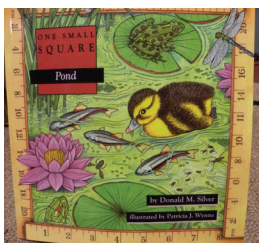


# POP-UP POND DIORAMA



This project was originally designed as an activity to go along with the book “One Small Square; Pond” by Donald Silver. Of course, it can be used without the book, too, but this book provides lots of great pictures that students can use as inspiration for their own drawings.

The project is intended to be a balance between structure and creativity. There are general guidelines and some patterns provided, but you can take the idea and run in a different direction and create your own version of it.

## General supplies you will need:

- acrylic paint (tan, light blue, several shades of green, white, brown, and maybe yellow)
- light green paint pen (if possible) for doing the duck weed dots (if you are in a group, the paint pen can be shared)
- optional: watercolor paints for doing the fish, frogs, duck and grebe
- paintbrushes of various sizes (small, medium, large, round and flat)
- high-quality colored pencils, such as Berol Prismacolor (which can color on top of the paint)
- scissors
- white glue (Elmers or something similar- avoid “school glue”)
- clear packaging tape (wide)
- ruler and pencil
- supplemental pictures of pond creatures found on Google image search

## Materials you will need for each diorama: (NOTE: Most computer printers can print on card stock.)

- a piece of white poster board (if you can get it in two thicknesses, buy the thicker one)
- the two animal pages (pattern provided) printed onto heavy card stock (110 lb paper)
- a copy of the pattern page for pop-up supports (says to print it on light blue card stock) If you can't get light blue, use white. If you don't want to buy a whole package of light blue, most copy centers will sell you just a few sheets.

**NOTE about colored pencils:** If you aren't that thrilled with the colored pencils you currently have, consider purchasing the best colored pencils on the planet. If seem a bit expensive, be assured that their high quality makes them worth every penny. The brand is Berol Prismacolor, and if you want to buy them on Amazon, here is what to type into the search box: **“Prismacolor Premier Colored Pencils, 24 Pack, Assorted Colors”** You can buy larger boxes, even up to about 150 different colors, but 24 will cover the range of what most kids will need. (If you go searching for other Berol options, please note that the “scholar” set is lower quality and the “veri-thins” have a harder lead that doesn't draw as well.)

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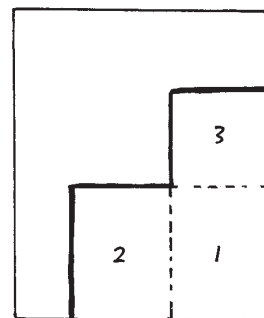
**DEMO VIDEO:** Don't forget there is a video on the website page that gives you some pointers pertaining to these instructions.

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## INSTRUCTIONS:

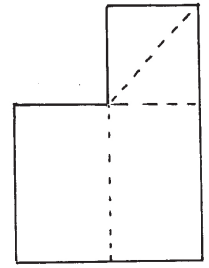
**1)** Cut out the posterboard. (This is demonstrated on the video.) Use a piece of card stock to map out the pattern as shown. Trace around a piece of paper (or better yet card stock) two times, as shown. Then use the paper sideways to draw a square on top of the first rectangle, as shown. Cut out this L shape. Make sure your cuts are as straight as possible. If the kids don't cut well, consider doing this for them.

**NOTE:** Make sure you take note of the shiny and dull sides of the posterboard. You will want to make sure that the dull side ends up on the inside, where you will paint and draw.

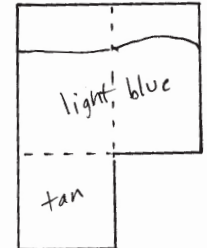


- 1-2) Trace around a Sheet of card stock (or paper) 2 times.  
3) Then create square.

**2)** Score the fold lines on the posterboard. Use a compass point, dried out pen, or the side of a scissor. Scoring the fold lines will make them bend perfectly the first time. Don't skip this step. Scoring is discussed on the demo video. Again, make sure you are bearing in mind that the dull side will be the inside. Scoring is probably best done on the reverse side, but it will be okay if it gets scored on front side. Not a big deal.



