



TEACHER GUIDE

MAPS OF EARTH'S SURFACE GRADES K-2

COMMON MISCONCEPTIONS

- **Landforms don't change.**
Landforms such as valleys and mountains change over long periods of time – which is hard for students to understand at a young age. Volcanoes and earthquakes can change land much more quickly. Stress to students that mountains and islands were formed over many, many years – and it takes a long time to observe the changes.
- **Volcanoes appear randomly.**
It is common for elementary students to believe that volcanoes randomly appear around the Earth. While students will not be able to grasp tectonic plates at this age, you can help them understand that there is a reason why volcanoes appear in certain places where openings in the land are more easily formed.
- **Maps are accurately colored photographs.**
A common misconception is that maps that show certain colors for a landform or country accurately reflect the actual appearance. Students likewise may be surprised that a country colored orange on a political map is not actually an area of orange land. Reinforce to students that mapmakers select bright colors to help draw the viewer's attention and differentiate among many distinct features.

TYPES OF MAPS

Physical maps show landforms and natural features of Earth. A political map shows countries, cities, states and other boundaries. Some maps show roads and routes to aid in navigation. Topographic maps show elevation. Maps can also blend these features, such as a globe that shows landforms and political boundaries.

LANDFORMS

Landforms are natural features of Earth's surface. Most landforms were formed over long periods of time, such as mountains and canyons. Other landforms can be formed quickly through violent and rapidly occurring events, such as a crater from an impact. Examples of landforms include: islands, coast, mountains, forest, beaches, lakes, rivers, oceans and volcanos. Landforms slowly change over time due to erosion, earthquakes, eruptions and other events. Geologic time is always a difficult concept for students – it's best to keep it simple and tell students they take a very long time to form and change.