



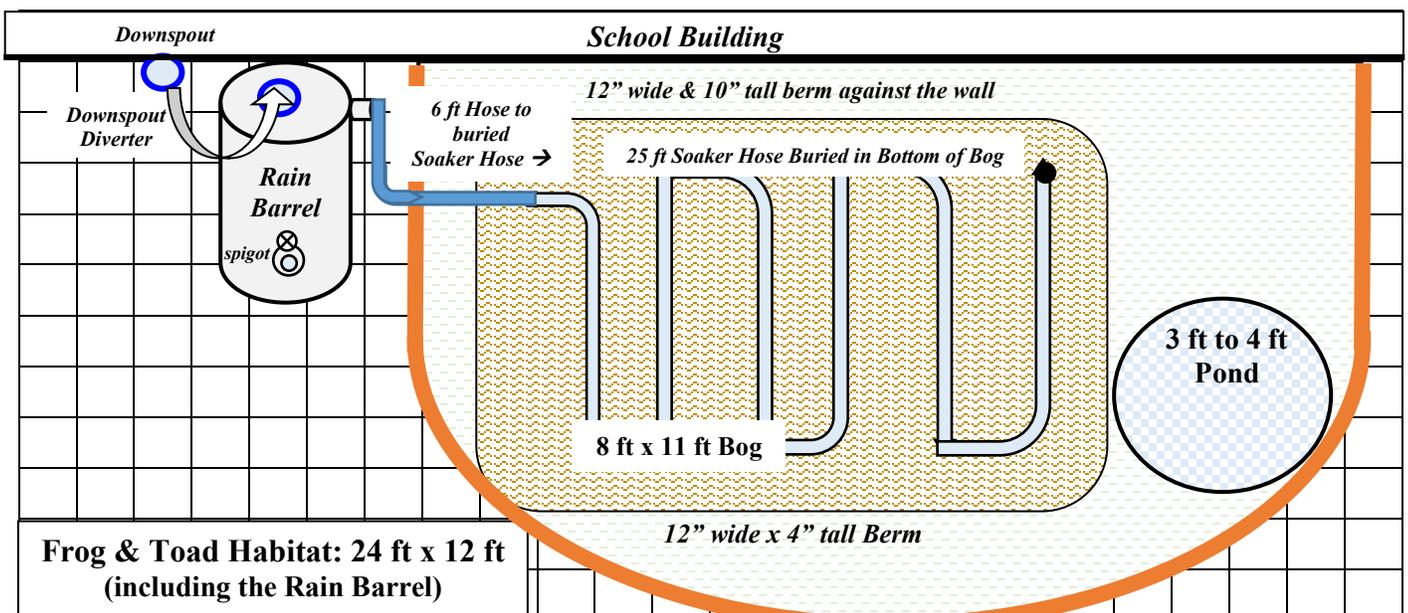
# Outdoor Classroom Project Plan: Construction Instructions for Example Frog & Toad Habitat

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

- (4) Spade Shovels for digging and (1) pick ax for removal of large stones if necessary
- (2) Wheelbarrows for moving dirt, sand & mulch
- (4-6) 1-gallon milk jugs (with tops cut off but handles remaining) for students to move dirt, peat moss, sand, etc.
- (1) 24 or 48-inch Box Beam or I-beam Level
- Water hose for filling bog and pond and for watering plants at the end of day

## ❖ Construction & Planting Instructions:

- 1) Procure tools, materials & supplies, and have them on-hand for the Outdoor Classroom Build Day.
- 2) If possible, choose a location where some of the water from a nearby downspout can be diverted into the bog. Then measure and spray paint a 17 ft x 12 ft rectangle on the ground for your Frog & Toad Habitat that positions the 17 ft along the wall with the downspout but places the rectangle approximately 4 ft from the downspout to leave room for the rain barrel. **See diagram below.**
- 3) Next measure and paint the border of the 8 ft x 11 ft bog inside the 17 ft x 12 ft rectangle allowing for a 1 ft wide berm along the outside border of the bog. **See diagram below.**
- 4) Then place the pre-formed pond to the right of the bog inside the perimeter of the frog & toad habitat, and spray paint on the ground the perimeter of the 3 to 4 ft wide pond.
- 5) Dig out dirt and grass to 12" deep inside of the spray-painted bog and pond areas. Use some of the excavated dirt to build a 12-inch wide and 4-inch tall berm around the perimeter of the bog. If the bog is next to a school building wall, build up the berm behind the bog (along the wall of the building) to 10 inches tall to prohibit water from accumulating and leaking into the school building. Then move the remaining excavated dirt to a pre-approved area.
- 6) Place the pond liner inside the bog area and mold it to the bottom and sides of the hole you dug. Leave 2-3 inches of the pond liner on the ground around the perimeter of the bog where the berm will be, and then cut away the excess pond liner.
- 7) Cut 6-inch long horizontal slits in the sides and bottom of the pond liner 6 inches from the ground level. This will allow water to seep into the ground after heavy rains and it will prohibit the top level of the bog from washing away.





## Outdoor Classroom Project Plan: Example Frog & Toad Habitat

### ❖ Construction Instructions (continued):

- 8) Place a soaker hose in the bottom of the bog with the nozzle sticking up out of the back corner of the bog that is closest to the rain barrel so that you can fill the bog with water as needed. Put rocks or bricks on top of the soaker hose if needed to hold it down.
- 9) Add layers of sand, peat moss, top soil and leaves in 2-inch increments like a lasagna, and then use potting soil and leaves to create the top layer.
- 10) Attach the downspout diverter to the downspout and rain barrel, and then connect the 6 ft hose to the rain barrel.
- 11) Connect a hose to the end of the soaking hose that is sticking out in the back corner of the bog near the rain barrel to fill up the bog with water. The water level should thoroughly soak the soil but you should not have standing water. Once the soil is soggy, the students can take off their socks and shoes and stomp around in the bog to help mix the soil, peat moss, and sand.
- 12) Place the pre-formed pond inside the hole where you want the frog pond to be. Dig more if the pond is still sticking up out of the ground. Use a level to make sure that the top of the pond is level with the ground from front to back and side to side. Use sand to level the ground under the pond if needed.
- 13) Place your aquatic plants in the pond. Keep them in their plastic pots. If you have more than one plant of each species, you can combine them into one large pot per species. If there are no holes in the pots, poke 3-6 small 2-inch holes in the side of each pot to allow the plants to suck up and filter the water in the pond. Then, pour some of the gravel in each pot around the base of each plant's stem to help weigh down the plants so they don't float.
- 14) Pour the rest of the bag of gravel around the bottom of the pond. Then stack two retaining wall blocks along the edge of the pond to help frogs enter and leave the pond.
- 15) Use a hose to fill the pre-formed pond 10" deep.
- 16) Place a single layer of retaining wall blocks around outer edge of the bog's berm to help hold it in place.
- 17) After the bog settles, add potting soil & sand as needed to fill it even with the ground around it.
- 18) Plant bog plants after the bog's soil has settled and feels somewhat firm. You may need to wait a day or two before planting to let the bog fully settle. You should also plant plants along the berm to help stabilize it as well.

