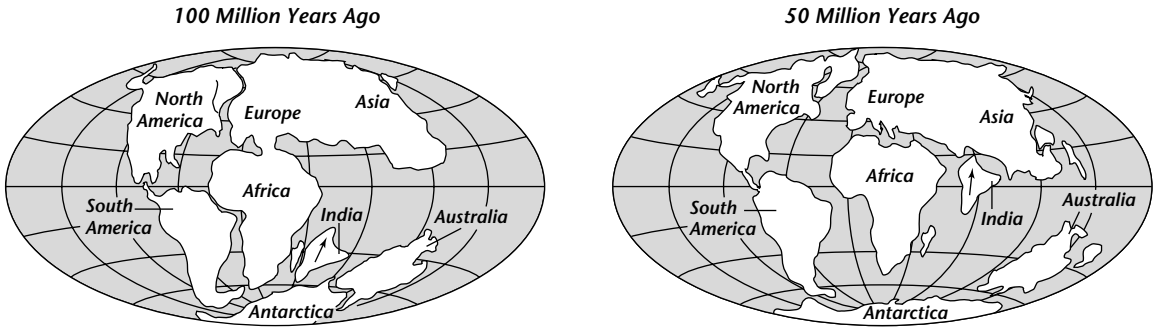
Name _____ Date _____ Class _____

The Birth of the Himalayas



The greatest challenge for mountain climbers is Mt. Everest, whose peak rises 8,872 meters above sea level. This is the highest mountain in the world, though many mountains around it are almost as high. Mt. Everest is in the Himalayas, a series of massive ranges that extends 2,500 kilometers across South Asia north of India. The Himalayas cover all or part of the countries of Tibet, Nepal, and Bhutan.

A climber on the high slopes of Mt. Everest would probably be surprised to learn that the region was relatively flat about 40 million years ago. It was then that two continental plates collided. The plate carrying India had been moving northward for millions of years. The oceanic crust in front of it was slowly subducted under the Eurasian plate. But when the two continents collided, subduction stopped because India could not sink into the mantle. Instead, it pushed crust upward and downward. The Himalayas were one result. Thus, the Himalayas are actually pieces of plates broken and lifted up because of the collision. Another result of this collision was the movement of China eastward, as the movement of India northward pushed the Eurasian plate in front of it. The collision is still occurring today. In fact, the Himalayas are growing in elevation at a rate of about 1 centimeter per year.

Answer the following questions on a separate sheet of paper.

1. Where are the Himalayas?
2. What was the area of the Himalayas like 40 million years ago?
3. How did the movement of plates create the Himalayas?
4. What else resulted from the collision of those plates?
5. What type of plate boundary exists today along the Himalayas?
6. If the Himalayas continue to grow in elevation at their present rate, how tall will Mt. Everest be in one million years?