Erosion

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Nature is always changing. Those changes are called natural events. Some natural events happen quickly. Sometimes a fire can start when lightning strikes a tree. But other events occur slowly, such as when as when rocks in a river are worn down over hundreds of years and made smooth, as tiny parts of the rock come off as water washes over it. The same thing can happen when wind hits rocks again and again, slowly tearing off tiny parts from the air washing over them.

Erosion is the name given to that very slow change and can happen from moving air or water. Have you ever seen waves crash against rocks on the shore? The water can wash away small pieces of rock. As more waves hit the rocks, the pieces become even smaller. Eventually, if the process continues, those pieces will add up to sand, but it takes a very long time.

Ice can also cause erosion. Some mountains have solid sheets of ice near the top. During warmer weather, a bit of ice melts. Then the sheet of ice may move slowly down the mountain. As the solid ice moves, it scrapes rocks, breaking off pieces.

Wind also causes erosion. Wind can blow sand and dirt. It can carry the dirt far away. In some places, strong wind will push sand against rocks, and over a long period of time, the wind wears down those rocks.

Water in rivers causes erosion, moving sediment in front and peeling it from the sides, sometimes carving out a canyon, such as the Grand Canyon, but also moving material and depositing it at some further point, like the opening to the ocean.

Over millions of years that water and wind have been affecting the planet, they’ve carved out the amazing features like canyons, arches and natural bridges that we see. Scientists use our models of how wind and water works to try to make sense of features on other planets, such as Mars.