



**CREATING A SCHOOL
BUTTERFLY/POLLINATOR
GARDEN**

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GETTING STARTED

Your first goal should be to gather a **Garden Team** with members who will support the creation and maintenance of your school butterfly garden. You need the principal's blessing and long-range support, and it will be essential to have the principal, or an individual appointed by the principal to be a part of the team. There needs to be at least one enthusiast teacher (often a science teacher) who not only supports the creation of the butterfly garden, but who will also be the liaison between the team and the school's faculty and staff. It is important to have some parents on the team. A goal of your team should be to include as many teachers, parents and students as possible in the initial building and planting of the flowerbeds. They should also be invited to participate in regularly scheduled maintenance workdays. Depending on your particular situation, it is important to have someone from the school maintenance staff to be a part of the initial planning meetings to avoid conflicts down the road and to gain their support. A weed eater and/or lawnmower can do a lot of damage in a short time.

Selecting a site and determining the size of the garden will be critical to the long-range success of the garden. Choose a location that receives at least six to eight hours of sunlight a day. It should have good air circulation but also have protection against high winds. It is critical to choose a site near a source of water. If you do not have a way to irrigate the garden regularly at your chosen location, then choose another site or be prepared to install an irrigation system. The garden must have regular irrigation during school holidays and during the summer or the plants will die. Long term you cannot count on a volunteer to water. At the very least, you need a soaker hose that is connected to an inexpensive battery-operated timer on a faucet that will regularly soak the beds. Your butterfly garden can be as small as 4 ft. by 15 ft. and quite successful at attracting a variety of butterflies and pollinators, if you plant the right nectar plants and more importantly the right host plants for the butterflies' larva stage.

Have your team members become knowledgeable by reading some of the outstanding materials available on Butterflies and Butterfly Gardening. Such as:

Guide to Butterfly Gardening, Cockrell Butterfly Center's free brochure that is an outstanding publication underwritten by The Garden Club of Houston.

Butterflies of Houston & Southeast Texas, by John and Gloria Tveten. This paperback book that is filled with wonderful photos that will help you identify the butterflies and their larva. It also contains extensive information on the different host plants for each butterfly.

The Butterflies of Galveston County, What Every Gardener Needs to Know is a publication by the Galveston County Master Gardeners Association. It is available for purchase at the Galveston County Extension Office in La Marque, Texas.

If you have a limited budget, put most of your funds into bed preparation and into an irrigation system. The purchased or donated plants can be small, but when they are placed into good soil that is regularly watered and have good sunlight, they will grow rapidly and fill the beds in no time. Bring in good garden soil and build the beds up 8 inches or more above the ground level to assure good drainage. If you don't have access to good garden soil, you may prepare your own by mixing some bales of Canadian Peat into a load of good topsoil.

Avoid accepting and/or purchasing just any old blooming plant from the garden section of the big box stores. Make a list of plants that you want to include and then go to sales or nurseries that carry native plants. Some possible places:

The Garden Club of Houston's Bulb & Plant Mart – held in October every year Master Gardener's annual plant sales The Native Plant Society of Texas – Houston Chapter annual plant sale Mercer Arboretum plant sales

Joshua's Nursery located in the Heights Buchanan's Nursery located in the Heights Natives Nursery at Houston Audubon Edith L. Moore Sanctuary (call for days open to public)

There is a plethora of nectar plants available in the nurseries and at plant sales, but try to make wise choices, particularly if you have limited space. Plan your garden to have plants with various heights and make sure you have something blooming year-round. If you are in a protected area from winter winds, you will find that this is not hard to do.

You also want to have some plants that are evergreen, because in winter their foliage will offer protection to the butterflies in high winds and cold weather. Butterflies have favorite nectar plants, and you can experiment with different plants. Some flowers like Lantana and Verbena offer a nice landing platform where they can rest and feed. Be aware that some of the hybrid plants do not produce as much nectar as the native plants. These plants are some of the favorite nectar plants of butterflies/pollinators:

A FEW FAVORITE NECTAR PLANTS

- **Buttonbush - (*Cephalanthus occidentalis*)** a shrub or small tree. The butterflies line up to get to the flowers (does best in wet spot).
- **Purple Homestead Verbena – (*Verbena x hybrida* 'Homestead Purple')** This is always a butterfly favorite, particularly the Black Swallowtail.
- **New Gold Lantana (*Lantana camera* 'New Gold')**
- **Purple Trailing Lantana – (*Lantana montevidensis*)** Makes a nice low attractive ground cover.
- **Pentas (*Pentas lanceolata*)**
- **Asters Family (Aster spp., Astereaceae)** Both the **Blue mistflower (*Eupatorium***

coelestinum) and **White** (mistflower (*Eupatorium havanense*) bloom in the fall.

