Storm Water Woes

Lesson Objectives: Students will learn how our actions have affect the natural water cycle and how properly managing our storm water can alleviate those problems.

Students learn what rain barrels are and how they are part of a sustainable set of solutions to storm water woes.

Materials:

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| Plastic Cups for Paint | Paint | Tarp |
| Paint brushes | Rain Barrel | Lab jackets (smocks) |
| Paper towels | Calculators |  |

Instructions:

Lesson (15 minutes):

1. Introduce the topic of the activity with the PowerPoint presentation.
2. The Natural Water Cycle: Briefly discuss how water naturally cycles in the environment. Before moving to the next slide, ask the students how humans may have disrupted this cycle.
   1. The goal of this discussion is to have students identify if there is more or less runoff, infiltration, evapotranspiration, etc.
   2. Ask the students about the side effects of these alterations to the natural water cycle.
      1. Flooding, erosion, nonpoint source pollution, reduced rate of aquifer recharge, combined sewer overflows.
3. Define rain barrels as a part of a set of solutions to alleviate these side effects caused by urban and suburban development
   1. Go through the list of benefits and facts about rain barrels
      1. Save drinking water: Less than 10% of all the water house holds use is for drinking! Rain barrels can reduce consumption of drinking water by collecting water for water plants.
      2. Minimize Pollution: be sure to define or have the campers define non point source pollution. (pollution that is washed into water ways during storms)
      3. Prevent Erosion
4. A couple quick calculations
   1. Help the kids solve the math problems on the next slide. Encourage campers to solve the problems on the board as a group.

Rain Barrel Painting (55 minutes):

1. Take the campers and counselors to the grassy area behind AEC 117B. (Turn right out of the room to the exit closest to Watson hall and go down the stairs next to the green roof. Take a minute to explain that green roofs are another way to alleviate storm water problems.)
2. Break the campers into two groups and give them a few minutes to plan their rain barrel design while you pour the paint into cups. Each group will paint 2 barrels.
3. Distribute paint and brushes and supervise and/or assist the campers.