vegetation, wet areas, or bodies of water

You Can Borrow Gear!

You can reserve materials for your trash cleanup activities on the S-Line Biodiversity Corridor by contacting Groundwork Jacksonville at groundworkjacksonville@gmail.com at least 1 month in advance. There are trash grabbers available for up to 20 people to use at a time. Groundwork Jacksonville can provide trash bags for the disposal of litter.

Get Volunteer Hours!

Did you know that you can get volunteer hours for school or other purposes by participating in trash cleanups at the S-Line Biodiversity Corridor?

For more information and directions on how to sign up, visit:
<https://www.groundworkjacksonville.org/support/volunteer/>

North Florida Wildlife: You may spot these at the S-Line!



Trachemys scripta elegans
Red-eared slider



Picoides pubescens
Downy Woodpecker



Mycteria americana
Wood stork



Coluber constrictor
North American Racer



Thamnophis sirtalis
Eastern Garter Snake



Eudocimus albus
White Ibis



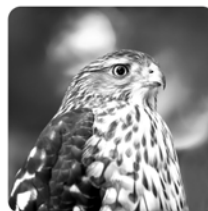
Ardea alba
Great Egret



Geothlypis trichas
Common Yellowthroat



Hyla cinerea
Green tree frog



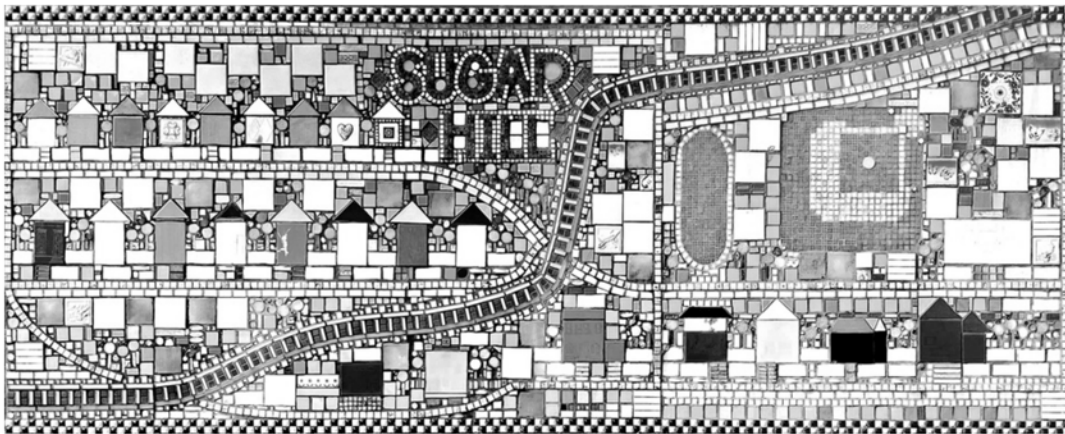
Accipiter cooperii
Cooper's Hawk

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The state of Florida has a very diverse ecosystem which is home to many species of animals. For more information on Florida's wildlife, visit:

<https://www.visitflorida.com/things-to-do/outdoors-and-nature/wildlife/>

The Sugar Hill Mosaic



“The Sugar Hill Mosaic is an important reminder of the contributions to our city by the African-American residents who once called it home. But, just as important, it celebrates our future as we work together to build the Emerald Necklace with its miles of trails, parks, public art, recreation and economic opportunity.” - Council Reginald Gaffney (Groundwork Jacksonville, 2019).

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The neighborhood of Sugar Hill was established in the 19th century and within a few decades, became a thriving middle-class community. By the early 20th century, Sugar Hill was known to be home to many wealthy African American professionals--entrepreneurs, doctors, lawyers, and pharmacists. The Ritz Theatre and St. Stephen’s African Methodist Church are both historic buildings that still stand today which give us a glimpse into Sugar Hill’s 19th and early-20th century state. In the 1950s, the Jacksonville Expressway, now I-95, was paved through the heart of Sugar Hill (Groundwork Jacksonville, 2019).

The Mosaic honors the history of Sugar Hill, as well as the present and future. It was created through the collaboration of Groundwork Jacksonville with Kate and Kenny Rouh of Rouxart. The Groundwork Jacksonville Green Team and other community volunteers were instrumental in bringing this mural to fruition.

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The full mosaic totals 96 feet in length!