**3)** Lay the diorama out flat, dull side up. Use the pattern on the following page to draw curved edge of the pond on the right side. This is on the demo video. (If your square has ended up underneath not the curvy side but the other side, don't panic it will still go together just fine.) Then paint the area below that line with light blue acrylic paint. Double coat if necessary. If you need to speed up drying time between coats, a hair dryer will do the job in just a few minutes. This can be a life-saver when you have limited class time!



**4)** Paint the bottom square a muddy light brown or tan. Obviously, this will be the bottom of your pond.

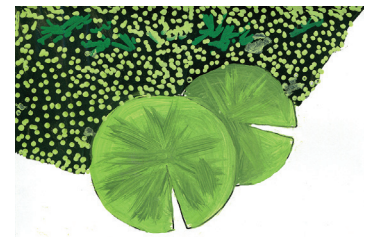
**5)** Now you are ready for the grasses along the edge of the pond. This is demonstrated on the demo video. If you have younger kids and want to skip trying to use atmospheric perspective (adjusting colors and values, as explained on the video) they can just use paints or pencils to draw in the reeds, grasses or bushes along the edge. It is best to have reference photos for them to look at. (The "One Small Square" book might be some help, too.)

Here is a summary of the three rules of atmospheric perspective as discussed on the video:

- 1) Size and detail: Closer things look bigger, further away look smaller. Closer things have more detail, further away have less detail.
- 2) Values: This means light and dark. Your darkest darks and lightest lights are in the foreground. Lights and darks in the background get closer to gray.
- 3) Colors: Your brightest and truest colors go in the foreground. Colors in the background are closer to gray.

When painting the grasses, use three layers. Do a medium value first, then do darker strokes over that, then lighter strokes as a third layer. This is demonstrated on the video.

**6)** While you still have your paints out, paint the two lily leaves, then paint that background area black. After the black is dry, you can use either a small paint brush or a paint pen (a light green paint pen works really well!) and dot in the tiny duckweed leaves. (Copy the pattern page onto heavy card stock paper, then cut out the lily corner piece.)



Notice how darkening the smaller leaf makes it look like it is underneath.

**7)** Draw a lily flower in the rectangle provided. Making it this size will ensure that it is the correct size for the lilies you painted. You can make more than one flower, too.

**8)** Next you'll need to put in all your underwater plants. There is a picture reference page here, plus you can look in the "One Small Square" book to find names of plants (in the back) and then Google them. (Encourage the students to look at their book as they plan and draw.) Berol Prismacolor pencils will draw right over the blue paint just fine. You might be able to use paint pens, but don't use regular markers.

**9)** Finish any plants along the edge of the pond. Use either paint or colored pencils. Look at reference pictures in book.

**10)** Add animals or birds along the shore line. You might want to put a heron in the background or some ducks swimming in the back of the pond. Remember scale and make them small! (Also remember not to make the colors too bright if the animals are in the background.) You might also want to add a spider web in the foreground, using a white colored pencil. What else could be peeking out of the grasses in the foreground? A snake? A turtle? A shrew? Look at the book to get some ideas. (Putting some tiny birds flying in the sky will help to make the right side look more distant, too.)



NOTE: Animals can also be drawn and colored on regular paper, then cut out and glued on. (If you are having trouble with getting the pencils to cover adequately you might want to use this cut and paste method.)

NOTE #2: It is possible to still add animals after you have the diorama put together. A little harder, but not impossible.

**11)** Next you need to do the artwork on the blue strips that will form the large pop-up supports. One of them will have the lily stems going up. Make a stem for each leaf and flower. (If you have two leaves and one flower, make three stems going up.) You will draw the lily root on the bottom of the pond after you assemble the diorama. You can also add things in and around the stems. The “One Small Square” book has info about what might be lurking on and around stems. Look for the pages where you see stems.

The other blue strip is a great place to draw water insects such as diving beetles and dragonfly nymphs. Add some tadpoles, too. You can choose whether to label them (write their names) or not. On the top surface (the part that will be in front of the duck) you can draw water striders and whirligigs.

