



OUR WETLANDS PREVENT FLOODING: FLOOD STORAGE ACTIVITY

Objective: Students will visualize how wetlands prevent flooding compared to hard surfaces without vegetative buffers

Age Group: Any

Materials Needed:

- Two hard, flat surfaces of the same size (clipboard or cutting board)
- Tape or glue
- Two square or rectangular cake pans of the same size
- 5-6 household sponges (non-scrub, enough to cover one of the flat surfaces)

Curriculum Connection:

Een.2.3: Explain the structure and processes within the hydrosphere

EEn.2.4: Evaluate how humans benefit from wetlands during rain events

1.E.2: Understand the physical properties of Earth materials that make them useful in different ways

8.E.1: Understand the hydrosphere and the impact of humans on local systems and effects of hydrosphere on humans

What you need to know:

Wetlands protect our homes and towns from flooding. During heavy rain or extreme weather, wetlands act as sponges, absorbing the excess water rushing across land surfaces and holding onto it. After the rain stops, the wetlands will slowly release the water back into the ecosystem as needed. Without wetlands, we would have a lot more flood damage! See firsthand how wetlands act as sponges with this demonstration.

- ❖ Place a single layer of sponges across one of your flat planes, securing them to the bottom with tape or glue. This represents your wetland. (see diagram of setup)
- ❖ Leave the other plane bare to represent a hard, impenetrable surface like a parking lot or roadway.
- ❖ Angle each plane in its own cake pan. The pan represents the town that your wetland (or lack of wetland) takes care of (see bottom of activity for setup diagram)
- ❖ Fill your beakers with 100 mL of water and slowly pour the water onto each plane simultaneously
- ❖ Watch how the water on the wetland soaks in, but the water on the hard surface runs right across into the “town”

Follow-up Questions:

What happened to the water in the hard surface simulation? In the wetland simulation?

What kinds of pollutants do you think end up in the water that runs across roadways and parking lots?

How do we save money by using wetlands as flood protection?

As a secondary activity, see “Wetland Soil is a Filter”

DIAGRAM OF SETUP

