Wilderness Passport

Become a Nature Explorer and Discover Careers in Conservation!
Your Picture Here

Issuing Authority: Houston Wilderness

Month Day Year

Date Completed:

Month Day Year

Date Issued:

Name or School:

State

Country

Houston Wilderness Ecosystem I Live In:

First

Last

Name
At Houston Wilderness, we want you to visit and learn about nearby wilderness areas. Did you know that the Houston Wilderness region has 10 different ecosystems?

Each time you visit a different ecosystem, put a sticker on your passport showing that you were there, just like a real passport. To download stickers, please go to houstonwilderness.org/passport.

For GGQ schools and participants please go to www.greatgreenquest.org

Also throughout this passport you will find out the answers to these and other questions:

- What is the longest river that begins and ends in Texas?
- How many birds pass through the Columbia Bottomlands every year?
- What is the Attwater’s Prairie Chicken and what does “endangered” mean?
- What sort of environmental career can I have?
Next to each site is a letter (A-J) and a number (1-10). Refer to this map to get a general idea of where the site is located in the Greater Houston Area. Use the letters to go laterally across the map and then the number to go longitudinally.
My Discoveries

The coolest thing I saw: ____________________________
________________________________________________________________________________________
________________________________________________________________________________________

The weirdest thing I saw: __________________________
________________________________________________________________________________________
________________________________________________________________________________________

Something I did not know before: ________________
________________________________________________________________________________________
________________________________________________________________________________________

Best part of my visit: ____________________________
________________________________________________________________________________________
________________________________________________________________________________________

My favorite ecoregion: ____________________________
________________________________________________________________________________________
________________________________________________________________________________________

Did you know that Sea Center Texas has a “touch tank?” You can gently feel blue crabs, hermit crabs, stone crabs, snails, and even anemones.
My favorite thing I saw or did:

Careers in Conservation

Look for this section to find out more about “Green Jobs”!

Learn what types of environmental jobs exist and what sort of education and experience you need to get them!
You’ve heard of nurseries for babies – well, the marshes along the Texas gulf coast provide a nursery area for young fish and shellfish. Where freshwater from rivers meets saltwater from the Gulf of Mexico, you can find an amazing diversity of animals, from fish and oysters to shrimp and blue crabs.

Did you know that 90 percent of the commercial fish and shellfish caught in Galveston Bay and the Gulf of Mexico spend at least part of their lives in an estuary?

*Can you draw a food web that includes organisms that live in bays and estuaries?*
Did you know that Galveston Bay is the second most productive estuary in the country? You can visit this unique ecosystem at **Galveston Island State Park “Bay Side”** and see many animals including birds, fish, and marsh rabbits.

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**Careers in Conservation - Environmental Educator:**

**What Do They Do?** If you love the environment, why not share that love with the next generation by becoming an environmental educator? You could teach eager minds all about the importance of the environment.

**How Do I Get This Job?** To start educating others about the environment, you will need a college degree, preferably in environmental science. If you want to teach younger kids, you can stop there, but to teach at the college level you will need to get a Ph.D.
The brown ribbons of water winding through neighborhoods and along city streets may look dirty, but they’re actually carrying sand, soil and nutrients down to their ultimate destination: the bays and estuaries.

These waterways also have a number of creatures in them (yes, fish do live in these waters) and they provide homes and food sources to many wild creatures, including opossums, raccoons, armadillos and alligators. They also provide a needed wet place for toads and dragonflies that eat millions of mosquitoes!
Bayou Wilderness
sites to visit:

1. **Armand Bayou (G-6)***
   - Nature Center
   - 8500 Bay Area Blvd. Pasadena, TX 77258
   - www.abnc.org/
   - (281) 474-2551

2. **Arthur Storey Park (G-5)***
   - 7400 West Sam Houston Pkwy S, Houston, TX 77072
   - www.pct3/parks/storey-park
   - (281) 496-2177

3. **Buffalo Bayou Park (F-5)***
   - 1800-3600 Allen Parkway/Memorial Drive
   - www.buffalobayou.org/
   - (713) 752-0314

4. **Eddie V. Gray (F-6)***
   - Wetlands Center
   - 1724 Market Street Baytown, TX 77520
   - (281) 420-7128

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**Careers in Conservation - Horticulturist:**

**What Do They Do?** As a horticulturist working in the environmental field, you will most likely work to collect native seeds and grow them in a greenhouse until they can be planted, thereby helping to restore endangered and native plants.

