

MOUNT EVEREST

AND ITS ASCENT



THE MAKING OF MOUNT EVEREST

Millions of years ago neither Mount Everest nor the Himalaya existed. These high mountains were created by movement of tectonic plates.

According to the theory of plate tectonics, the surface of the Earth is broken up into a series of plates, which move around on the surface of the earth.

When the dinosaurs still dominated the Earth, the Indo-Australian plate began moving northwards. About 50 million years ago, the Indian continent (carried by the Indo-Australian plate) started to collide with Eurasia. This began to squash and thicken the edges of the plates and the result of this cataclysmic collision was the buckling up of the land to form the Himalaya. This vast mountain range stretches approximately 2,414 km (1,500 miles) and is home to the world's highest mountains.

In fact, the story doesn't end there because the Indo-Australian plate continues to move northwards, carrying India with it, which pushes up the mountains further. This means that even today Mount Everest and the Himalaya are actually growing higher.

The base of Everest is made up of metamorphic rocks, known as schists. These are rocks that started as muds and sands that have been crystallised as a result of the collision. Higher up the mountain is a there is also a huge band of granite.

Nearer the top of the mountain, the rocks are mainly sedimentary. For example, within a few hundred metres of the summit is a formation known to climbers as the 'Yellow Band'. This layer of shale, sandstone and limestone is made up of marine silts, clays and animal remains. In the past these formed the bed of the ocean that separated India from Asia before the collision of the plates. However, during the collision these deposits were lifted up to more than 8000 meters (over 28,000 feet) above sea level.

The actual summit of Mount Everest stands at 8,848 metres (29,028 feet). It has the shape of a huge triangular pyramid. This type of mountain summit is known as a pyramidal or horn peak. It has three knife-edged ridges running down from it, known as arêtes. The summit is made of limestone and many sandy layers. When climbers stand on the summit and look out from the roof of the world they are perching on the remains of millions of years old marine animals and plants!