



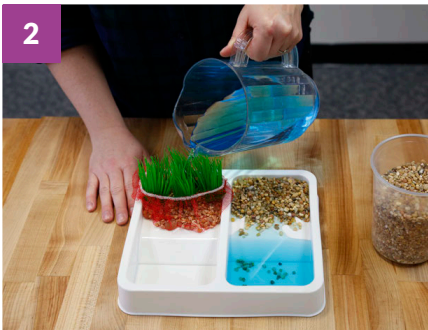
EXPLORING EARTH

Land Cover

Try this!



1 Slowly pour water over the side of the tray that just holds pebbles. What happens to the pebbles?



2 Now, slowly pour water over the side with plants and pebbles. Do you notice a difference in what happens?



3 Share your observations. What happened to the pebbles on each side of the tray? What holds the pebbles in place?

Try this at home!

Follow the instructions on the worksheet to make your own land cover map at home and learn how you can share data with researchers who collaborate with NASA!

The movement of water over a landscape is a constant force of change.

Different types of land cover interact with water moving over the landscape in different ways. This activity demonstrates how plants help slow runoff and prevent erosion. The water in the tray without any plant material moves more quickly and carries more sediment. The side with the plants absorbs some of the surface water and the mesh (the roots) help stabilize the soil.

Changes due to erosion and runoff sometimes occur slowly and naturally as wind and water move over the land. However, urban development and other human impacts can result in rapid loss of protective vegetation. When weather events, like tropical storms and hurricanes, dump water onto streets, sidewalks, or other developed land, the water moves more quickly and carries more sediment particles—like soil, sand, and rocks.



Some cities use storm water planters to manage street runoff and improve water quality.

NASA scientists use observations from Earth and space to monitor changes and make predictions about the future of our planet. Data collected from satellites, such as the joint NASA/USGS Landsat satellites, help improve our understanding of Earth's land cover. For example, a researcher with a flood observation group used Landsat data to convince his community to reject a public housing development project that was in a floodplain.



NASA also collects information about land cover from Earth. People in museums and schools can participate in citizen science programs to photograph and classify land cover in their area and share the data with researchers who collaborate with NASA.

Orbiting high above Earth, the Landsat 8 satellite monitors huge areas.