**12)** Prepare other animals you will want to use, such as the duck, the frogs, the fish, or the grebe, or any others you want to add as pop-up features. (Don’t forget about the videos of the grebe on the YouTube playlist.) Each of these can be painted or colored with colored pencil. You might want to consider using watercolor paint for some of these. Either tube colors or pan paints (the rows of dry color circles) will work well if you add plenty of water so the color doesn’t get too intense. (Watercolors are supposed to be transparent, unlike acrylics which are best for places where you need an opaque covering.) You can do light washes of watercolor, then, when dry, add pencil on top. For example, the frogs can have a painted green background, then spots added on top. Watercolor paint will not cover lines like acrylic will. This is nice if you want to have eyes and fin lines still visible after painting.

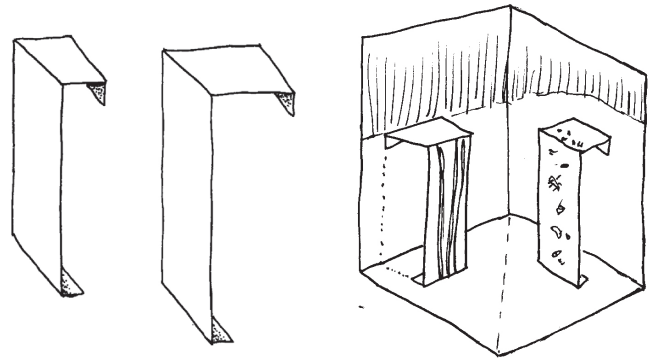
NOTE: The animals come in various sizes so you can choose whether to have them look like they are up close or far away. Or maybe some are juveniles? You have options, anyway. And you can always draw them freehand instead of using these patterns. No obligation on the patterns!

NOTE: You can choose to glue on the duck and frogs on the lily now, or you can wait until the supports are in place. Either is fine. My advice is not to worry about putting supports behind them. They can be pulled up by hand when you open the diorama. You won’t be opening and closing it enough to make it worth the trouble to put in supports.

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**13)** Now it is time to do the assembly. First you need to fold the blue strips along the thin fold lines, creating two glue tabs. Glue in place so that from the side you can see a perfect rectangle (indicated by the dotted lines in the drawing). Make sure the top is parallel to the bottom and the front is parallel to the back. (If you don’t get this quite right, what will happen is when you fold it closed, the folds will adjust and realign.)

MAKE SURE THE GLUE IS MOSTLY DRY before you try to close the diorama. (And make sure there isn’t glue leaking out from under the tabs when you press on them.)



**14)** Now you can do any other pop-ups that you want to. You might want to add a dragonfly or bird flying at the top, above the lilies or duck. Or you might want to put in some fish swimming behind the lily stems or insects. You could also put your grebe on a support. All supports will work the same way as these main ones. Just make sure that from the side you are forming a nearly perfect rectangle. You can glue in supports, then glue your finished artwork to them.



Draw your water bugs while the paper is still flat.



Sky and grasses will go here.

Cut along this line, then use either  
half as tracing template.

A single, smooth, curved line that starts at the left edge of the page, rises to a peak in the middle, and then descends to the right edge. This line is intended to be cut out and used as a template for a craft project.

This bottom section is water and  
will be painted light blue.

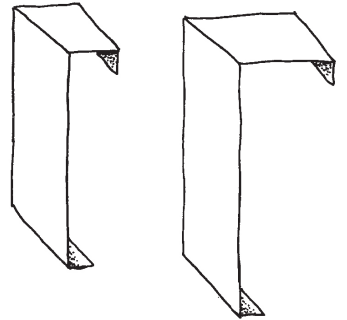
**COPY THIS PAGE ONTO WHITE CARD STOCK**

