

## Part A: Exploring Sediment Transport Activity Worksheet

### Introduction:

A bayou is a slow-moving body of water that typically flows through flat, low-lying areas in warm, humid regions. These waterways can range in size from narrow streams to wide, marshy expanses. Bayous are an essential part of wetland ecosystems, providing critical habitats for a wide variety of plants and animals, including fish, birds, reptiles, and amphibians. The gentle water flow allows sediment to settle, enriching the soil and supporting lush vegetation. Bayous also play a vital role in natural water purification, flood control, and supporting local economies through activities such as fishing, tourism, and agriculture. Often surrounded by dense greenery, bayous are not only ecological treasures but also carry deep cultural and historical significance, especially in the southern United States, where they are closely tied to regional traditions and folklore.

### Materials:

- 1 large plastic bin (one per group)
- sand (to cover the bottom of the bin)
- water
- 1 measuring cup
- food coloring (to represent pollution)
- 1 ruler or measuring tape

### Procedure:

1. Cover the bottom of the plastic bin with a layer of sand.
2. Using your fingers or a small tool, form a trench or “river channel” in the sand that runs from one end of the bin to the other.
3. Elevate one end of the bin at about 10 degrees from the horizontal. Slowly pour water at one end of the bin and allow it to flow down the channel. Observe how the water flows and where the sand (sediment) moves as the water travels through the trench.
4. Using food coloring, add a few drops where you started pouring the water. This will represent pollution moving along with the sediment.
5. Watch how the sand moves along the channel and where it builds up. Use a ruler to measure where sediment accumulates and record your findings below.

Name:

Date:

Class:

**Observations:**

Observation Point	What Happened to the Sediment?	Average Height of Sediment Buildup
Start of the channel		
Middle of the channel		
End of the channel		

**Reflection and Discussion:**

1. Where did you notice the most sediment building up?
2. Describe what happened to the “pollution” (food coloring). Did it settle in specific areas, or did it travel with the water?
3. Why do you think sediment builds up in certain areas? Think about how water speed and obstacles might affect where sediment settles.