For more information on the S-Line's public artwork installation and the donors that made this project possible, visit: <https://www.groundworkjacksonville.org/emerald-trail/public-art/>

Air Potatoes



ou may have noticed vines and potato-like bulbs on the ground during your visit to the S-Line Biodiversity Corridor; these are air potatoes! Well, they're not quite potatoes--they're called aerial bulbils. In North Florida, there are many native species of plants, but there are also plants present that have been introduced into the ecosystem. Plants can be introduced in a variety of ways, including for ornamental planting or agricultural practices. The air potato is an example of an introduced species that became invasive, meaning that the species is non-native and disrupts the local economy, environment, or human activities. Invasive species are often hard to remove from a geographic area because of their pervasiveness; many species produce a high volume of seeds and have root systems that travel long distances underground (U.S. Forest Service, n.d.-a). The air potato is a particularly fast-growing vine; it can grow eight inches in a single day (Frank, 2001). The bulbils of the air potato vine fall from the plant to the ground. After a period of dormancy, the bulbils sprout new vines in spring, allowing the plant to multiply.

The air potato, or *Dioscorea bulbifera*, is native to the continents of Asia and Africa (Overholt et al., 2003). The air potato was known to have been introduced to North America by the late 18th century but was introduced to Florida in the early 20th century (Gucker, 2009.) The plant has been cultivated for many reasons, including being for medicinal, ornamental, or its agricultural potential as a food crop. While the plant has been used medicinally and is sometimes edible, the air potato that has spread through Florida contains toxic compounds and should not be consumed (Frank, 2001).



Fig. 1: Airpotato leaf beetle-- "*ilioceris cheni*."



Fig. 2: Air potatoes on a banana leaf.

Air Potato Activity



Collect Air Potatoes!

With a friend or group, see how many air potatoes you can collect! You may use bags, preferably of the same size, or even your arms! Remember to follow the same safety guidelines as you would when doing any other type of cleanup (refer to page 23.)

After you have collected your air potatoes, count how many you have collected and make sure to high-five the person who collected the most!

Dispose of the air potatoes by delivering them to a nearby trash bin on the S-Line Biodiversity Corridor. By properly removing and disposing of the air potato, you are working to protect the surrounding area, including plant biodiversity, animal habitats, and the built environment.



The Fight Blight Initiative



"The Fight Blight initiative is working hard to combat and clean-up local neighborhoods with the help of engaged citizens. Blight threatens public safety, lowers property values and degrades quality of life." (City of Jacksonville, n.d.-a).

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Neighborhood Blight

Neighborhood blight is common in Jacksonville. You may recognize blight in a building that is deteriorating due to neglect. Blight occurs for a variety of reasons, many of which are social or economic in nature. An area can become blighted because of a lack of economic support, the presence of crime, shifts in the local economy, changes in land use, or abandonment by property owners. Blighted areas can become areas with high crime rates as a result of becoming less populous, as abandoned buildings or areas have the chance of becoming havens for criminal activity. Blighted areas also face economic challenges, such as businesses moving out, which lowers the amount of professional and recreational opportunities the area's residents have access to.

What can I do?

The City of Jacksonville has a few recommendations for fighting blight:

- Maintain your yard: Any landscaping, such as grass, properly trimmed. Grass over fifteen inches tall can present problems, such as pest infestations.
- Recycle: Properly dispose of recyclable materials.
- Dispose of garbage and waste: Reduce litter in your neighborhood by properly disposing of non-recyclable materials. Know what days trash and recycle are collected in your neighborhood.
- Properly dispose hazardous household waste: There are many hazardous materials that should not be placed in your curbside trash can for regular pickup. Materials such as paint and fireworks should be delivered to your local Hazardous Waste Facility.
 - E-waste: Materials such as old computer monitors and keyboards can be placed outside with regular trash, however, these cannot be recycled if they end up in a landfill.

The First Rule of Blight Club



Get Involved: Join the Blight Squad!

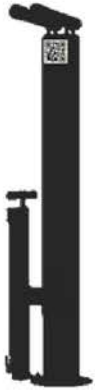
If you want to help combat blight in your neighborhood or the greater Jacksonville area, consider joining the Blight Squad.

There are many ways you can get involved. You can download the Blight Squad Pledge and print your Blight Squad Membership Card to begin fighting blight on your own. You can also ask the administration at your school or other institution to invite the JaxCan and the Blight Squad to visit for an educational opportunity. In addition, you can organize a clean-up in your community, or just with your friends.

