



# Outdoor Classroom Project Plan: Example Woodland Wildflower Garden

A Woodland Wildflower Garden includes a variety of native wildflowers (and native ferns) that live in the woods (often near streams) in the southeastern United States. Most wildflowers thrive in areas where they receive at least six hours of sunlight each day, but our native woodland wildflowers actually thrive in the shade of a forest. The woodland provides nutrient-rich soils from the decay of last falls' leaves, and the tree canopy helps keep the soil moist for these unique and rare wildflowers. We also like to include native ferns in these gardens to provide students the opportunity to study these ancient plants that use spores instead of flowers and seeds to reproduce.

Woodland wildflowers are spring ephemerals that bloom from February through April while students are still in school and can study them, and then they often disappear completely until the following spring. Their early bloom times provide nectar and pollen for insects and other pollinators just as winter ends and spring begins, often several months before most other perennials bloom.

## ❖ Habitat Requirements:

- Part to Full-shade with only one or two hours of direct sunlight / Dappled sunlight is best
- Nutrient-rich soil with organic matter from the decay of dead leaves in a woodland
- Moist soils (water retention can be enhanced by using peat moss and a little sand in the soil of the garden)

## ❖ Example Woodland Wildflower Garden Pictures:



*Example Native Woodland Wildflower Garden*

### Welcome to our Native Woodland Wildflowers Garden

Most flowers thrive in areas where they receive at least six hours of sunlight each day, but our native woodland wildflowers actually thrive in the shade of a forest. The woodland provides nutrient-rich soils from the decay of last falls' leaves, and the tree canopy helps keep the soil moist for these unique and rare wildflowers.



Keep a look out for these beautiful flowers that only grow and bloom in the spring before they disappear again until the following year.

Please help us protect it from litter and vandalism! Thank you!

*Example Educational Sign for a  
Native Woodland Wildflower Garden*





## Outdoor Classroom Project Plan: Example Woodland Wildflower Garden

### ❖ Estimated Cost:

- Example 4 ft x 13 ft Woodland Wildflower Garden: 3-sided garden against the school building: **\$620-\$705**
- Example 5 ft x 14 ft Woodland Wildflower Garden: 4-sided garden in OC away from the school building: **\$735**

### ❖ Materials & Supplies Lists with Estimated Budgets:

<b>Example Garden: 4 ft x 14 ft x 8 in</b>				
(Actual Size: 3 ft (W) x 12 ft 4 in (L) x 6 in (D) 3-sided raised bed garden against school building → ~19 CF)				
Learning Station	Materials & Supplies	Estimated Cost	Source of Materials (Donated or Purchased?)	Final Cost
WdlnWdflwrs	(1) Can of Rust-Oleum Professional White Water-based Marking Paint @ ~\$9.98 ea	\$10	Lowe's Item #429750	
WdlnWdflwrs	(40) Old Manor 12-in L x 4-in H x 8-in D Concrete Retaining Wall Blocks (to create three sides of raised bed against school building) @~\$2.88 ea <b>OR</b> (40) 2-3" tall & 12-18" long & 4-6" wide Natural Landscape Rock (to create natural border)	\$115 total OR \$200 total	Lowe's Item# 477088 OR Local Landscape Co.	
WdlnWdflwrs	(1) 6'x50' Sta-Green Professional Landscape Fabric (weed barrier) (16' used for this garden) @~\$33.98 ea	\$35	Lowe's Item #510606	
WdlnWdflwrs	(4) 32-Quart (1CF) Bags of Evergreen Organic Potting Soil Mix @~\$6.38 ea	\$25 total	Lowe's Item #380608	
WdlnWdflwrs	(8) 1 CF/32 Qt Bags of Evergreen Organic Top Soil @~\$2.18 each	\$15 total	Lowe's Item #648834	
WdlnWdflwrs	(1) 1 CF Bags of Evergreen Organic Compost and Manure @~\$3.68 ea	\$5	Lowe's Item #380606	
WdlnWdflwrs	(19) 8 qt. bag of Sta-Green Organic Coconut Coir @ \$6.98 ea	\$135 total	Lowe's Item #876255	
WdlnWdflwrs	(1) 0.5 CF Bags of All Purpose Sand @~\$5.18 ea	\$5	Lowe's Item #104898	
WdlnWdflwrs	(16) Native Plants (4 different species, 4 individuals of each species – see list below)	\$115 total	Nursery via OC Consultant	
WdlnWdflwrs	(1) Package of 40 6" Black Plastic Landscape Edging Pieces create (3) 3 ft dividers between the four plant species to make plant ID & weeding easier) @~\$21.98 ea	\$20	Lowe's Item #379805	
WdlnWdflwrs	(3) 2 CF Bags of Natural Dark Brown Pine Bark Mulch @~3.48 ea <b>**do NOT get black mulch as it gets hot and kills plants**</b>	\$10 total	Lowe's Item #92118	