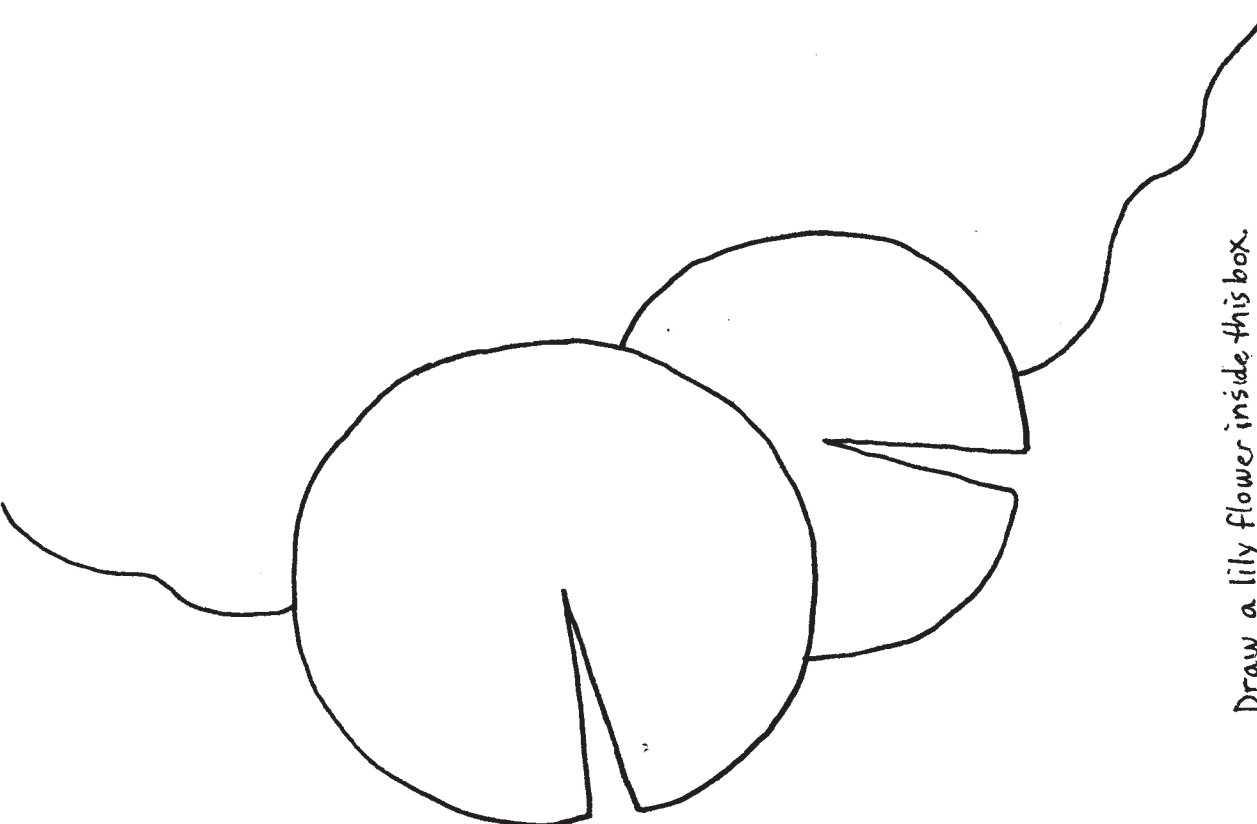


**COPY THIS PAGE ONTO  
LIGHT BLUECARD STOCK**

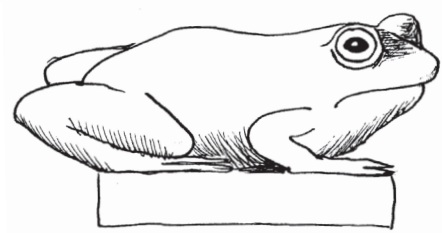
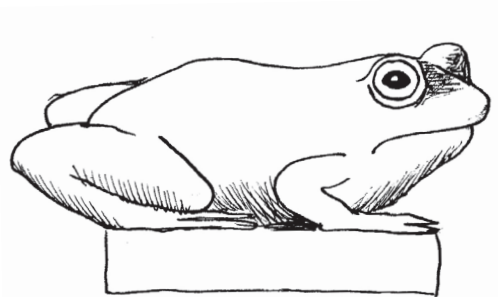
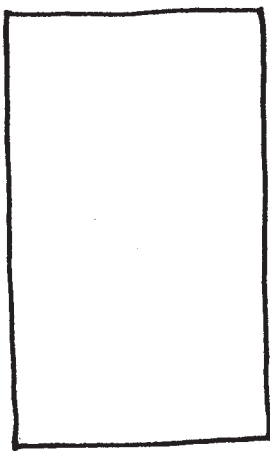
If light blue is not available, use white.

