



Outdoor Classroom Project Plan: Materials List & Budget for Example Frog & Toad Habitat

A Frog and Toad Habitat should provide food sources, water, shelter, and places for frogs and toads to lay their eggs which will become tadpoles. To meet their habitat needs, this learning station will consist of two features built together as one habitat:

- 1) **Frog Pond** – A frog pond should have shallow water where frogs and toads can lay their eggs. In an outdoor classroom, the frog pond can be a pre-formed plastic pond that is approximately 3 to 4 feet in diameter and 10 to 12 inches deep with 8 to 10 inches of water and one or two pots of native marginal aquatic plants such as pickerelweed, lizard tail, arrow arum, or horsetail.
- 2) **Bog Garden** – A bog is a type of wetland in a low-lying area where water collects, often times depositing dead, decaying plant matter. Flora and fauna that thrive in a bog area prefer a moist environment, but do not require standing water (like a pond, marsh or swamp) unless the bog area recently experienced heavy rains and has not yet drained. An example bog garden can be created in your outdoor classroom by digging a hole in the ground that is 11 ft long, 8 ft wide, and 12 inches deep, placing a 10 ft x 13 ft pond liner in the hole, and filling it with layers of peat moss, sand, and compost. See page 3 for bog plant suggestions and construction instructions.

❖ Location Requirements:

- Area near a Downspout and/or Spigot** (so that you can divert rain water into the habitat and/or fill the pond and bog with water during low rain levels)
- Flat Area** (so the soil in the bottom of the bog will not flow out of the pond in a heavy rain)
- Area Approved for Digging** (must not have any utility lines under the area)
- Full to Part Shade** (be sure to choose the appropriate plants based on your sunlight conditions)

❖ Example Frog & Toad Habitats:





OC Project Plan: Example Frog & Toad Habitat Materials List & Budget

❖ Estimated Cost:

- Small Frog and Toad Habitat (4 ft x 8 ft x 1 ft → 32 CF): \$1,015-\$1,250
- Large Frog and Toad Habitat (8 ft x 11 ft x 1 ft → 88 CF): \$1,530-\$1,790

❖ Materials & Supplies with Estimated Budget:

Example (4 ft x 8 ft) Frog and Toad Habitat Materials Budget				
Station	Materials & Supplies	Estimated Cost	Source of Materials	Final Cost
Sm. Frog	(1) Can of Rust-Oleum Professional White Water-based Marking Paint @ ~\$9.98 ea	\$10	Lowe's Item #429750	
Sm. Frog	(1) Smartpond 10-ft x 7-ft (200-Gallon) Black PVC Pond Liner (~14.5 mil thick) @ ~\$49.98 ea	\$50	Lowe's Item #61250	
Sm. Frog	(1) 3 CF Bag of Fafard Sphagnum Peat Moss Organic Moisture Control (1 bag expands to 6 CF; will only use 1/2 of the bag for the bog) @ ~\$19.98 ea	\$20 total	Lowe's Item #674760	
Sm. Frog	(18) .5 CF/50 Lb Bags of American Countryside All-purpose Sand @ ~\$5.18 ea	\$95 total	Lowe's Item #104898	
Sm. Frog	(4) 32-Quart (1CF) Bags of Evergreen Organic Potting Soil Mix @ ~\$6.38 ea	\$25 total	Lowe's Item #380608	
Sm. Frog	(7) 1 CF/32 Qt Bags of Evergreen Organic Top Soil @ ~\$2.18 ea	\$15 total	Lowe's Item #648834	
Sm. Frog	(1) 1 CF Bags of Evergreen Organic Compost and Manure @ ~\$3.68 ea	\$5	Lowe's Item #380606	
Sm. Frog	(4) 2 CF Bag of Evergreen Organic Drainage and Aeration Soil Conditioner @ ~\$4.58 ea	\$20 total	Lowe's Item #648829	
Sm. Frog	(9) Bog plants (4 wildflowers @ \$7 ea (2 plants of 2 different species) and 2 ferns @ \$10 ea, and 3 groundcover plants @ \$7 ea (for berm) – see list below)	\$65 total	Nursery via OC Consultant	
Sm. Frog	(1) Aquatic Plants (see list below)	\$15	Nursery via OC Consultant	
Sm. Frog	(1) Virginia Sweetspire ...or... Clethra Bush	\$30	Nursery via OC Consultant	
Sm. Frog	(1) EarthMinded FlexiFit Universal Diverter System (to divert downspout water into rain barrel or to the hose that links to the buried soaker hose) @ ~\$35.95 ea	\$35	https://www.therainbarreldepot.com/earthminded-universal-diverter-system/	
Sm. Frog	(1) 50-gallon RTS Home Accents Flat Back Brown Rain Barrel (*optional – helps slow flow of rain water and holds water for future watering) @ ~\$209.00 ea	\$210	Lowe's Item #4057929	
Sm. Frog	(1) RTS Home Accents Black Rain Barrel Stand - (*optional – helps elevate spigot to increase water flow out of barrel and allow for room for buckets to catch water coming out of barrel) @ ~\$72.98 ea	\$75	Lowe's Item #4057926	
Sm. Frog	(1) 5/8-in x 6-ft FLEXON Light-Duty Vinyl Green Hose @ ~\$11.98 ea	\$10	Lowe's Item #812743	