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### ❖ Materials & Supplies Lists with Estimated Budgets (cont.):

WdlnWldflwrs	(4) Plant ID Signs (one for each plant species) @~\$6 ea	\$25 total	<a href="https://www.alabamawildlife.org/oc-dig-into-plants/">https://www.alabamawildlife.org/oc-dig-into-plants/</a> for details	
WdlnWldflwrs	(4) Biomarkers to hold Plant ID signs (13" stake with a 2" x 4" plate) @ ~\$3 ea (includes S&H)	\$15 total	AWF OC Consultant or <a href="https://mcgbiomarkers.com/shop/">https://mcgbiomarkers.com/shop/</a>	
WdlnWldflwrs	(1) Educational Sign (with educational information about woodland wildflowers)	\$75	Ask OC Consultant about <a href="https://www.alabamawildlife.org/oc-signs/">https://www.alabamawildlife.org/oc-signs/</a>	
WdlnWldflwrs	(1) 6 ft. U-Post for Fence (for educational sign) @~\$10.69 ea	\$10	Lowe's Item #493054	
WdlnWldflwrs	(1) Hillman 1/4-in x 1-1/2 in Zinc-Plated Coarse Thread Hex Bolt (2-count) @~\$0.88 ea	\$5 total	Lowe's Item# 137634	
WdlnWldflwrs	(2) Hillman 1/4-in x 20 Zinc-Plated Steel Hex Nut @~\$0.10 ea		Lowes Item# 63301	
WdlnWldflwrs	(2) Hillman 1/4-in Zinc-Plated Standard Flat Washer @~\$0.15 ea		Lowe's Item# 63306	
<b>TOTAL ESTIMATED COST: \$620-\$705</b>				

<b>Example Garden: 5 ft x 14 ft x 8 in</b>				
(Actual Size: 3 ft 4 in (W) x 12 ft 4 in (L) x 6" (D) 4-sided raised bed garden → ~20 CF)				
Learning Station	Materials & Supplies	Estimated Cost	Source of Materials (Donated or Purchased?)	Final Cost
WdlnWldflwrs	(1) Can of Rust-Oleum Professional White Water-based Marking Paint @ ~\$9.98 ea	\$10	Lowe's Item #429750	
WdlnWldflwrs	(70) 4" x 12" Retaining Wall Blocks (to create three sides of raised bed against school building) @~\$2.88 ea  <b>OR</b>  (70) 2-3" tall & 12-18" long & 4-6" wide Natural Landscape Rock (to create natural border)	\$200 total  <b>OR</b>  \$200 total	Lowe's Item# 477088  <b>OR</b>  Local Landscape Co.	
WdlnWldflwrs	(1) 6'x50' Sta-Green Professional Landscape Fabric (weed barrier) (16' used for this garden) @~\$33.98 ea	\$35	Lowe's Item #510606	
WdlnWldflwrs	(4) 32-Quart (1CF) Bags of Evergreen Organic Potting Soil Mix @~\$6.38 ea	\$25 total	Lowe's Item #380608	





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WdlnWldflwrs	(10) 1 CF/32 Qt Bags of Evergreen Organic Top Soil @~\$2.18 each	\$20 total	Lowe's Item #648834	
WdlnWldflwrs	(1) 1 CF Bags of Evergreen Organic Compost and Manure @~\$3.68 ea	\$5	Lowe's Item #380606	
WdlnWldflwrs	(19) 8 qt. bag of Sta-Green Organic Coconut Coir @ \$6.98 ea	\$135 total	Lowe's Item #876255	
WdlnWldflwrs	(1) 0.5 CF Bags of All Purpose Sand @~\$5.18 ea	\$5 total	Lowe's Item #104898	
WdlnWldflwrs	(20) Native Plants (4 different species, 5 individual plants of each – see list below)	\$140 total	Nursery via OC Consultant	
WdlnWldflwrs	(1) Package of 40 6" Black Plastic Landscape Edging Pieces create (3) 3 ft dividers between the four plant species to make plant ID & weeding easier) @~\$21.98 ea	\$20	Lowe's Item #379805	
WdlnWldflwrs	(3) 2 CF Bags of Natural Dark Brown Pine Bark Mulch @~3.48 ea <b>**do NOT get black mulch as it gets hot and kills plants**</b>	\$10 total	Lowe's Item #92118	
WdlnWldflwrs	(4) Plant ID Signs (one for each plant species) @~\$6 ea	\$25 total	<a href="https://www.alabamawildlife.org/oc-dig-into-plants/">https://www.alabamawildlife.org/oc-dig-into-plants/</a> for details	
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WdlnWldflwrs	(1) Educational Sign (with educational information about woodland wildflowers)	\$75	Ask OC Consultant about <a href="https://www.alabamawildlife.org/oc-signs/">https://www.alabamawildlife.org/oc-signs/</a>	
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WdlnWldflwrs	(2) Hillman 1/4-in x 20 Zinc-Plated Steel Hex Nut @~\$0.10 ea		Lowes Item# 63301	
WdlnWldflwrs	(2) Hillman 1/4-in Zinc-Plated Standard Flat Washer @~\$0.15 ea		Lowe's Item# 63306	
<b>TOTAL ESTIMATED COST: \$735</b>				