**How Do I Get This Job?** To become a Horticulturist, you need a degree in either horticulture or botany, and a love for growing and working with plants.

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**Did you know that the Houston Arboretum and Nature Center participates in the Texas Amphibian Watch?** This program is used to count the number of frogs and toads in Texas. Volunteers are trained to listen to amphibian calls and record them.
Bayou Wilderness
sites to visit:

5 Edith L. Moore (F-7) □
Nature Sanctuary
440 Wilchester Blvd, Houston, TX 77079
http://houstonaudubon.org/sanctuaries/edith-moore/edith-moore.html

6 Houston Arboretum (F-5) □
& Nature Center
4501 Woodway Dr, Houston, TX 77024
http://houstonarboretum.org/

7 Jesse H. Jones Park (E-5) □
& Nature Center
20634 Kenswick Drive Humble, TX 77338
www.hcp4.net/jones/

8 Keith Wiess Park (F-5) □
12300 Aldine Westfield Rd. Houston, TX 77093
www.houstontx.gov/parks/parksites/keithwiesspark.html

9 MacGregor Park (G-5) □
5225 Calhoun Houston, Texas 77021
www.houstontx.gov/parks/parksites/macgregorpark.html

10 Mason Park (G-6) □
541 South 75th Street Houston, Texas 77023
www.houstontx.gov/parks/parksites/masonpark.html
Bayou Wilderness
sites to visit:

11 Mercer Arboretum (E-5)
& Botanic Gardens
22306 Aldine Westfield Road Humble, TX 77338
www.hep4.net/mercer/

• (281) 274-4160

12 Memorial Park (F-5)
6501 Memorial Drive Houston, TX 77007
www.memorialparkconservancy.org/visit-memorial-park.html

• (713) 863-8403

13 Sims Bayou Urban (G-6)
Nature Center
3997 River Drive Houston, TX 77017
http://houstonaudubon.org/sanctuaries/sims-bayou.html

• (713) 640-2407

14 Shangri La Botanical (E-9)
Gardens & Nature Center
2111 West Park Avenue Orange, Texas 77630
starkculturalvenues.org/shangrilagardens/

• (409) 670-9113

15 Terry Hershey Park (F-5)
15200 Memorial Drive, Houston, TX
www.terryhersheypark.org

• (281) 496-2177

16 Tony Marron Park (G-5)
808 N. York Street Houston, Texas 77003
www.buffalobayou.org/visit/destination/neighboring-parks

• (713) 752-0314
Did you know that the Houston area used to be home to many bison and tallgrasses? When settlers arrived, most of Houston had prairie grasses taller than a 6-foot person. Today, less than 1 percent of the original coastal prairie still exists in pristine condition. These areas are very important to migrating birds and are home to more than 1,000 plant species, including big bluestem and little bluestem.

*Can you see the blue in little bluestem?*

*Can you describe the relationship between the Native Americans and the bison?*
Prairies sites to visit:

1. **Attwater Prairie Chicken NWR (G-3)** • (979) 234-3021
   FM 3013 Eagle Lake, TX 77434
   www.fws.gov/refuge/Attwater_Prairie_Chicken/

2. **George Ranch Historical Park (G-5)** • (281) 343-0218
   10215 FM 762 Richmond, TX 77469
   http://www.georgeranch.org

3. **Texas City Prairie Preserve (H-6)** • (409) 941-9114
   4702 Highway 146 North Texas City, TX 77590
   www.nature.org/ourinitiatives/regions/northamerica/unitedstates/texas/placesweprotect/texas-city-prairie-preserve.xml

4. **Katy Prairie Preserve (E-4)** • (713) 523-6135
   Site 100 on Upper TX Coast Birding,
   Trail - west of Nelson Farm Preserve 28411 Sharp Road Katy, TX

5. **Sheldon Lake State Park (F-6)** • (281) 456-2800
   14140 Garrett Rd. Houston, TX 77044
   www.tpwd.state.tx.us/state-parks/sheldon-lake

Careers in Conservation - Park Director:

**What Do They Do?** The Park Director is in charge of supervising the day-to-day operations of a park, as well as all of the other employees.

