Green Classroom

Watershed Pollution Activity

TEKS **Science:** 5.1(B), 5.2(C,D,F), 5.7(B), 8(D)
Social Studies: 5.6(A), 5.7(B), 5.9(B)
Reading: Students learn academic vocabulary in meaningful context, and 5.27(A), 5.28, 5.29

basin, floodplain, pollution, flow

Concept
Water flow in a watershed and the effects of non-point pollution.

Objective - Students will:
1) Identify activities around the house and yard that can cause pollution;
2) Observe the flow of water and pollutants from homes and yards into the creek and river on a watershed model and;
3) Commit to an action that will begin a habit in their personal life that will contribute to better water quality.

Time   20 minutes

Materials: Provided at the Green Classroom
- The Green Classroom's model of the Bouldin Creek Watershed
- Toy houses
- Small watering cans with a sieve on the spout
- Empty bucket to catch runoff
- Food coloring

GREEN CLASSROOM LESSON
Watershed Pollution Activity Watershed Model

ENGAGE: Ask students to place their fingers on the edge of the model and run them down to the blue line in the center. "What is this a model of? (a watershed) Becker Elementary is in the Bouldin Creek Watershed, so this is a model of the watershed, or basin, we are on. It is similar to your watershed with lots of houses, a school, and streets.

Give students a house to place on the watershed: Note the houses that are too close to the creek and will flood next time it rains. Give the owners of those houses 5 seconds to move to higher ground. "The area around the creek that floods is called the <mark>floodplain</mark>. It is not a good place to have a house."

Clean Creek Challenge poster: "The actions we take on our watershed determine whether the creek is clean or <mark>polluted.</mark>" Review the actions students can take to begin a lifelong habit that will keep the watershed clean.

Pollution at home: Demonstrate a <mark>pollution</mark> for which you are working on building a clean creek habit (e.g. you scoop the poop some of the time, but not all). Put a drop of red food coloring by your house to represent dog poop that needs to be scooped.
Students choose the action they will begin, and put a drop of food coloring by their house to represent the pollution they will be affecting.

EXPLORE
Rain on the polluted watershed:
- Remove the houses so just the pollution is left on the watershed for demonstration purposes.
- Demonstrate a light rain with a small watering can by gently pouring on your pollution for 5 seconds. Observe the <mark>flow</mark> path the pollution takes on the model.
- Give three students a small watering can. Instruct students to lightly "rain" over their "<mark>pollution</mark>" on the watershed model for 5 seconds, then pass the water to the next person. Continue until all students have had a turn.

EXPLAIN
Discuss how the pollution moves from the homes to the creek and drain into the river. "What is the name of the river the creeks drain to in Austin? (Colorado River) "Where does Austin get its drinking water? (Colorado River) Tell students drinking water goes to a water treatment plant for cleaning, but if the water becomes too polluted, it becomes more expensive to clean.

EVALUATE
Ask students to commit to working on their clean water habit so Austin's water continues to be healthy. The number of drops total earned by the class can be turned in for a prize!