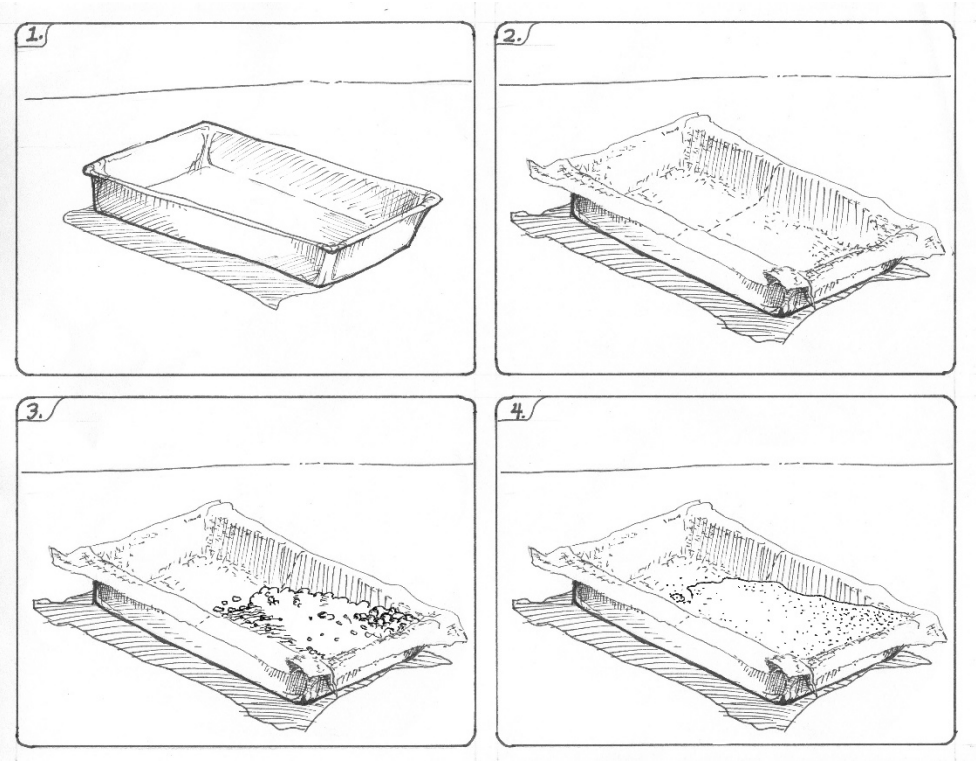
Materials for activity:

Clear plastic tray (at least 4” deep)
Dry sand
Gravel
Powdered red drink mix
Small cups
Paper towels
12” rulers or similarly sized flat pieces of wood

These materials are for the basic activity provided in this handout. However, other materials can be used to come up with your own scenarios to highlight point and nonpoint source pollution.

Instructions for Nonpoint Source Pollution Groups

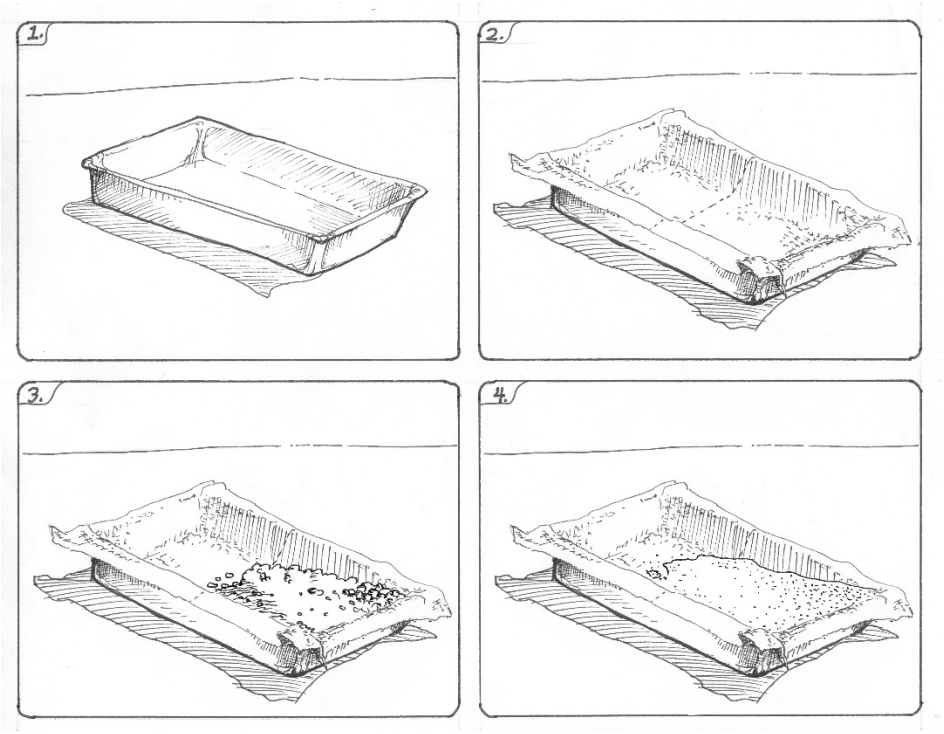
1. Begin building the model by putting a paper towel on the bottom of the container. Make sure that several centimeters of the towel are draped over the edge of the container.
2. Place 3 centimeters of gravel on the bottom of the tray atop the paper towel. Create a gradual slope across the surface of the gravel creating an empty space at one edge of the tray representing a lake (see box 3 below).
3. Place a loose, thin layer of sand over the gravel.



4. Spread 20 grams of powdered drink mix over the sand. The drink mix represents a pollutant such as pesticides or fertilizers.
5. On your data sheet, predict what will happen when rain falls on your landscape.
6. Sprinkle warm water on top of your landscape. Observe and record on your data sheets what happens to the pollutant as the water spreads across and through your landscape. Compare the results to your predictions.
7. Observe the paper towel you placed under the gravel. What happened to it? How and why do you think this occurred? Record your observations and conclusions on your data sheets.
8. As a group, write down a list of 3-5 questions you have about what you observed.

Instructions for Point Source Pollution Groups

1. Begin building the model by putting a paper towel on the bottom of the container. Make sure that several centimeters of the towel are draped over the edge of the container.
2. Place 3 centimeters of gravel on the bottom of the tray atop the paper towel. Create a gradual slope across the surface of the gravel creating an empty space at one edge of the tray representing a lake (see box 3 below).
3. Place a loose, thin layer of sand over the gravel.



4. Put 20 grams of powdered drink mix in a small cup and dissolve it with water. The drink mix represents a pollutant such as from a leaking gas tank.
5. On your data sheet, predict what will happen to the pollutant when it is "discharged" or spilled onto the ground.
6. Place a 12-inch ruler or similar sized piece of wood across the pan over the sand layer of your landscape. Poke a hole in the bottom of a second plastic cup then balance the cup on the ruler.
7. Pour the dissolved pollutant into the cup perched atop the ruler. The dissolved "pollutant" will spill onto the layer of sand through the hole in the cup. Record your observations of what happens on your data sheet. Compare the results to your predictions.
8. Observe the paper towel you placed under the gravel. What happened to it? How and why do you think this occurred? Record your observations and conclusions on your data sheets.
9. As a group, write down a list of 3-5 questions you have about what you observed.