



# EXPLORING EARTH

## Rising Sea

### Try this!



Place the plastic cover over the basin. Use a marker to trace around the outside edge of the island landform.



Add water to the basin until it comes up to the first mark. Now, trace around the edge of the landform where it emerges from the water. Is your line in the same place?



Keep adding small amounts of water and tracing the coastline until you have created a *topographic map*. Why do you think it's important to track changes in the coastline?

## *Sea levels are rising on Earth, submerging land, and causing coastlines to recede.*

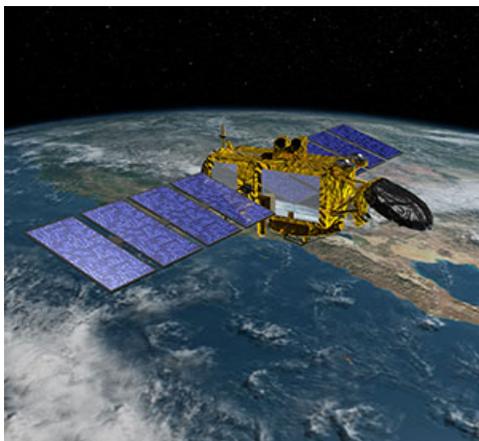
**Rising sea levels will have consequences for life around the world.** Many people and animals depend on the ocean and on stable coastlines. In this activity, you made a simple map documenting the effect of rising water on land. As water levels rise, land is submerged.

Rising sea levels are caused by climate change. As the Earth warms, the ocean absorbs heat and expands. Glaciers and ice sheets on land melt, adding water to the ocean. Within our lifetime, we'll see major changes to ocean coastlines.



**Residents of Tonga share an urgent message about the danger climate change poses to their Pacific island nation.**

**Scientists are monitoring sea levels, providing information that can help us prepare for and adapt to changes.** Researchers keep a long-term record of sea surface height to predict how rapidly sea levels are rising and how those changes will affect coastal areas and communities.



**Every second, Jason-3 bounces thousands of radar pulses off Earth to measure sea level.**

For example, NASA's Jason-3 spacecraft uses radar to measure the height of the ocean. The satellite also records wind speeds and wave heights. These data help scientists determine how climate change is affecting the world's oceans and develop accurate models of what will happen in the years to come. It's up to all of us to take this information into account and plan for the future.