

Runoff

http://www.ccge.org/resources/learning_centre/classroom_activities/runoff.asp

Purpose

To demonstrate how rain affects topsoil.

Materials

- Dirt
- Red powdered tempera paint
- Measuring spoon, teaspoon (5 ml)
- Funnel
- Coffee filter paper
- Wide mouthed jar, 1 qt. (1 liter)
- Measuring cup, 1 cup (250 ml)
- Stirring spoon

Procedure

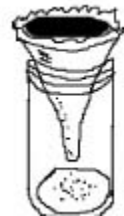
- Add 1¼ teaspoon (1.25 ml) of red tempera paint to 1¼ cup (75 ml) of dirt. Mix thoroughly.
- Set the funnel in the jar.
- Place the coffee filter inside the funnel.
- Pour the colored sand into the paper filter.
- Add 1¼ (75 ml) of water to the funnel.
- Observe the water dripping into the jar.
- Pour this water out of the jar and add another 1¼ cup (75 ml) of water to the funnel.

Results

The liquid dripping out of the funnel is red.

Why?

The red paint represents nutrients in topsoil that are soluble in water. Nutrients dissolve in rainwater and feed the plants growing in the soil. If the rain is too heavy, the water runs across the land, taking the dissolved nutrients with it. Excessive rains can leave the topsoil lacking in necessary nutrients.



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