For more information on any of the content of this page, visit: bit.ly/COJFightBlight. At the top, navigate to where you want to go by clicking on “Examples of Blight | How You Can Help | Join the Blight Squad ...”

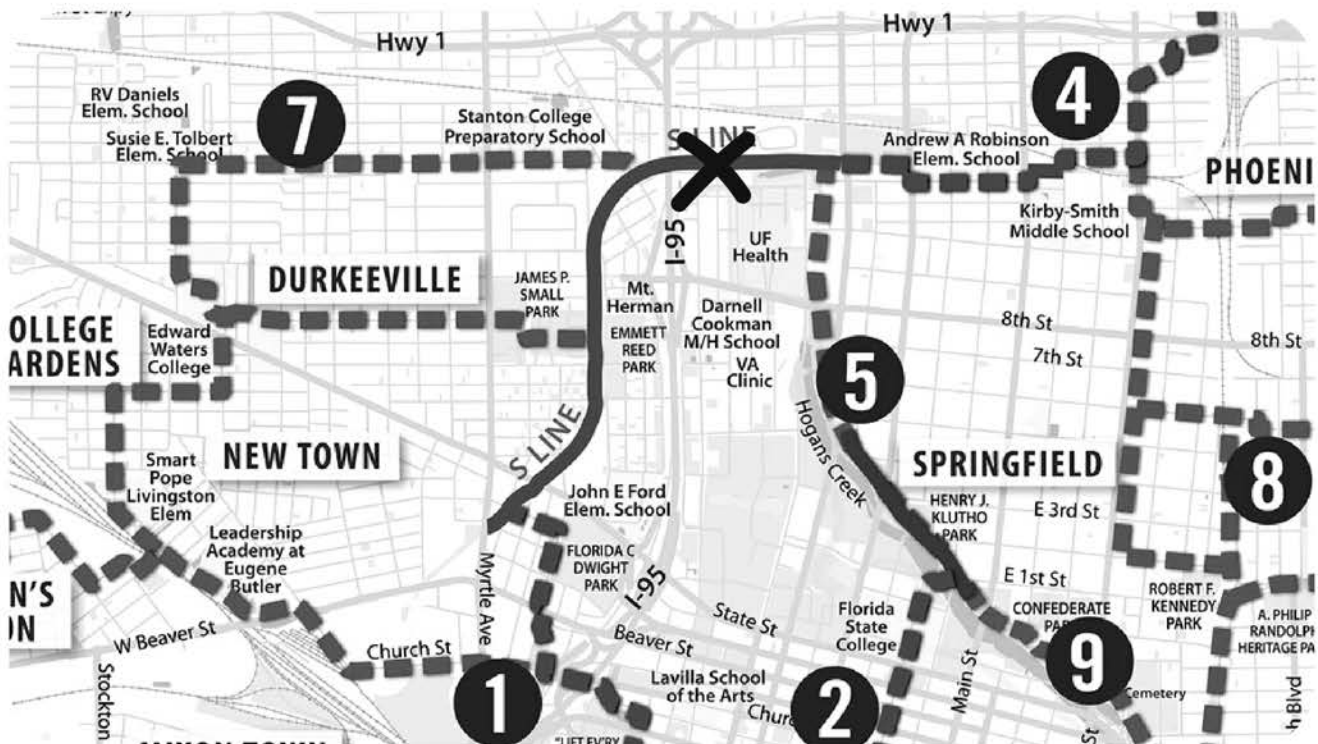
To Do:

The Bike Repair Station



Using the Bike Repair Station

Near the Herb and Spice Garden area beside the sidewalk that runs along N. Davis Street, there is a FixIt bike repair station. It is always safe to use stations and tools how they are intended. To access the directions on how to properly use the bike repair station, snap a photo of the QR code located near the top of the bike repair station.



The Emerald Trail, which is projected to be reach completion in 2029, will encompass 30 miles of trails, parks, and greenways.

The trail connects schools, parks, businesses, and neighborhoods. The Emerald Trail holds great potential to encourage social and economic development in Jacksonville, FL. The trail also aims to encourage the community to adopt healthy lifestyles, and to promote public safety.

To learn more about the Emerald Trail, visit: <https://www.groundworkjacksonville.org/emerald-trail/>

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