Runoff

**Purpose**
To simulate how pollutants move from the land into the ocean.

**Materials**
- Grass
- Red food coloring
- Tap water
- Soil
- Trowel
- Cookie Sheet
- 2-quart (2-L) Pitcher
- Long, shallow baking pan

**Procedure**
1. Place the baking pan on the ground.
2. Place one end of the cookie sheet on the rim of one long edge of the baking pan, and use a mound of soil to raise the other end of the cookie sheet about 4 inches (10 cm) above the rim of the pan.
3. Cover the surface of the cookie sheet with soil.
4. Use the trowel to dig up five or six small clumps of grass. Then set these on the soil-covered sheet.
5. Squeeze five to six drops of food coloring near the base of each clump of grass.
6. Fill the baking pan half full with water.
7. Fill the pitcher with water.
8. Hold the pitcher at the raised end of the cookie sheet and slowly pour the water across the soil at the raised end of the cookie sheet.
9. Observe the color and contents of the water as it washes into the pan.
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Results
Water from the pitcher, along with bits of soil and red food coloring, wash into the pan.
Why? Sources of pollution such as trash and oil spills are very visible and publicized, but one source that is very damaging to some coastal areas is polluted runoff (the part of precipitation that washes from the land into bodies of water). Runoff becomes polluted when rainwater runs across farmland, highways, city streets, lawns, mining areas, or any polluted place on the land. Fertilizers, pesticides, salt, oil, and all kinds of chemicals dissolve or float in the water and are carried to their final dumping place: the ocean. In this experiment, the red food coloring represents the pollutant