**How Do I Get This Job?** To become a Park Director, you will need a bachelors degree or higher, preferably in a related field such as parks and recreation management. In addition most park directors gain experience by working a different job at a park until they are promoted.

Did you know that pocket prairies are popping up in Houston’s urban core? The **M.D. Anderson Pocket Prairie** in the Texas Medical Center (TMC) provides an excellent wildlife habitat in the city and also presents educational and recreational opportunities that benefit patients and visitors of the TMC.
The Trinity River area is home to many large hardwood trees, including cypress and tupelo. These trees act as a very important flood buffer. When rains make the Trinity River grow wider, this area absorbs the floods, holding back water with the roots of the trees and plants that grow along its shores.

Did you know that cypress trees have adaptive features called “knees”?

*Can you think of ways “knees” might help the tree survive?*
Trinity Bottomlands sites to visit:

1. Trinity River (E-7)
   National Wildlife Refuge
   601 FM 1011 Liberty, TX 77575
   Coordinates: (30.098288, -94.765547)
   www.fws.gov/refuge/trinity_river/
   • (936) 336-9786

2. USACE Wallisville (F-7)
   Lake Project
   FM 563 Wallisville, TX 77597-0036
   www.swg.usace.army.mil/Locations/WallisvilleLakeProjectOffice.aspx
   • (409) 389-2285

“Did you know that the Monarch Butterfly is at risk of becoming endangered? Pesticide use and a changing climate have decimated our habitat. But, you can help save my species by building a pollinator garden!”

Careers in Conservation - Wildlife Photographer:

What Do They Do? Wildlife photographers get up close and personal with nature to photograph wildlife in their natural habitats.

How Do I Get This Job? To become a wildlife photographer, you will need to be great with a camera and able to take high quality photographs. Also, you will need to have a love of wildlife, and a lot of patience, because it can take hours to get the perfect shot.

Did you know that half of all the bird species identified in the United States live in or migrate through the Trinity and Columbia Bottomlands?
In the thick, green woods known as the Big Thicket, you can find orchids and insect-eating plants! The Big Thicket is a fragile ecosystem where Southeastern swamp meets Eastern hardwood forest, Midwestern prairie and elements of the Southwestern desert landscape. The diversity of plants here attracts many migrating songbirds.

Can you name four kinds of insect-eating plants found in the Big Thicket?

What sorts of trees provide the best habitat for songbirds?
Did you know that Big Thicket National Preserve has over 45 miles of hiking trails? Did you also know that along these trails live several species of carnivorous plants? But don’t worry, these plants prefer insects to humans!

Careers in Conservation - Fire Management Officer:

**What Do They Do?** Fire is a natural part of many ecosystems, so sometimes wildlife refuges find themselves having to prescribe burns. A fire management officer helps to plan these burns and also fights damaging wildfires.

**How Do I Get This Job?** You may not need a college degree to get this job, but it has its own set of difficult requirements. You must be physically fit and willing to work outdoors, travel, work in a team, and stay in a tent for up to two weeks at a time.
The Piney Woods are named for loblolly, shortleaf and longleaf pines. Mostly found in East Texas, these trees stretch all the way west to Montgomery County, just north of Houston. Longleaf pines were almost lost due to logging and lack of fire, but thanks to new forestry methods, they will hopefully make a return.

How does the use of controlled fires help longleaf pines grow back?

How does fire affect the other organisms in this ecosystem?
Did you know that the endangered red-cockaded woodpecker is the only American bird to carve out its nesting cavity in a living pine tree? Red-cockaded woodpeckers prefer to nest in longleaf pines over 100 years old, but will adapt to other pine species.
Every year, almost 30 million migratory birds stop in this area along the Brazos, Colorado and San Bernard rivers. The old trees in these wet, low-lying and insect-rich forests help provide rest and food for the birds.

