FRIENDS of *Great Salt Lake*

What do wetlands do?

Background:

The wetlands around Great Salt Lake serve an important service for the ecosystem. They act as a filter and a sponge. The plants in wetlands can absorb harmful toxins that would pollute our water system, and they prevent a lot of sediment from moving into the lake. The plants absorb water through a capillary action, so if there is pollution in the water, the plants absorb that as well storing it. Wetlands also slow water down and allow it to be absorbed, preventing flooding. Wetlands are crucial to keeping our water system clean.

The wetlands are also exceptionally important for the birds that make Great Salt Lake so special. They provide important nesting and foraging habitat for over 250 species of birds. The lake is a critical link in the Pacific Flyway between North and South America. Between four and six million birds visit, feed, and nest at the lake and its surrounding wetlands.

Human development of the wetlands has greatly impacted and devastated the area in years past. Legacy highway was actually built on several miles of wetlands. Conservation of wetlands around the lake is critical for the protection of the ecosystem and its health.

Materials:

- Water
- Sponge
- jars
- celery
- food coloring
- plastic water bottle with bottom cut off
- piece of window screen to put over top of bottle
- water with sediment in it

Activity:

Go over some of the ecosystems services wetlands provide or a natural system. Talk about their ability to absorb toxins and filter pollutants. Give every group a dry sponge, some water, and food coloring. Explain how the wetlands act as a sponge for our water system. Allow the students to slowly pour the water one the sponge to demonstrate how it will absorb the water. Have them add a little food coloring to the water to show how it is absorbed as well. Let them add water until the sponge is saturated to demonstrate that sometimes when there is excessive water, even the wetlands can overflow.

Give each participant a jar, water, celery, and food coloring. Have the students fill up their container with water. Let them choose what color they would like to dye their water. Have them stir in the food coloring. Then, have them add the celery. Ask them to make hypothesizes about what they think will happen to the celery if left over night. Make sure to have them record their guesses.

Let the celery and water sit overnight. Have the students re-examine their container the next day and record observations about what has happened. The celery should have absorbed some of the water and food coloring and changed color. Explain that this is a good representation of what wetland plants can do with pollutants and toxins.

For the last demonstration, attach the piece of window screen to the top of the bottle. Then using the end of the bottle that is cut off, add a layer of gravel, then a layer of sand, and another layer of gravel. Hold the bottle over a tray, and have a student dump in the sediment water. Explain that the wetlands filter out a lot of the sediment that would otherwise make it into our water system. You can add food coloring water, too, to demonstrate that some pollution still makes it through the filtration mechanism.