

P.p1 found at the
bottom rock layers of



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0px; text-indent: 36. 0px; font: 12. 0px ' Times New Roman'; -webkit-text-stroke: #000000}span. s1 {font-kerning: none}An integral part of understanding the geological features of the Grand Canyon is to know the timeline of different layered rocks in the present location. Current characteristics of the Canyon portray 277 miles of geologic formations that span a mile deep and 15 to 18 miles wide (National Park Service, 2009). Also, the formation of bedrocks makes up the Grand Canyon region even before the formation and layering of rocks (National Park Service, 2009). There is igneous rock in the Grand Canyon that was formed from the cooling of hot mantle material, especially in the inner canyon region.

Granite and Basalt are the most common types of igneous rock material found in the Grand Canyon and are the result of ancient volcanic activity that spewed lava onto the surface of the earth. These igneous rocks form the bedrock of the Canyon, which is then built on by layers of sedimentary rocks. Such rocks were formed over a billion years ago.

Image 1 helps provide information on the essential timelines that shaped the geological history of the Grand Canyon. The upper rock layers in the Grand Canyon are predominately sedimentary layers that are the result of the flow of the Colorado River. The development of sedimentary rocks originate from compacting and solidifying various properties, including rocks and chemical attributes. Furthermore, properties such as organisms that have perished were also solidified into forming sedimentary rocks.(National Park Service,

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2009). These particles were brought in by the flow of the Colorado River and as they accumulated, they hardened into rock layers.

The Grand Canyon has three major types of sedimentary rock, including sandstone, shale, and limestone. Shale is found at the bottom rock layers of the Canyon, but also in some of the upper. Image 3 provides a depiction of which types of rock are evident in the Canyon. Sandstone and shale are composed of particles, while limestone is more of a chemical formation. Interestingly, the composition of limestones in the Grand Canyon come from calcium carbonates which are mostly formed in deep water (National Park Service, 2009). This is the evidence that many scientists and geologists use to create the theory that the rock formations were formed at around under sea level and that the Canyon has increased in elevation because of tectonic activity.

The sedimentary nature of the rock makes it easier for water flow from the Colorado River and carves different levels. This is what has allowed the water flow to carve such a drastic canyon into the Colorado Plateau.