



## **Town of Elkton Public Works Stormwater Management Education Program Lesson Plan # 1**

### **The Stormwater Taste Test**

**In this lesson, plan students will be able to:**

1. Understand the importance of clean water.
2. Identify hazardous materials that damage our Stormwater system
3. Define and understand what BMP's are.
4. Initiate Stormwater Management practices in their neighborhoods.

#### **Background**

A large number of residents within the Town of Elkton have limited information about Stormwater facilities and Stormwater management practices. Catch Basins and Storm drains are vital tools in directing rain and water runoff to where it needs to go. A lot of our natural rivers and waterways are in very poor and critical condition because of the hazardous materials and waste that are being dumped into our public storm drains.

#### **Materials**

1. Two clear glass pitchers about 1 1/2 gal. each
2. An ample source of clear water
3. Soy sauce
4. dead leaves & decomposing grass
5. Tootsie rolls
6. a few ounces of paint
7. newspaper & candy wrappers
8. Small plastic cups for the students
9. a large stirring spoon
10. chalk board

#### **Procedure**

1. Initiate interaction with students asking questions about their knowledge concerning Stormwater.
2. Introduce the Stormwater program to the students.
3. Give some background on the waterways that surround the town including animals and plant life that live around them.

4. Ask the students to imagine themselves as animals living in and near the water (interact with students asking what type of animals they're imagining themselves to be.)
5. Distribute cups to each individual student there and tell them they'll be conducting a Stormwater Taste Test." This test allows you to taste what the animals are drinking and swimming in every day."
6. Introduce the two glass pitchers. Explain to the students that the pitchers represent water in our bays and rivers.
7. As you start pouring water into one of the pitchers, explain the process of how catch basins and storm drains moves water directly into our bays and creeks
8. Introduce the soy sauce as being motor oil. Explain to the students how severely harmful motor oil is to our health and environment. In addition to that, inform students on how motor oil and other car oils make way to the town's bays and streams
9. Pour a generous amount of soy sauce into the pitcher (make sure all of the students can visualize this process) ask the students if they would like to try the water.
10. Introduce the paint. Explain to the students that "Paint is safe when you use it to color things, but it's harmful when poured down catch basins & storm drains"
11. Pour a generous amount of paint into the pitcher (make sure all of the students can visualize this process) ask the students if they would like to try the water.
12. Introduce the tootsie rolls as pet waste and explain to the students how harmful it is to our water and bodies.
13. Use the same format as steps 9. & 11.
14. Introduce the other hazardous materials following the same format as the others.
15. When finished adding the materials, begin to mix the materials around in the pitcher with the stirring spoon. While mixing, begin to reiterate the procedures that were previously done.
16. Draw a diagram on the chalkboard containing the pitcher and the corresponding hazardous materials. Make sure the students can identify all of the hazardous materials on the chalkboard.
17. Continue to interact with the students asking if they would like to taste the water.
18. Introduce and explain what bmp's are. Ask the students to give examples of possible bmp's they would do.
19. Give specific examples on how the students can initiate bmp's in their home and neighborhood.
20. Introduce the second pitcher. Explain to the students that the second pitcher symbolizes the catch basin & storm drain process again including the management practices we just learned.
21. Begin by filling the pitcher half way. Then introduce the soy sauce as motor oil again.

22. This time explain to the students that if everyone follows the bmp's (give examples) there won't be any motor oil going into catch basins & storm drains. Then state as a result there is more clean water.
23. Pour a generous amount of water into the second pitcher.
24. Introduce the rest of the materials following the same format as steps 22.& 23.
25. After you've gone through all of the materials, the second pitcher should be full of clear water. Proceed to ask the students if they would like to taste the water.
26. Distribute the water to the children while explaining the importance and benefits of clean water.
27. End with student responses, and a small discussion on Stormwater.