Finding Fossils

One day in 1988, Thad Williams, an eight-year-old from Mill Sap, Texas, was walking along when he noticed a strange-looking rock in a dry creek bed. It turned out to be part of the skull of a large dinosaur. Soon, paleontologists had unearthed three 15-foot dinosaurs from the rock wall of the creek bed. Thad was lucky. When you send the Science Seekers paleontology team out into Vastland it can’t just pick up any rock and expect to find a fossil. Fossils are actually very rare.

If fossils are formed deep underground in sedimentary rock, how do they get up to the surface where paleontologists can find them? First, uplift caused by plate tectonics brings the rocks that contain fossils from deep underground up closer to the surface. Then a second process, called erosion, takes over. Over thousands of years wind, water, and other elements wear away the solid rock surrounding the fossils. The best fossil sites are ones where small parts of fossils are actually sticking out of rock on the ground or in a hillside.

How Fossils Reach the Surface

It takes thousands of years for a fossil that was formed in sedimentary rock deep underground to make its way to the surface.

1. Bones buried in dirt or sand get buried under more layers of sediment. Over time, the bottom layers harden into sedimentary rock. At the same time, the bones become fossils.

2. Plate tectonics causes the layers of rock to be uplifted. Some fossils that were deep underground are now much closer to the surface. At the same time, wind and water begin wearing down the rock on the surface.

3. As a river carves its way through the rocks, it creates a river canyon. The sides of the canyon look a little like a layer cake.

4. With a little help from wind and rain, the river wears away the rock in the walls of the canyon. Over many years, fossils buried in the rock are exposed.