Did you know that the Colorado River flows almost 900 river miles and drops roughly 3,000 feet from the river’s origin in Dawson County to Matagorda Bay? It is the longest river that has its entire course in Texas.

*Can you trace the length of the Colorado River on a map?*
Columbia Bottomlands
sites to visit:

1. Bates M. Allen Park (H-4) • (281) 835-9419
   630 Charlie Roberts Ln, Kendleton, TX 77451
   www.fortbendcountytx.gov/index.aspx?page=381

2. Brazos Bend State Park (G-5) • (979) 553-5101
   21901 FM 762 Needville, TX 77461
   www.tpwd.state.tx.us/state-parks/brazos-bend

3. Matagorda County (I-4) • (979) 245-3336
   Birding Nature Center
   1025 State Highway 35 S Bay City, TX 77414
   www.mcbnc.org/

4. San Bernard (J-5) • (979) 964-3639
   National Wildlife Refuge
   6801 CR 306 Brazoria, TX 77515
   www.fws.gov/refuge/san_bernard/

5. Seabourne Creek Nature Park (G-5) • (832) 595-3960
   3831 State Highway 36 Rosenberg, Texas
   http://rosenbergtx.gov/seabourn-creek/

Careers in Conservation - Park Ranger:

What Do They Do? Park Rangers work in the outdoors, protecting and supervising areas of a park. They also sometimes lead hikes, nature walks, etc., and teach the public about the environment.

How Do I Get This Job? To become a Park Ranger, you need a bachelors degree. It can be in any field, but majors such as biology, earth sciences, and park and recreation management are preferred.

Did you know that the number of birds stopping in the Columbia Bottomlands is so large that they can be seen on radar when they fly across the Gulf of Mexico?
Coastal marshes act as important sponges, helping slow and absorb storm surges (when wind and rain increase) that might otherwise do greater damage farther inland. Coastal marsh wetlands also act as filters, as the plants and soils found there clean the water of sediment and pollutants.

Can you name five organisms you might find in a coastal marsh?

What special adaptations do they have for living in this ecosystem?
Coastal Marshes
sites to visit:

1. Anahuac National (G-8) • (409) 267-3337
   Wildlife Refuge
   FM 1985 Anahuac, TX 77514
   www.fws.gov/refuge/Anahuac/

2. Brazoria National (I-6) • (979) 964-4011
   Wildlife Refuge
   County Road 227 Freeport, TX 77541
   www.fws.gov/refuge/brazoria

3. East End Lagoon (H-7) • (409) 797-5000
   On Galveston Island at the east end of Seawall Blvd.
   along Boddecker Dr. adjacent to Apffel Park (East Beach)
   www.eastendlagoon.org/about/

4. San Jacinto (F-6) • (281) 479-2431
   Battleground State Park
   3523 Independence Parkway South LaPorte, TX 77571 (TX Hwy 134)
   www.tpwd.state.tx.us/state-parks/san-jacinto-battleground

5. Sea Rim State Park (G-9) • (409) 971-2559
   19335 S. Gulfway Drive Sabine Pass, TX 77665
   www.tpwd.texas.gov/state-parks/sea-rim

Career in Conservation - Environmental Lawyer:

- What Do They Do? Environmental lawyers are attorneys that focus their practice on handling environmental issues. They help interpret, enforce, and change laws regulating the impact of humans on the environment.

- How Do I Get This Job? To become an environmental lawyer you will first need to get a bachelors degree (preferably in something related to the environment), and then you will need to get a law degree.

Did you know that Southeast Texas is one of the best places for alligator viewing? At Anahuac NWR you can often see the alligators sunning themselves on the banks of the bayous and ponds!
The Post Oak Savannah is a land of mostly grassy areas with clumps of post oak trees scattered throughout. In the past, fire was an important part of the ecosystem, where it would burn before being stopped by either a change in topography or the weather. The post oaks would survive even if wildfires destroyed the grasses, leaving clumps of trees on the grassy plains.