- **Salvias – (Salvia)** ‘Lady in Red’ - *S. coccinea* and many of the other salvias are dependable plants that attract hummingbirds and butterflies.
- **Purple Cone Flower – (Echinacea purpurea)**
- **Mexican Flame Vine – (Senecio confuse)** When in bloom, this vine is a show stopper for butterflies and humans.
- **Coral Honeysuckle Vine (Lonicera sempervirens)**
- **Coral Vine – (Antigonon leptopus)**
- **Herbs** - Bee balm, mint, parsley, basil, etc. (“Thai Basil” and “African Blue” Basil are favorites of bees) (The fun part of a butterfly garden is being able to see the entire life cycle of the butterflies. Since each butterfly has a specific host plant where it will lay its eggs, you will need to have each of these plants included in your garden. Most people know that the Milkweed is the host plant for the Monarch butterflies. Buy many more than you think you need. When the Monarchs lay their eggs on this plant, their caterpillars will eat them all to the ground. Don’t worry the plants soon begin to put out fresh growth. It is highly recommended to cut the milkweed back in early October during Monarch migration. There are many wonderful native Milkweeds in the fields and ditches, but they are often not readily available in the nursery trade. Here are the host plants that are a must for a school or home butterfly garden:

BUTTERFLIES AND THEIR HOST PLANTS

- **Monarch, Queen, Viceroy Butterflies** – Milkweed (*Asclepias*) Go to this website for more information on the native milkweeds and how you can help the Monarch butterflies survive. <http://www.monarchwatch.org>.
- **Gulf Fritillary Butterflies** – Passionvines (*Passiflora*) Native and non-native passionflower vines will attract the Gulf Fritillary and they will lay their eggs on all of them except for the red passionflower vine.
- **Sulphur Butterflies** - Cassia Trees/Shrubs (*Senna*) It is often hard to find the caterpillars, but you can’t miss the butterflies hovering around the Cassia tree. They are covered with yellow flowers in the fall.
- **Black Swallowtail Butterflies** – Fennel, dill, and parsley are a must. Particularly the fennel is eaten to the ground, so plant enough of it.
- **Giant Swallowtail Butterflies** – Citrus trees are the host plant. If you plant a Satsuma tree and/or a Meyer Lemon, the students can watch for the wonderful caterpillars that look like bird droppings. Gently poke the caterpillar in the head and see their orange

“horns” appear for self-defense.

- **Pipevine Swallowtail Butterflies**– Dutchman’s Pipevine (*Aristolochia fimbriata*) is found in many nurseries. This vine grows as a ground cover with a small insignificant flower. (There are many more host plants for different butterflies in our area, but you will be rewarded with lots of caterpillars and chrysalis from these six butterflies, if you grow these plants in your garden.

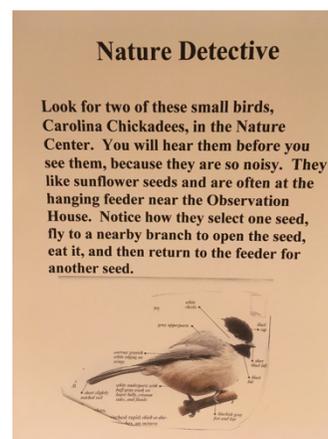
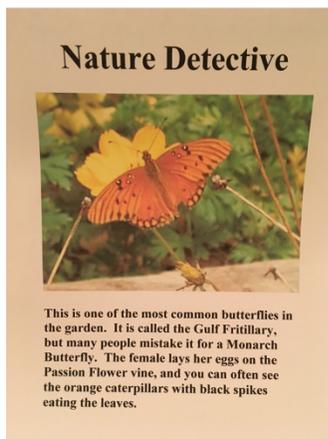
MAINTAINING THE GARDEN

On maintenance of the butterfly garden, the number one rule is do not use pesticides! Many people are conditioned to get out the spray when they see a caterpillar, so this is another lesson that the student can learn. Most of our insects are beneficial and the added bonus is insects will attract birds to your garden. You might have problems with the wasps eating your caterpillars. If it gets too bad, you can put some netting over the plants that are covered with caterpillars so that the students will have an opportunity to see the entire life cycle. The Buttonbush might get webworms in the fall, but if you wait, you might see the ladybugs arrive and the students will have the opportunity to see the entire life cycle of the ladybugs. If you wait even longer, you might see the small Downy Woodpecker arrive to eat the larva stage of the ladybugs. The other “pests” you will probably see will be the Oleander Aphids on the tips of the Milkweed. You can ignore these since they prefer milkweed plants, or they can be controlled with a strong spray of water. You can use three to four inches of a pine or hardwood mulch to control weeds and conserve moisture. If you live in an area with pine trees, put out a request for parents to drop off bags of “clean” pine needles for the garden, and these make an outstanding mulch. Leaf Mold, which can be purchased in bags, is expensive, but it makes excellent mulch. Avoid dyed mulches. Go natural!

