HOW TO: BUILD A MODEL WATERSHED

SIMPLE PROJECTS FOR CONSERVATION

It’s a simple matter of gravity: Water runs downhill. This model watershed offers a clear visual demonstration of how water picks up sediment and pollutants as it flows — and that simple measures can reduce the amount of polluted runoff that ends up in your watershed.

This is a good project for talking with school children about water pollution and what they can do to prevent it. It’s also a great indoor conservation project and travels well to expos and county fairs.

Materials

- Disposable aluminum cake pan or a plastic bin
- Florist foam
- Aluminum foil
- Model farm animals (cows, pigs)
- Small models of barns, houses, industrial buildings
- Permanent markers (e.g., a Sharpie®)
- Watering can or spray bottle
- Chocolate pudding/hot chocolate mix
- Lime gelatin mix
- Orange gelatin mix
- Straw
- Small pieces of artificial turf
- Craft glue
- Plain modeling clay (colored clay will run when wet)
- Sponges
- Bucket

REQUEST TO READERS

If you build a project based on this or other Outdoor America articles, or if you have an idea for a good conservation project, please e-mail us at oa@iwla.org.

ILLUSTRATIONS BY BOB DRY/WWW.DRYSPOND.COM

1. Develop Land: Create your landscape inside the cake pan using green florist foam (available at craft stores). Buy blocks and round pieces of foam and arrange them to represent two tall mountains on the outer edges of the pan. A river should run between the mountains down to a lake. Make a shallow depression for the lake to hold water.

2. Cover Ground: Cover the entire landscape with a large piece of aluminum foil. Start from the middle and gently press the foil into the hills, valleys, and waterways. Fold the foil over the edge of the pan to help hold everything in place. You may need multiple sheets of foil.

3. Run a River Through: With a permanent marker, draw the outline of the river running through the middle of the mountains and the lake at the bottom.

4. Build: Put in land-use areas by placing model homes, barns, factories, and animals around the watershed, from the hills to the lakeside. You may need craft glue to hold these in place. Draw roads, fields, and other landscapes to tie the community together.

5. Pollute: Sprinkle chocolate pudding/hot chocolate mix near animals to show manure and/or near construction sites to show exposed

Three-step landscaping: Sculpt foam inside a cake pan, cover it with foil, and outline a river and lake.
A Few Talking Points

- A watershed is an area of land that drains water, sediment, and pollutants into a common body of water. For example, the Chesapeake Bay watershed is thousands of square miles of land and waterways that all eventually drain into the Chesapeake Bay. A watershed can also be a very small area that drains into a local pond or stream.

- Pollution on land in the watershed eventually ends up in the water. Fertilizer, pesticide, and manure run-off from farms and yards can put potentially harmful chemicals and pathogens in rivers and lakes. Incorrect disposal of household and industrial chemicals can lead to deadly chemicals in waterways. Excess sediment from construction sites can wash into streams, smothering fish eggs and the bottom-dwelling bugs fish eat.

- Healthy watersheds and clean water are important to protect the rivers, streams, and lakes we use for drinking water, recreation, and fishing.