Mountains, Rocks, and Sediment

At the same time that some processes push mountains up, other processes wear them down. At Earth’s surface, water and wind break rocks apart and move the pieces away. As long as mountains are pushed up faster than they wear down, they grow taller. For this reason, young mountains tend to be tall and steep. But eventually mountain-building processes slow, then end. Water and wind take over. Given enough time, all mountains become rounded hills, and then they are gone. Countless mountains have formed and worn away throughout Earth’s long history.

Rocks break down into loose pieces that can be carried by water or wind. These pieces are called sediments. For example, sand on a beach is sediment. Thick layers of sediments can build up in low-lying areas, such as valleys, lakes, or the ocean. Pieces of sediments form sedimentary rock as they are pressed together or joined by natural cement.

The land becomes flatter as mountains wear down and valleys fill with sediments. If tectonic plates were to stop moving, eventually the surfaces of all the continents would be completely flat.