



Buffer Benefits Readings

Instructions

Read the below readings aloud to the class, following the instructions to roll marbles as indicated throughout each reading. To calculate the pounds of pollution after each demonstration, use this conversion factor: 1 marble = 100 pounds of pollution.

Demonstration Number One: With Riparian Forest Buffer

It is August and a big thunderstorm is brewing. It begins to rain hard, and water rushes across the landscape of {Insert name of community} and downhill, toward {Insert name of local stream}. As the water flows over the land, it picks up various pollutants in its path.

Passing the grocery store parking lot, it picks up oil that leaked from cars. [Roll a handful of marbles toward the trees.]

Down the road, the land has been cleared for a new shopping center and here, the rainwater picks up sediment from the bare ground. [Roll another handful of marbles, preferably of a different kind or color, toward the trees.]

In the Whispering Creek subdivision, Mr. McKenzie just fertilized his lawn, and the water flowing across his land carries away the fertilizer. [Roll another handful of marbles, preferably of a different kind or color, toward the trees.]

[Note: Most of the marbles should hit a student and stop, without making it to the stream.]

Demonstration Number Two: Without Riparian Forest Buffer

It is August, one year later, and a new housing development has been built along {Insert name of local stream}. Because the landowners do not like the trees blocking their view of the river and want to develop additional parking areas, they have decided to clear trees. [Select all but a few students to sit down, explaining that they represent the trees that have been cut down.]

A big thunderstorm is brewing. It begins to rain hard, and water rushes across the landscape of {Insert name of community} and downhill, toward {Insert name of local stream}. As the water flows over the land, it picks up various pollutants in its path.

Passing the grocery store parking lot, as it did last year, it picks up oil that leaked from cars. [Roll a handful of marbles toward the trees.]

Down the road, the land has been cleared for another new shopping center and here, the rainwater picks up sediment from the bare ground. [Roll another handful of marbles, preferably of a different kind or color, toward the trees.]

In the Whispering Creek subdivision, Mr. McKenzie just fertilized his lawn, and the water flowing across his land carries away the fertilizer. [Roll another handful of marbles, preferably of a different kind or color, toward the trees.]

[Note: Most of the marbles should collect in the stream.]