

Kids Learn to Prevent Water Pollution at Tahoe

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Date: March 27, 2003

Through a number of innovative watershed education programs in the Tahoe Basin, our school children are learning how to prevent water pollution. The key message is that since we all live in the Tahoe watershed, and since everything eventually drains to the lake, what we do at home, at school and at work impacts our lake.

Lauri Kemper of the Lahontan Water Quality Control Board enjoys teaching these concepts by using a teaching tool called a watershed model. This tabletop display looks like a miniature neighborhood, with streets, houses, farms, businesses, and creeks and roadside ditches flowing into a lake at the bottom. As it is made of molded fiberglass, it is waterproof.

The kids are told that they can sprinkle various "pollutants" onto the model. They can put green Kool-Aid powder on the lawns and agricultural fields to represent fertilizer. They can sprinkle cocoa powder on the streets and construction sites to represent eroded soil or sediment, and instant tea crystals on the yards and parks to represent animal waste. They can put chocolate syrup on the streets to represent oil leaks and other chemical or pesticide spills.

The real fun starts when the spray bottles of water are handed out, and the kids are told to make it



"rain" on the watershed. Kids of all ages love to spray the water down on the miniature community, and watch the runoff from the impervious surface collect and transport all the pollutants into the lake at the bottom. And of course, the color of the water in the lake becomes a disgusting cloudy dark brown.

The lesson is complete when the kids are told that all water pollution at Lake Tahoe happens in this way. There are no factories or wastewater treatment plants to discharge waste materials into our creeks or the lake. The formal name for the type of pollution that threatens to ruin Lake Tahoe is nonpoint source pollution. This name was bestowed 30 years ago by the Clean Water Act to describe pollution that comes from our everyday activities, from land use, from construction sites,

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and from eroding soil. The authors of the Clean Water Act went on to define the solution to this type of pollution as “Best Management Practices” (BMPs).

The watershed model can also be used to demonstrate the effectiveness of simple BMPs. Green felt strips representing grassy swales are laid below a construction site to trap and filter sediment (the cocoa powder). The felt or grass also absorbs the fertilizer when small quantities are placed directly on it. Fences are used to keep cattle from streams. When the spray bottle comes around a second time, sediment, fertilizer and animal wastes are trapped in place, away from streams and lakes.

Using the watershed model as a tool, students learn about nonpoint source pollution and bring that information home to teach their parents about how to prevent water pollution. For more information on how to introduce environmental education lessons into your local schools, call Jill Sarick, regional coordinator, Adopt-A-Watershed, (775) 832-4167.