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### ❖ Native Woodland Wildflowers Garden Suggestions:

- ❑ Customized plant identification signs with unique scannable QR Codes linked to webpages on AWF's website are available for the **bolded species below**. The webpages provide specific information about that plant species including a description of the plant, photos of the plant, maintenance tips, and the ecological benefits that species provides.

Bleeding Hearts	<b>Heartleaf Foamflower</b>	Southern Shield Fern
Cinnamon Fern	Jacob's Ladder	Trillium
Dwarf Crested Iris	<b>Lady Fern</b>	Virginia Bluebells
<b>Eastern Red Columbine</b>	Shooting Stars	Wild Blue Phlox
Fire Pink	Solomon's Seal	<b>Wild Ginger</b>

### ❖ Construction Tools & Supplies for Outdoor Classroom Build Day:

- ❑ (8) Shovels (4 for adults & 4 for children)
- ❑ (1) pick ax for removing large rocks if necessary
- ❑ (1-2) Wheelbarrows for moving grass clumps, soil & mulch
- ❑ (24-30) 1-gallon milk jugs (with tops cut off but handles remaining) for students to move excavated dirt, peat moss, sand, soil, etc.
- ❑ (1) 24 or 48-inch Box Beam or I-beam Level
- ❑ (4-6) Hand-held Trowels (for stirring soil amendments together)
- ❑ Water hose for watering plants at the end of day
- ❑ (1) Saw for cutting 4" x 4" post into (4) 6" pieces for Plant ID Signs
- ❑ (1) Speed Square for measuring angle for the top of the 4" x 4" posts for Plant ID Signs
- ❑ (1) Drill for attaching signs to posts



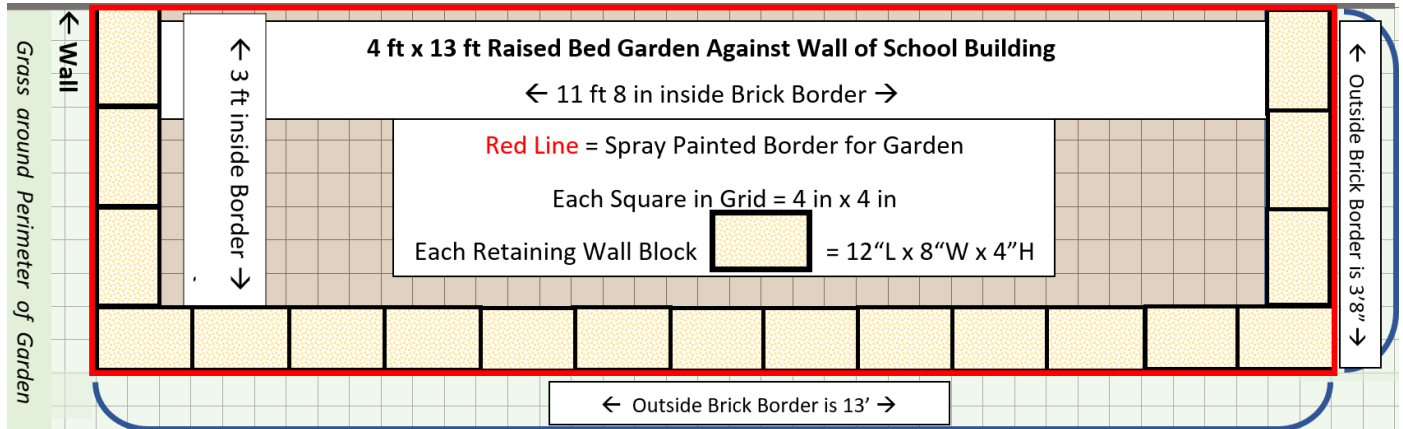
### ❖ Construction & Planting Instructions:

