



DIY THE **Mud Layers**
SOIL + WATER = MUD

It's soft, sticky, cold, and probably the easiest thing on Earth to make. You can play with it in so many creative ways: build a mud house, bake mud pies, and — best of all— squish it between your toes on a hot summer day!

But what is mud really made of? This simple experiment will show the different types of soil that makes mud.

MATERIALS

- Dirt or mud
- Water
- Glass or plastic container with lid

INSTRUCTIONS

- 1 SCOOP MUD INTO CONTAINER**
Fill a glass or plastic container about half full of mud.
- 2 FILL WITH WATER**
Fill the remainder of the jar with water, nearly to the top, but leave room for shaking. Close tightly with a lid.
- 3 SHAKE**
Shake the jar until all the mud and water are mixed.
- 4 LET SIT**
Leave the jar untouched for several hours or overnight. The soil sediments will separate to reveal what your mud is made of.

After your jar has settled, you'll see four distinct layers: water, clay, silt, and sand.

Age Level: 3-7 (elementary).
Duration: 10 minutes (minimum).
Key Definitions: Clay, silt, sand.
Objective: To learn and identify different soil layers in mud.

GOOD MUD OR BAD MUD?

Mud is judged by its ability to grow plants. Most plants thrive in a soil mixture of 20% **clay**, 40% **sand**, and 40% **silt**.

If your mud has too much or too little of each type of soil, you can amend the soil with organic material, such as compost, to help your plants grow!

WATER

It can mix with soil to make mud but the soil won't dissolve. Water will always separate from mud and rise to the top of the jar. This is part of the evaporation process.



20%

CLAY

It's a soil made of fine particles and organic material. It is what makes mud sticky. Plant life struggles to thrive in clay, despite being the lightest of the soil types.

40%

SILT

It's a granular material, often made of quartz and feldspar. It is lighter than sand, but heavier than clay, making it settle in the middle of the jar.

40%

SAND

It's not just on the beach! All soil contains some particles of sand created from the erosion of siliceous rocks. It is the heaviest, causing it to fall to the bottom of the jar.