**POP-UP SUPPORTS**

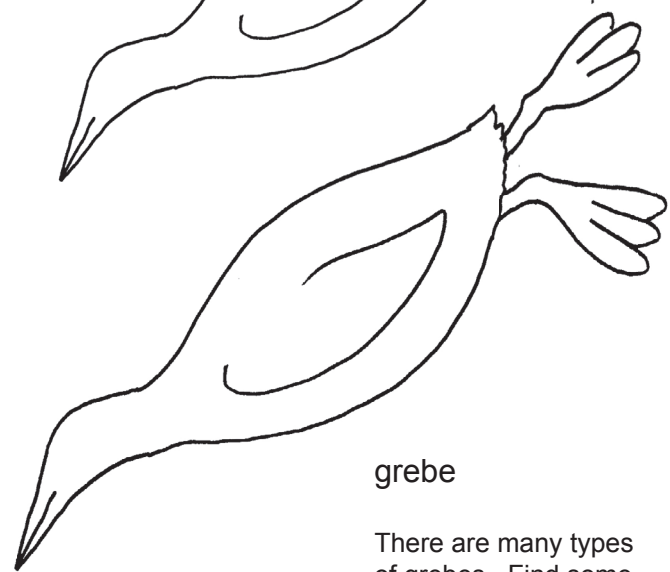




Draw a lily flower inside this box.

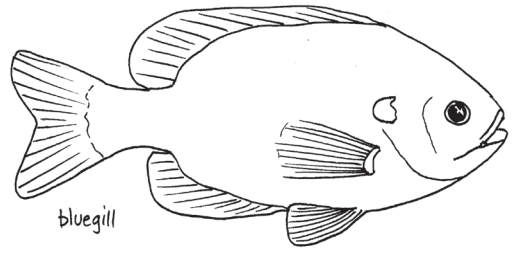
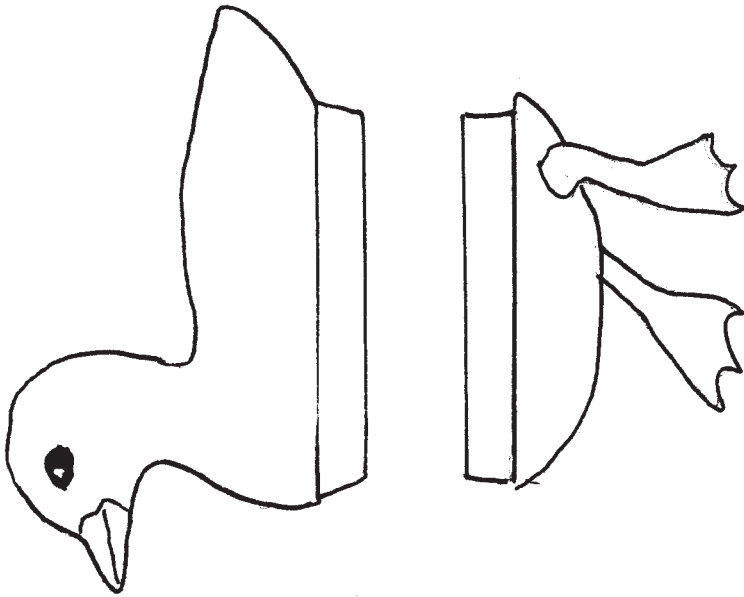


These frogs can be made into any species. Look for ideas online.

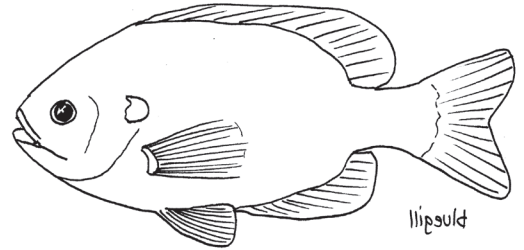


grebe

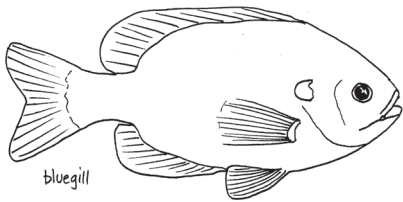
There are many types of grebes. Find some pictures online.