The Post Oak Savannah is home to many animals, including wild turkeys, red-tailed hawks, white-tailed deer and coyotes.

*What are some of the ways that wild turkeys get water in this ecosystem?*
Post Oak Savannah
sites to visit:

1. **Stephen F. Austin**
   State Park (F-3)
   Park Road 38 San Felipe TX 77473-0125
   www.tpwd.texas.gov/state-parks/stephen-f-austin
   • (979) 885-3613

2. **Washington on the Brazos**
   State Park
   23400 Park Road 12 Washington, TX 77880
   www.tpwd.texas.gov/state-parks/washington-on-the-brazos
   • (936) 878-2214

Did you know that Post Oaks can grow to be 300 years old? There have even been some Post Oaks found that were over **400 years old!**

**Careers in Conservation - Wildlife Biologist:**

- **What Do They Do?** Wildlife Biologists study the populations of animals and plants on a wildlife refuge. They observe and work with animals to collect data and compile information.

- **How Do I Get This Job?** To become a Wildlife Biologist, you will need to get a bachelors degree related to biology, and then you will need to complete some internships to gain experience before you become a certified wildlife biologist.

“Did you know that the Houston Toad, which used to be abundant in our city, is now an endangered species? Some Houston Toads can still be found near Austin, but habitat loss has driven the species out of Houston entirely.”
Surrounded by the United States, Mexico and Cuba, the Gulf of Mexico is more than half a million square miles of warm, sunlit waters and a steady food supply for an array of fish, wildlife and humans alike. About two-thirds of the continental United States drains into the Gulf, including states as far away as Montana and New York.

The Gulf of Mexico is the ninth largest body of water in the world and home to unique coral reef ecosystems, including the Flower Garden Banks National Marine Sanctuary, about 100 miles from the coast of Galveston.
Did you know that the Gulf Stream, which originates in the Gulf of Mexico, is \textit{one of the strongest ocean currents on earth}? The stream exits the Gulf through the Strait of Florida, follows the eastern coastline of the United States and crosses the Atlantic Ocean to Europe and Africa.

\textbf{Gulf of Mexico sites to visit:}

1. \textbf{Sea Center Texas (H-5)}
   - 300 Medical Drive Lake Jackson, TX 77566
   - www.tpwd.state.tx.us/spdest/visitorcenters/seacenter/
   - \quad \textcolor{red}{(979) 292-0100}

2. \textbf{Matagorda Bay Nature Park (J-4)}
   - 6420 FM 2031 Matagorda, TX 77457
   - www.lcra.org/parks/developed_parks/matagorda.html
   - \quad \textcolor{red}{(979) 863-2603}

3. \textbf{Galveston Island State Park “Gulf Side” (H-6)}
   - 14901 FM 3005, Galveston, TX, 77554
   - www.tpwd.texas.gov/state-parks/galveston-island
   - \quad \textcolor{red}{(409) 737-1222}

4. \textbf{Houston Audubon’s Bolivar Flats Bird Sanctuary (G-7)}
   - For directions visit: http://houstonaudubon.org/sanctuaries/bolivar-flats/
   - \quad \textcolor{red}{(713) 932-1639}

\textbf{Careers in Conservation - Marine Biologist:}

\textbf{What Do They Do?} Marine Biologists study all types of sea creatures. Most Marine biologists choose to specialize, however, in a field ranging from large ocean animals to microscopic organisms.

\textbf{How Do I Get This Job?} To become a Marine biologist you will need a degree in marine biology as well as relevant internships and research experience.
The Houston Wilderness region has a rich, vibrant history that can be explored and learned about at a variety of museums and cultural centers throughout the 10 ecoregions. Discovering the roles that nature plays in the decisions our ancestors made can be fascinating and rewarding. Many of the “Other Places to Explore” sites offer special exhibits and programs that provide excellent learning opportunities for people of all ages.
Other Places to Explore:

1. Bellaire Nature Discovery Center  • (713) 667-6550
   7112 Newcastle Bellaire, TX 77401
   www.naturediscoverycenter.org/

