

LANDSLIDE TYPES



Landslides are generally classified by their movement type (topples, slides, flows, and creeps), as well as type of material (rock, debris, soil). Sometimes, more than one type of movement happens within a single landslide, making classification more complicated. These are known as complex landslides.



A **TOPPLE**, or fall, involves the abrupt free fall or downslope movement of heavy blocks of material, at a very steep angle.



A **SLIDE** involves the failure of material at depth, so that the entire mass slides along the shearing surface (slope).



A **FLOW** is a landslide where the material has been saturated and deformed, so that the mass travels downslope as a viscous fluid.



CREEPS involve slow downslope movement or gradual deformation—but not failure—of the soil slope. Creeps occur over long periods of time.

MAKE A LANDSLIDE !



The composition of a landslide affects the way it damages or changes the environment. Model a few simple landslides by following the instructions below!

Supplies you will need:

- Sand
- Gravel
- Small rocks
- Disposable cups
- Tape
- Scissors
- Several books
- A large plastic tub, casserole dish or baking sheet
- A piece of plastic downspout (available at most hardware stores). In a pinch, you can craft a chute out of cardboard, and coat it with glue or wax to make it water-resistant

1

Tape one end of the plastic chute to the bottom edge of the container and prop the other end up on a pile of books.

2

Using scissors and tape, create several houses out of paper or cardstock. Use a template from online or create your own. Place the finished houses inside of the container, in front of the chute. Predict whether any of the houses will be safe from the landslide. Which do you think will be most damaged?

3

Make sure that the sand and chute are slightly damp before you begin. Then, use a disposable cup to pour a large volume of sand down the chute. If the angle is too shallow, add more books or tilt the chute with your hands. Record what effect the landslide has on your houses, then reset and repeat the experiment with the gravel, and then rocks.

4

Repeat the experiment one more time with the sand and gravel, but this time add water to the mixtures to create different consistencies. Did adding liquid affect the extent of the damage?