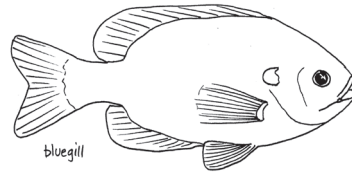
bluegill



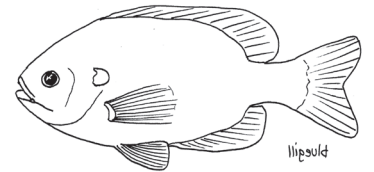
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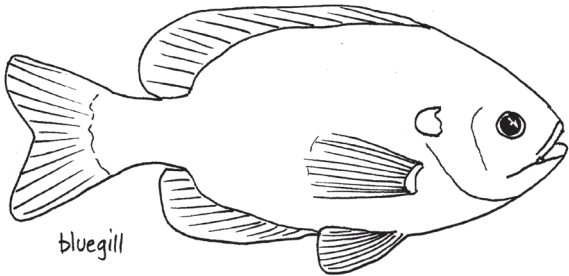
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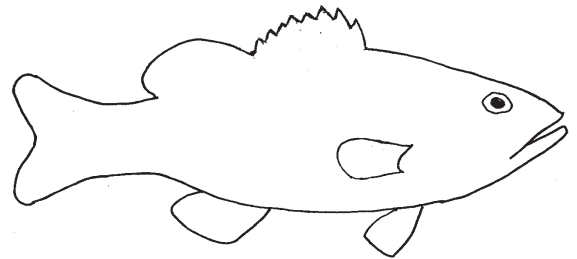
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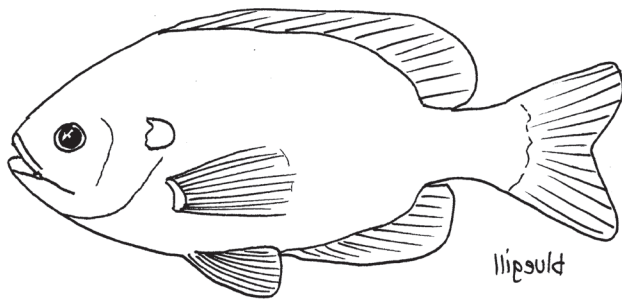
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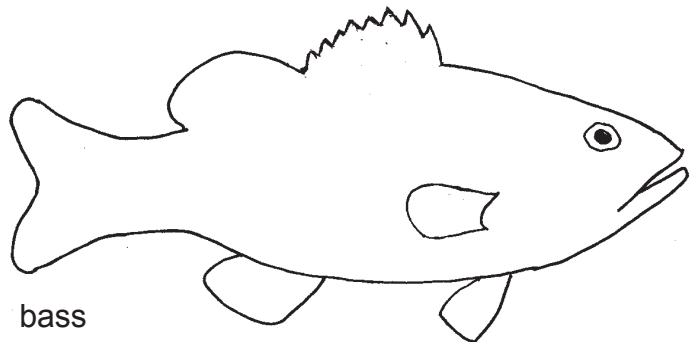
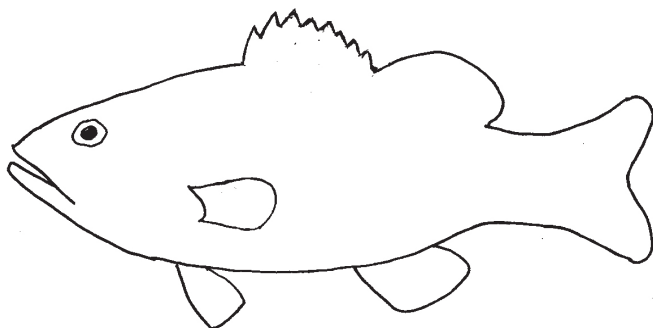
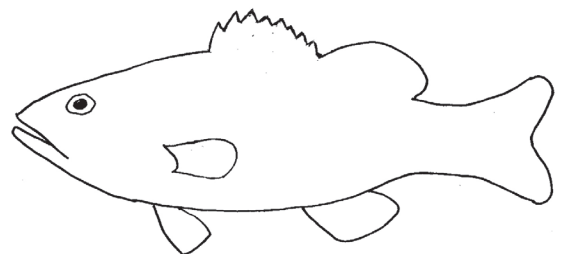
bluegill



bass



bluegill



bass

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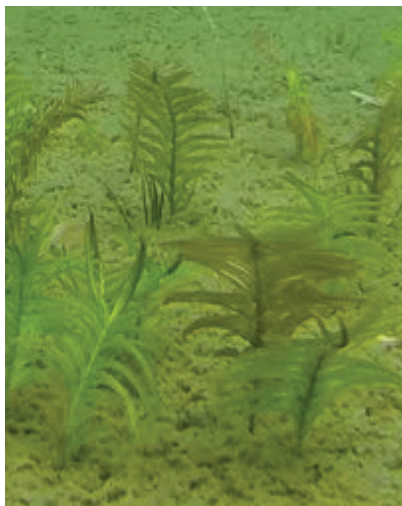
Some pictures of edge of pond.  
Use can use an image search  
to find more.







