



Making Mountains

Mountains form on Earth through volcanic activity and when tectonic plates collide.

The plates may collide and crumple up against each other (Himalayan mountains), or one plate can slide under another plate, pushing the top plate upwards (Andes mountains). This mountain building happens over many millions, even billions of years as the tectonic plates shift around due to continental drift.

Himalayan Mountains

The Himalayan Mountains between China and Tibet (including Mount Everest) were formed where two continental plates collided head-on and the plates 'buckled' upwards or sideways to form mountains.

The building of the Himalayas started about 50 million years ago, when the Indian tectonic plate had drifted up and collided with the Eurasian tectonic plate. The greatest growth of the Himalayas has occurred over the last 10 million years. The Himalayas continue to grow today, and Everest gets higher each year.

Andes Mountains

The Andes Mountains are being formed where the Nazca tectonic plate is sinking under the South American tectonic plate (a process called subduction).

The Nazca plate is an oceanic plate (covered with water). As it sinks under the South American continental plate (the South American land mass), it causes large earthquakes and forces the South American plate upwards into a mountain range.

The Nazca oceanic plate is thought to be more dense, so it sinks under or subducts the lighter South American continental plate.

Scientists are unsure whether the magma that fuels the volcanic activity around the Andes comes from the melted Nazca plate, or other sources.

More Information

Formation of Folds in the Earth <http://www.earth.monash.edu.au/OpenDay/goldendyke.html>

United States Geological Survey—This Dynamic Earth
<http://pubs.usgs.gov/publications/text/understanding.html>

United States Geological Survey—Convergent Plate Boundaries
<http://geology.wr.usgs.gov/docs/parks/pltec/converge.html>