

# Playing in mud puddles

[http://www.ccge.org/resources/learning\\_centre/classroom\\_activities/mud\\_puddles.asp](http://www.ccge.org/resources/learning_centre/classroom_activities/mud_puddles.asp)

## Subject

Science

## Objectives

Students will examine the effects of rainfall on different surfaces and discuss water pollution.

## Time

1 hour

## Key Vocabulary

Erosion, pollution, motor oil, contamination, fertilizer, pesticide

## Prerequisites

None

## Chapter 5 Outcomes

1, 2, 3

## Background

Rain alone can be harmful to the earth by washing away small particles of soil which may eventually cause turbidity (cloudiness) in streams and rivers. Fertilizers, pesticides, motor oil, and other toxic substances dumped onto the earth can have even more harmful effects. Our smokestacks and our cars are also a serious problem for our water. All water is part of the same system that, we need to drink and use. Much of the water in Pennsylvania eventually goes to the Chesapeake Bay, Presque Isle Bay and Lake Erie. Some of it even goes into waters in Ohio and Washington, D.C.

## Materials

Aluminum pie pans with small holes in the bottom or a vegetable strainer, 4 clear bowls, bare soil, soil with small leaves on top, sod grass, pitcher, and 1 gallon of water.

## Procedure

- Review the water cycle and the uses of water in daily lifestyles.
- Set up 3 'strainers' on top of 3 clear bowls.
- Put bare soil in one strainer, soil with leaves on top in the second strainer and sod grass in the third. Leave the fourth bowl empty.
- Pour 1 quart of water in each strainer and in bowl four. Compare the cloudiness (turbidity) of the water, the particles in each bowl and any other substance that is visible.
- Look at the different amounts of water that have made it through the strainer to the bowl.
- Measure the amount of water in each bowl and compare it to the initial 1 quart.
- Discuss the effects of soil run off in streams and rivers. Students should realize poisons used and discarded by people can follow the same water routes.

## Extension

- Go outside. Discover where the water goes when it rains. Map the route.
- Talk to your custodian or principal. Are any pesticides, herbicides, etc. used in or around your school? Are there other solutions?
- What toxic substances go down the drain in your home?

**Assessment**

Students should realize that soil can pollute water when it is washed off the land by the rain. Poisons that people use in daily life can pollute water. Make a class chart that shows what substances or actions pollute the water that runs off your school ground. Prepare a similar chart for the students to use at home. Display and discuss the charts.

**Source**

Project Teachers

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