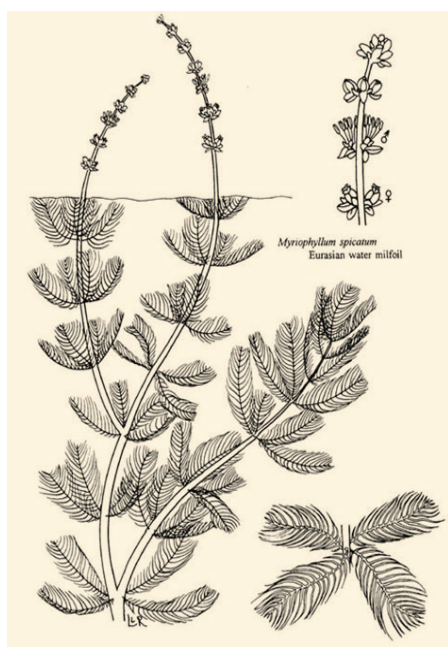
American pond weed  
(underwater)



Pond weed underwater



Narrow-leaf pond weed underwater



Eurasian milfoil



Milfoil



Milfoil growing underwater.



Mare's tails



Arrow arum



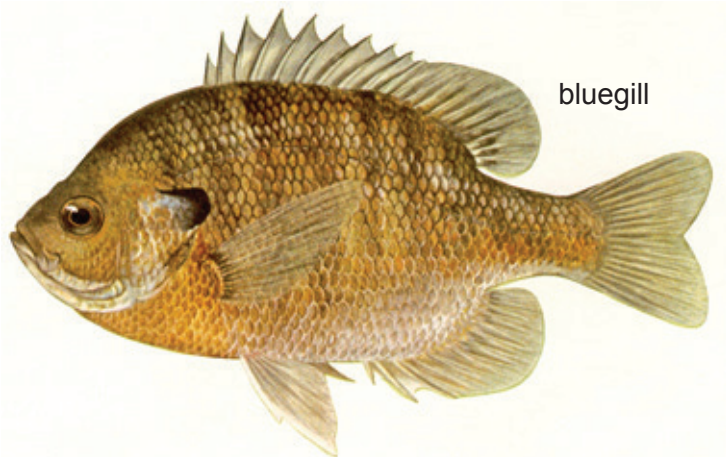
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bluegill



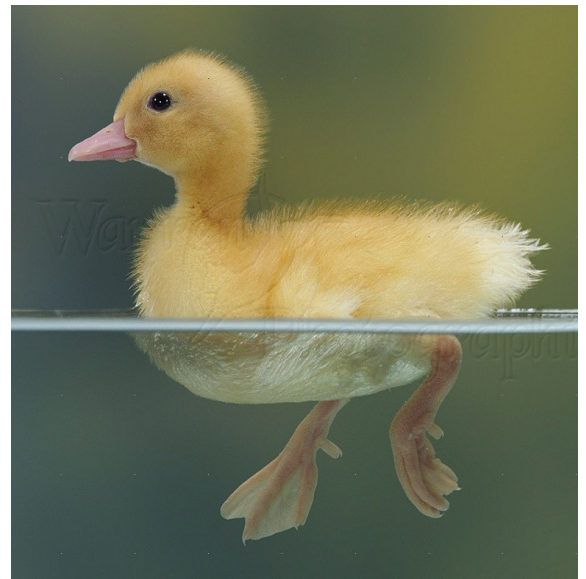
bluegill



## Some pictures to get you started



Flycatchers live around ponds.



Blue heron





The students will be able to show what they learned from the book.



Each student will work at his/her ability level, so this project can be done with a wide range of age levels.



There are many types of grebes. The students can choose a particular species for their pond.

