

# Dirt Pudding

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## Standards of Learning

Science 3.1, 3.7

## Objective

Students will:

- model the major components and layers of soil using pudding.

## Materials

- Clear plastic cups
- Vanilla cookies, semi-crushed
- Vanilla pudding
- Graham crackers, crushed
- Butterscotch pudding
- Chocolate cookies, semi-crushed
- 1 gummy worm per student
- Chocolate pudding (mix with chocolate cookies, semi-crushed)
- Shredded coconut (dyed green)

## Background Knowledge

There are three main types of soil—sand, silt and clay. When all three are mixed together they create loam. Humus, anything in the process of decaying, is the organic matter found in soil. In this activity, students will layer pudding and cookies to model the major components and layers of soil.

This lesson will review the layers of soil as they are in the ground. On the bottom is bedrock, which is the parent material for the soil that will not be shown until erosion or an earthquake exposes it to the world. Next is subsoil, which is mostly sand/silt and clay. This is where most of the nutrients are found and deep plant roots will come here for water. Next is topsoil, which is where plant roots grow and animals live. This is sometimes called the organic layer where decomposers recycle dead plants and animals into the top layer. On top is humus, which includes more decomposing organic material.

## Procedure

1. Give each student a plastic cup.
2. Have students layer the ingredients in the following way:
  - ¼" layer of vanilla cookie (semi-crushed for larger crumbs)
  - ½" layer of vanilla pudding
  - ½" layer of graham cracker crumbs
  - ½" layer of butterscotch pudding
  - ¼" layer of chocolate pudding / chocolate cookies mixture
  - sprinkle of dyed coconut (enough to cover top layer)
  - gummy worm
3. Discuss what each layer of food represents in reference to soil layers
  - vanilla cookie (semi-crushed) = rock
  - vanilla pudding / graham cracker crumbs / butterscotch pudding = subsoil
  - chocolate pudding / chocolate cookie (semi-crushed) = topsoil

Or you could break it down as follows:

- vanilla cookie (semi-crushed) = rock
  - vanilla pudding = sand
  - graham cracker crumbs = silt
  - butterscotch pudding = clay
  - chocolate pudding / chocolate cookies (semi-crushed) = topsoil with humus
4. Enjoy dirt pudding!

