

Erosion of Rocks

Even though we might think that a large chunk of rock, especially like a rocky mountain, is a permanent part of the landscape, in reality it is constantly changing just like everything else on earth. Mountains, huge boulders and even grains

of sand seem permanent to us because they change slowly over time. Rock material is broken down, loosened, dissolved and transported elsewhere through erosion. Erosion is an important part of the life cycle of rocks which can span hundreds of thousands of years. Without the forces of erosion to transport and move worn away rock elsewhere, rock debris would accumulate in place.

A major type of erosion is water erosion. Flowing water in springs, streams and rivers is constantly affecting the area around it. Flowing water washes away sediment and fast moving water has enough force to carry heavier objects. Torrential floodwaters of a river can rip away trees along the bank or even carry away homes if the water rises high enough. Fast flowing water is capable of carrying sediment which might contain loose rock fragments, sand and clay particles. These items suspended in the flowing water rub against rocks on the bottom and sides of the river or stream, wearing them down.

Water erosion carries sediment, rock particles and dissolved minerals downstream where they can eventually become sediment in the ocean. Or these particles can be deposited on land. Remember that the Ancient Egyptians relied on the annual flooding of the Nile River to bring fresh sediment to their farm fields. The mighty Colorado River carved the Grand Canyon due to water erosion.

Although we think of sediment as the material at the bottom of a lake, river or the ocean, sediment is defined to be any eroded material, no matter what its location is. Wind erosion transports sediment through the air and deposits it elsewhere. Sediment in the air further erodes rocks as the wind carries it by. Wind erosion occurs more often in dry desert-like areas. In fact, prevailing winds carry sand particles across the Atlantic Ocean to North and South America when there are major dust storms in the Sahara Desert of Africa.

Receding glaciers transformed the North American continent thousands of years ago. We still see the effects of glacial erosion in rock strewn areas throughout the United States.