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❖ Materials & Supplies with Estimated Budget (cont.):

Sm. Frog	(1) 3/8-in x 25-ft-Element Kink Free Rubber Black Soaker Hose @ ~\$15.98 ea	\$15	Lowe's Item #2626704	
Sm. Frog	(21) 11-in L x 4-in H x 6-in D Flagstone Concrete Retaining Wall Blocks (trapezoid-shaped to create 32' border around berm and 2 steps in pond) @ ~\$2.88 ea	\$60 total	Lowe's Item #477095	
Sm. Frog	(10) Old Manor 12-in L x 4-in H x 8-in D Concrete Retaining Wall Blocks (to place along the sides of the berm) @~\$2.88 ea	\$30 total	Lowe's Item #477088	
Sm. Frog	(2) .5 CF Bag of 1" American Countryside 0.5-cu ft River Rock Gravel @ ~\$5.18 ea	\$10 total	Lowe's Item #2623	
Sm. Frog	(1) 3.91-ft diameter x 12" deep (64 gal) MacCourt Black High Density Polyethylene Pre-formed Pond @ ~\$253.12 ea ...OR... (1) 2.16 ft diameter (9 gal) MacCourt Black High Density Polyethylene Pre-formed Pond @ ~\$18.28 ea	\$255 ...OR... \$20	Lowe's Item #447801 ...OR... Lowe's Item #1176703	
Sm. Frog	(1) TetraPond Pond Spitter Decoration and Pond Aerator @~\$24.97 ea	\$25	https://www.amazon.com/TetraPond-Pond-Spitter-Decoration-Aerator/dp/B00U0K7SSC/ref	
Sm. Frog	(1) Smartpond® Low Water Shut-off 80-GPH Submersible Fountain Pump @ ~\$25.98 ea	\$25	Lowe's Item #2566875	
Sm. Frog	(1) EZ-FLO Clear Vinyl Tubing (1/2-in ID x 10 ft) (to connect pump to spitter) @~\$6.88 ea	\$5	Lowe's Item #814319	
Sm. Frog	Educational Sign about Life Cycle of a Frog	\$75	Ask OC Consultant about https://www.alabamawildlife.org/oc-signs/	
Sm. Frog	(1) 6 ft. U-Post for Fence (for educational sign) @~\$10.69 ea	\$10	Lowe's Item #493054	
Sm. Frog	(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	
Sm. Frog	(2) Hillman 1/4-in x 20 Zinc-Plated Steel Hex Nut @~\$0.10 ea		Lowe's Item #63301	
Sm. Frog	(2) Hillman 1/4-in Zinc-plated Standard Flat Washer @~\$0.15 ea		Lowe's Item #63306	
Sm. Frog	(6) Plant ID Signs @ ~\$6 ea	\$35 total	https://www.alabamawildlife.org/oc-dig-into-plants/ for details	
Sm. Frog	(6) Biomarkers to hold Plant ID signs (13" stake with a 2" x 4" plate) @ ~\$3 ea (includes S&H)	\$20 total	AWF OC Consultant or https://mcgbiomarkers.com/show/	
TOTAL ESTIMATED COST: \$1,015- \$1,250				