- 1) Purchase supplies and have them on-hand for the Outdoor Classroom Build Day.
- 2) Spray paint a 3 ft 8 in x 13 ft area (for the 4 ft x 13 ft garden) up against a wall of the school building OR spray paint a 4 ft 8 in x 13 ft 8 in area (for the 5 ft x 14 ft garden) where the pollinator garden will be located in the outdoor classroom. *(See diagrams below on pg 5)*
- 3) Dig and remove 3 inches of grass and roots INSIDE the painted rectangle, and then move them to the pre-approved compost or dump pile. *Note: Ask the custodian where to move the grass clumps.*
- 4) Using your shovel or hoe, make sure that the ground around the edge of the raised bed garden area where the retaining wall bricks will be laid is flat, smooth and level.
- 5) Place a single layer of the retaining wall blocks INSIDE the painted border of the garden area where the grass was removed. Do NOT place the retaining wall blocks on the grass. *(See diagrams below on pg 5)*

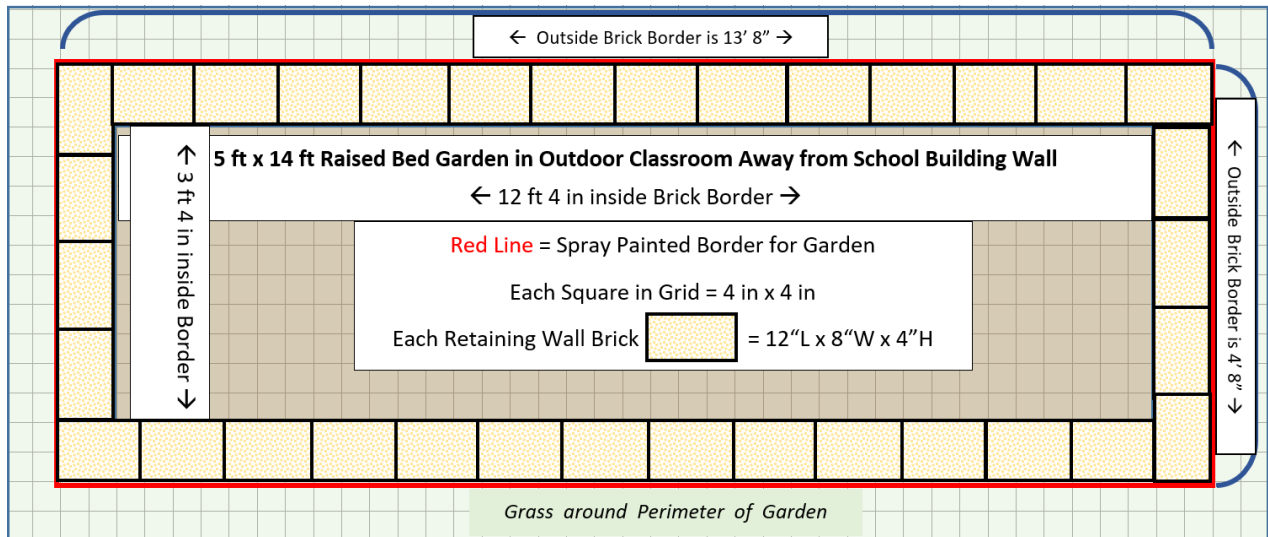


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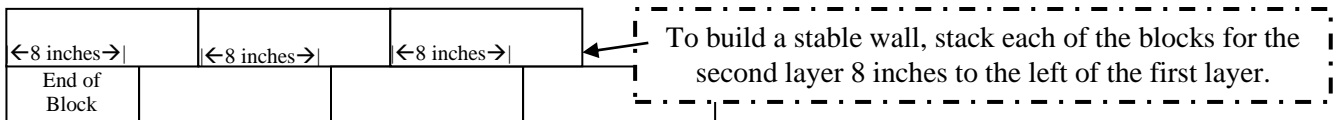
## ❖ Construction & Planting Instructions (cont.):



OR



- 6) Use a level to make sure that the blocks are balanced and level all the way around the border of the garden. Use a garden trowel to dig out or add dirt under the blocks when needed to level them.
- 7) Place the landscape fabric (weed barrier) on the bare ground inside the garden area, push the fabric against the insides of the retaining wall block, and lay the edges of the fabric on the top of the blocks. If your fabric is not wide enough to cover the insides of the block and have the edge of the fabric lay on top of the block, then you need to make your garden a little smaller (less wide).
- 8) Place the second layer of retaining wall blocks on top of the first layer of retaining wall blocks, offsetting the second layer 8 inches to the left of the first layer of blocks to help stabilize the retaining wall, with the edge of the landscape fabric sandwiched between the two layers of blocks.

