ACTIVITY:  
Drainage Detectives

Background:
Have you ever wondered from where the rivers get their water? Have you ever driven over a bridge and wondered where the little creek underneath leads? In this activity, students will discover the answers to these questions. Using maps, you and your students will select either a river on the North Shore of Lake Pontchartrain or a bayou on the South Shore to find all the drainage connections to this water body. If a field trip can be taken, “ground-truthing” the maps (physically finding the drainage ways that lead to the water body) can add to student understanding of drainage systems.

Objectives:
1. Use maps to determine a water body’s drainage system.
2. Make connections between tributaries and the main channel.
3. Relate features of a two-dimensional map to the actual site.

Teaching Materials:
- Map of the Lake Pontchartrain Basin with water bodies. (See link to Environmental Atlas on Lake Pontchartrain Basin Foundation’s website www.saveourlake.org).
- Copies of USGS topographic map for the particular water body. Make sure you get the right scale for the size of the water body you have chosen. (New Orleans Map Company is a good source.)
- Several sheets of tracing paper per student.
- Pencils and colored markers.

Getting Ready:
1. Prior to this activity, review the Chapter 1 activity “The Water Cycle” with the students.
2. Obtain a map of the Lake Pontchartrain Basin that shows water bodies in order to make your choice of which one to investigate.
3. Once you have chosen a water body for investigation, obtain the proper-scaled topographic map. They can be expensive, so sections of the topo map may be copied for each student.
4. Distribute maps, tracing paper, pencils and markers.
5. Review with students how to read a topo map. Use the legend on the map to understand the symbols. You can get a topo map symbol chart from New Orleans Map Company if you need more explanation.
6. Discuss the following procedure with the students before they begin their drainage detecting.

**Procedure:**

1. Put tic marks (small crosses) in pencil at each of the four corners of your map.

2. Lay a piece of tracing paper on top of your map. Using masking tape, put a small piece of tape at each corner of the tracing paper, binding it to your map. Make sure you put little pieces at each corner.

3. Trace the tic marks onto the tracing paper. This is done so that if you need to untape the tracing paper after you trace the drainage pattern, you can register it back together for future tracing.

4. Starting from the main channel, use a pencil to trace all connecting tributaries and drainage ways going out from the channel.

5. If there are names of these tributaries on the topo map, pencil them onto the tracing paper too.

6. Once you have finished tracing, untape the tracing paper and color your watershed with the markers. Use different colors for different types of tributaries (Notice that some tributaries are larger than others, and some are intermittent).

7. Identify and mark places along the tributaries and the main channel where roads cross. Look for other public access points (i.e., parks, boat launches, etc.). If you take a field trip you will want to stop at a few of these sites for ground-truthing.

**Extensions:**

1. Determine what kind of vegetative habitat is most dominant around this water body.

2. Research the kind of critters that might be found in this habitat.

3. Make a poster of the habitat with pictures of its critters in it.