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Example (8 ft x 11 ft) Frog and Toad Habitat Materials Budget				
Station	Materials & Supplies	Estimated Cost	Source of Materials	Final Cost
Lg. Frog	(1) Can of Rust-Oleum Professional White Water-based Marking Paint @ ~\$9.98 ea	\$10	Lowe's Item #429750	
Lg. Frog	(1) Smartpond 13-ft x 10-ft (600-Gallon) Black PVC Pond Liner (~8 mil thick) @ ~\$83.98 ea	\$85	Lowe's Item #62415	
Lg. Frog	(1) 3 CF Bag of Fafard Sphagnum Peat Moss Organic Moisture Control (1 bag expands to 6 CF) @ ~\$19.98 ea	\$20	Lowe's Item #674760	
Lg. Frog	(48) .5 CF/50 Lb Bags of American Countryside All-purpose Sand @ ~\$5.18 ea	\$250 total	Lowe's Item# 104898	
Lg. Frog	(11) 32-Quart (1CF) Bags of Evergreen Organic Potting Soil Mix @~\$6.38 ea	\$70 total	Lowe's Item #380608	
Lg. Frog	(21) 1 CF/32 Qt Bags of Evergreen Organic Top Soil @ ~\$2.18 ea	\$45 total	Lowe's Item #648834	
Lg. Frog	(2) 1 CF Bags of Evergreen Organic Compost and Manure @~\$3.68 ea	\$5 total	Lowe's Item #380606	
Lg. Frog	(12) 2 CF Bag of Evergreen Organic Drainage and Aeration Soil Conditioner @ ~\$4.58 ea	\$55 total	Lowe's Item #648829	
Lg. Frog	(26) Bog plants (12 wildflowers @ \$7 ea (3 plants of 4 different species) and 6 ferns @ \$10 ea (3 of 2 diff species) and 8 groundcover plants @ \$7 ea (for berm) – see list below)	\$200 total	Nursery via OC Consultant	
Lg. Frog	(1 or 2) Aquatic Plants (1 or 2 species - see list below)	\$15 or \$30	Nursery via OC Consultant	
Lg. Frog	(1) Virginia Sweetspire ...or... Clethra Bush	\$30	Nursery via OC Consultant	
Lg. Frog	(1) EarthMinded FlexiFit Universal Diverter System (to divert downspout water into rain barrel or to the hose that links to the buried soaker hose) @ ~\$35.95 ea	\$35	https://www.therainbarreldepot.com/earthminded-universal-diverter-system/	
Lg. Frog	(1) 50-gallon RTS Home Accents Flat Back Brown Rain Barrel (*optional – helps slow flow of rain water and holds water for future watering) @ ~\$209.00 ea	\$210	Lowe's Item #4057929	
Lg. Frog	(1) RTS Home Accents Black Rain Barrel Stand - (*optional – helps elevate spigot to increase water flow out of barrel and allow for room for buckets to catch water coming out of barrel) @ ~\$72.98 ea	\$75	Lowe's Item #4057926	
Lg. Frog	(1) 5/8-in x 6-ft FLEXON Light-Duty Vinyl Green Hose @ ~\$11.98 ea	\$10	Lowe's Item #812743	
Lg. Frog	(1) 3/8-in x 25-ft-Element Kink Free Rubber Black Soaker Hose @ ~\$15.98 ea	\$15	Lowe's Item #2626704	





