**Model Wetland Demonstration**

**Objective:** Students will be able to describe the importance of wetlands in preventing pollution from entering bodies of water.

**Materials:**

* modeling clay
* long, shallow baking pan
* sponge
* watering can
* cup of soil
* jar of muddy water

**Procedure:**

Tell students that wetlands include marshes, swamps, and bogs. Ask, **“Are wetlands lotic or lentic ecosystems?”** (*Lentic, because they are standing water.*) Ask students to identify some of the plants and animals that live in wetlands. Tell students that this demonstration will show how wetlands are important in protecting bodies of water from pollution due to runoff.

Show students the model and explain that it represents land that slopes down into a lake. Ask, **“What do you think will happen if it rains on the land?”** Show them that you will pour water onto the “land” (clay). *The water will run quickly into the lake.* Demonstrate by pouring water with the watering can.

Then, place a sponge in the pan at the bottom of the clay and tell students it represents a wetland as a buffer zone between the land and the lake. Pour some water on the land again and ask the students to explain what happens when the wetland is there. *The wetland slows down the runoff and less water reaches the lake because some remains in the wetland.* Explain that wetlands can help prevent flooding in this way.

Show students the muddy water and tell them it represents pollution from agriculture and factories. Spread the soil over the land and slowly pour half of the muddy water onto the land. Ask, **“What happens to the runoff?”** (*Most of it is trapped in the sponge.*)**“How does the water in the jar look compared to the water that ended up in the lake?”** (*The water in the jar is much more polluted.*)

Ask, **“What happens if a wetland is destroyed when a new housing development or shopping center is built?”** Demonstrate the effects, by removing the sponge and pouring muddy water over the land. Have students describe their observations. *The water reaches the lake faster, and the lake becomes dirty and polluted.* Explain that without wetlands, much more pollution ends up in our water.