Warning: Plan for the future and year-round maintenance. Eventually, your team membership will change – principals, teachers, parents, etc. Regularly recruit new members to the Garden Team, such as interested parents, teachers and community members who will work to maintain the garden. It is important that they become knowledgeable. It does not take long for a garden to become filled with invasive plants if an inexperienced person takes on oversight and maintenance.

A FEW ACTIVITIES FOR CHILDREN

There is a plethora of activities for children in a butterfly garden besides science; e.g. art, poetry, photography, creative writing, etc. The school year will bring opportunities for different activities as the plants and wildlife change with each season. If you want the teachers to feel comfortable bringing their students out to the garden for activities, you can easily keep everyone updated on current changes in the garden by posting a small “Nature Detective” poster. Take a photo of a particular blooming tree, plant, butterfly, insect, bird etc. that is currently in the garden. Then create a Nature Detective poster (8.5”X 11”) using the photo and a brief write up. If you post this on a door that leads to the garden, science room door or a bulletin board that is easily seen by students and teachers, the students will be able to easily search, discover, learn while enjoying the garden.



Children can have a successful planting of wildflower seeds in the fall, if you use the right seeds. Go to the Wildseed Farms in Fredericksburg website: <http://www.wildseedfarms.com> Look for the seeds that have at least an 80% germination success. You can use their Texas mix or make your own. Black-eyed Susan, Plains Coreopsis, Indian Blanket, Horsemint, and Mexican Hat make a pretty display. Also, order some of their Yellow Cosmos for a spring planting. The children will have great success with the Cosmos and enjoy them spring through the fall. Remember to collect and save the seeds for planting the following spring. Native American Seed www.seedsource.com is a wonderful source of native seeds. The “Lady Bird Johnson Legacy Wildflower Mix” is perfect for Houston/Galveston area. Even better, contact some of the wonderful prairie organizations in our area to request help in obtaining seeds that have been collected locally.

Finally, if your garden is large enough you might consider a path through the garden. Lay out the design using a garden hose and try out ideas for placement of the path. Curves are always attractive in a garden. A crushed granite path using a weed block fabric underneath and a metal edging to keep the granite out of the beds works well. Check the Internet for details on building a granite path. You might also consider a small pond and a bog area in your garden to broaden the possibilities for lessons about dragonflies, water insects, frogs and toads. A few small Gambusia, mosquito fish, in the pond will keep the mosquito larvae under control. For safety reasons, you should consider fencing and the ability to limit access when there is no adult supervision. Your butterfly garden will quickly become a small nature center. Enjoy!

EXAMPLES OF THREE DIFFERENT SIZES OF SCHOOL GARDENS

The “Nature Spot” (20’ X 40’) is an example of what can be done in a small area. Gated with a small sunken plastic pond, bog and bench



A small, narrow space can work. Water, sunshine, good soil and the right plants are key!



An acre or more can work and accommodate several classes at a time and include a large pond, an observation house, several seating areas large enough for a class, purple martin house, bird feeders, storage shed, and much more.



*To plant a seed and watch it grow
Is something every child should do,

And when it blossoms, how it grew
Is something every child should know,

And when its seeds are ripe to sow,
A child may see the old made new.

To grow and gently grow and grow
Is something people should do too.*

By Harry Behn

(Below are six "signs" you can print out and use in your school garden.)

SENNA, *CASSIA*
Host plant to the Sulfur Butterflies
(Begins blooming in late fall.)



PASSION VINE, *PASSIFLORA*
Host plant to the
Gulf Fritillary Butterflies



MILKWEED, *ASCLEPIAS*
Host plant to the
Monarch Butterflies



ARISTOLOCHIA FIMBRIATA
Host plant to the
Pipevine Swallowtail Butterflies



DILL, FENNEL AND PARSLEY
Host plant to the
Black Swallowtail Butterflies



CITRUS
Host Plant to the
Giant Swallowtail Butterflies