2. Brazos Valley Museum (C-2) • (979) 776-2195
   of Natural History
   3232 Briarcrest Drive Bryan, TX 77802
   www.brazosvalleymuseum.org/

3. Center for the Arts & Sciences (G-5) • (979) 265-7661
   Brazoria County 400 College Blvd Clute, TX 77531
   www.bcfas.org/

4. Children’s Museum of Houston (G-5) • (713) 522-1138
   1500 Binz Houston, TX 77004
   www.cmhouston.org/

Careers in Conservation - Zoo Veterinarian:

What Do They Do? Zoo Veterinarians work to treat sick and injured animals. But, instead of working on dogs and cats, zoo vets get to work on animals like lions and elephants.

How Do I Get This Job? To become a Zoo Veterinarian, you will need to get a masters of veterinary medicine. Also, relevant experience, like an internship with a zoo, is crucial to finding a job.

Museums and Zoos can be good places to learn about ecosystems locally and around the world. A breeding program at the Houston Zoo is working to save the Attwater’s Prairie Chicken from extinction.
Other Places to Explore:

5. **Discovery Green**
   - Address: 1500 McKinney Houston, TX 77010
   - Phone: (713) 400-7336
   - Website: www.discoverygreen.com/

6. **Hermann Park (I-5)**
   - Address: 6100 Hermann Park Drive, Houston TX 77030
   - Phone: (713) 524-5876
   - Website: www.hermannpark.org/

7. **Houston Museum of Natural Science (G-5)**
   - Address: One Hermann Circle Drive Houston, TX 77030
   - Phone: (713) 639-4629
   - Website: www.hmns.org/

8. **Houston Zoo (G-5)**
   - Address: 6200 Hermann Park Drive Houston, TX 77030
   - Phone: (713) 533-6500
   - Website: www.houstonzoo.org/

9. **Museum of the Gulf Coast (F-9)**
   - Address: 700 Procter Port Arthur, TX 77640
   - Phone: (409) 982-7000
   - Website: www.museumofthegulfcoast.org

10. **Nature Discovery Center (G-5)**
    - Address: 7112 Newcastle Bellaire, TX 77401
    - Phone: (713) 667-6550
    - Website: www.naturediscoverycenter.org/

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Careers in Conservation

If none of those jobs sounded right for you, don’t worry! There are plenty of other careers where you can make a difference for the environment.

Just a few examples are: Environmental Engineer, Zoologist, Ornithologist, Environmental Scientist, Geologist, etc.

The Possibilities are almost Endless!

So, get out there and work to make the world a better place!
Careers in Conservation:

Having trouble finding a specific career, no problem! Here is a list of all of the highlighted careers along with the page numbers where you can find them.

Environmental Educator ........................................ pg. 9
Horticulturalist ......................................................... pg. 11
Park Director .............................................................. pg. 15
Wildlife Photographer ................................................ pg. 17
Fire Management Officer ............................................. pg. 19
Forester ................................................................. pg. 21
Park ranger ............................................................... pg. 23
Environmental Lawyer ................................................. pg. 25
Wildlife Biologist ......................................................... pg. 27
Marine Biologist ......................................................... pg. 29
Zoo Veterinarian ......................................................... pg. 31
The Houston Arboretum & Nature Center is an urban nature sanctuary that has been serving Houstonians for the last 50 years. Come make memories on our trails and in our classrooms. Nature awaits!

WWW.HOUStONARBORETuM.ORG
Get Outdoors Houston
Download the mobile friendly app today!
Getoutherehouston.org

Great Green Quest
Plan on a summer of adventure and fun by joining the Great Green Quest! It’s a friendly challenge for families, schools, nature lovers, and outdoor enthusiasts to visit all ten ecoregions over the summer.

For more information, or if you would like to become a sponsor for an area school, please visit greatgreenquest.org or houstonwilderness.org/ggq
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Bettie Cartwright
Sarah Flournoy
Houston Arboretum and Nature Center

Special thanks to HW Education Passport Intern Emily Matta, and to Passport Spanish translators Norma & Roy Mendez for their assistance!