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❖ Materials & Supplies with Estimated Budget (cont.):

Lg. Frog	(50) 11-in L x 4-in H x 6-in D Flagstone Concrete Retaining Wall Blocks (trapezoid-shaped to create 32' border around berm and 2 steps in pond) @ ~\$2.88 ea	\$145 total	Lowe's Item #477095	
Lg. Frog	(2) .5 CF Bag of 1" American Countryside 0.5-cu ft River Rock Gravel @ ~\$5.18 ea	\$10	Lowe's Item #2623	
Lg. Frog	(1) 3.91-ft diameter x 12" deep (64 gal) MacCourt Black High Density Polyethylene Pre-formed Pond @ ~\$253.12 ea ...OR... (1) 2.16 ft diameter (9 gal) MacCourt Black High Density Polyethylene Pre-formed Pond @ ~\$18.28 ea	\$255 ...OR... \$20	Lowe's Item #447801 ...OR... Lowe's Item #1176703	
Lg. Frog	(1) TetraPond Pond Spitter Decoration and Pond Aerator @ ~\$24.97 ea	\$25	https://www.amazon.com/TetraPond-Pond-Spitter-Decoration-Aerator/dp/B00U0K7SSC/ref	
Lg. Frog	(1) Smartpond® Low Water Shut-off 80-GPH Submersible Fountain Pump @ ~\$25.98 ea	\$25	Lowe's Item #2566875	
Lg. Frog	(1) EZ-FLO Clear Vinyl Tubing (1/2-in ID x 10 ft) (to connect pump to spitter) @ ~\$6.88 ea	\$10	Lowe's Item #814319	
Lg. Frog	Educational Sign about Life Cycle of a Frog	\$75	Ask OC Consultant about https://www.alabamawildlife.org/oc-signs/	
Lg. Frog	(1) 6 ft. U-Post for Fence (for educational sign) @ ~\$10.69 ea	\$10	Lowe's Item #493054	
Lg. Frog	(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	
Lg. Frog	(2) Hillman 1/4-in x 20 Zinc-Plated Steel Hex Nut @ ~\$0.10 ea		Lowe's Item #63301	
Lg. Frog	(2) Hillman 1/4-in Zinc-plated Standard Flat Washer @ ~\$0.15 ea		Lowe's Item #63306	
Lg. Frog	(8 or 9) Plant ID Signs @ ~\$6 ea	\$50 or \$55 total	https://www.alabamawildlife.org/oc-dig-into-plants/ for details	
Lg. Frog	(8 or 9) Biomarkers to hold Plant ID signs (13" stake with a 2" x 4" plate) @ ~\$3 ea (includes S&H)	\$25-30 total	AWF OC Consultant or https://mcgbiomarkers.com/shop/	
TOTAL ESTIMATED COST: \$1,530 - \$1,790				





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❖ Frog and Toad Habitat Native Plant Suggestions:

Customized plant identification signs with unique QR Codes that you can scan to open plant species' 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, the ecological benefits that species provides, maintenance tips, and photos of the plant including its leaves, flowers & seeds.

Aquatic Plants			
Arrow Arum	Horsetail	Lizard's Tail	Pickerelweed
Bog Plants			
Blue Cardinal Flower	Christmas Fern	Cinnamon Fern	Eastern Red Columbine
Great Blue Lobelia	Heartleaf Foam Flower	Joe-pye Weed	Lady Fern
Southern Woodfern	Spiderwort	Stokes Aster	Swamp Milkweed
Ground Cover Plants for Bog Berm			
Ajuga	Native Violets	Wild Ginger	Woodland Stonecrop