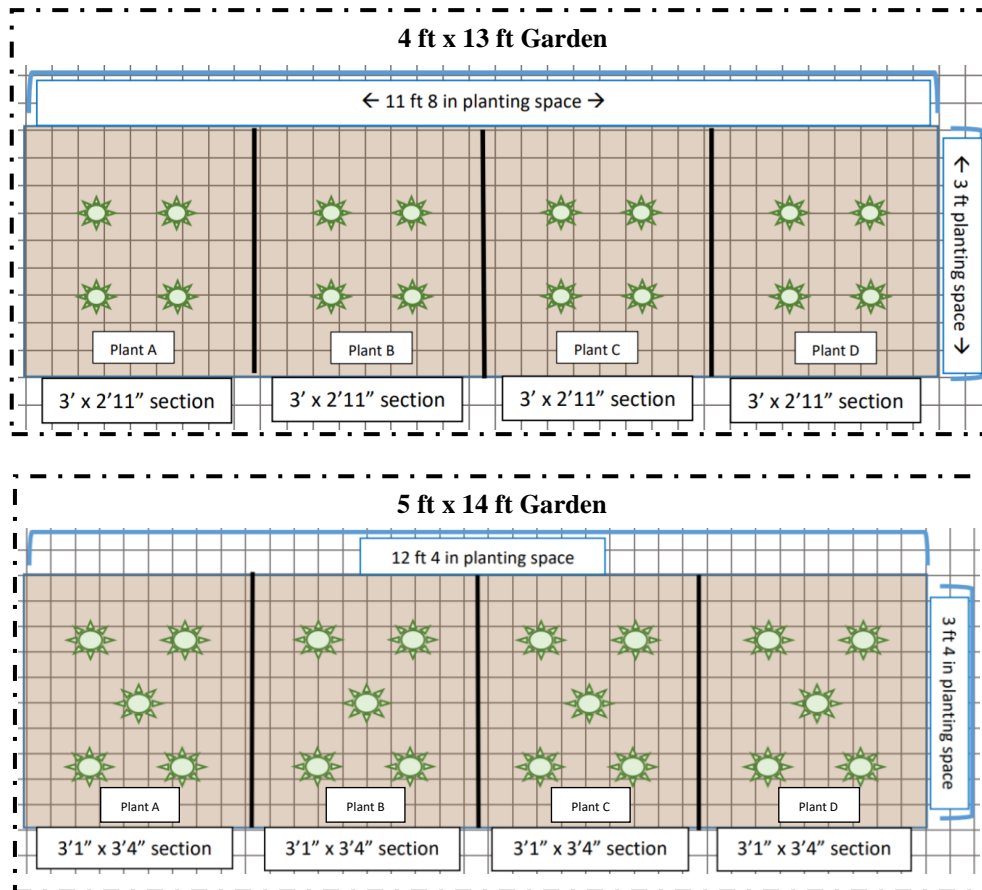




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### ❖ Construction & Planting Instructions (cont.):

- 9) Fill the bottom of the garden with top soil, add the compost and manure, and then add the potting soil and peat moss to retain moisture in the soil. Use trowels to turn and mix the soils.
- 10) Install 3 ft dividers of the landscape edging inside the garden to create 3 ft x 2 ft 11 in sections (for the 4 ft x 13 ft garden) or 3 ft 4 in x 3 ft 1 in sections (for the 5 ft x 14 ft garden) for each plant species.  
(see the lines | in the diagrams below)



- 11) Plant the flowers, grouping each of the different species of plants together within each rectangle.  
(see the diagram above)
- 12) Add 1 inch of mulch around the plantings throughout the garden.
- 13) Cut 4" x 4" x 8' into: (1) 6' piece & (4) 6" pieces. Use the Speed Square to cut one end of each 6" piece at a 40-50 degree angle to create a slanted top for your Plant ID signs.
- 14) Dig a 1-ft deep hole near the garden for your education sign, place the 4"x4"x6' post in the hole, use concrete to secure the post in the hole and around the base of the post to prevent water from collecting and rotting post. Attach educational sign to post.
- 15) Attach each Plant ID sign to the slanted tops of the 4" x 4" x 6" pieces (using screws or adhesive). Sink the bottom of the posts a few inches into the ground in front of the appropriate plant species grouping.
- 16) Water all of the new plantings thoroughly.

