

Grand Canyon Geomorphology: Overview

GPH 112: Overview of the Grand Canyon Geomorphology labs



The above 4 minute video overviews the structure and content of the Grand Canyon Geomorphology labs based on the geovisualization of the rock types and topography of the Grand Canyon.

OVERVIEW OF THIS LAB

The Grand Canyon can be a difficult landscape to absorb. There is just so much going on. Our task as designers of this lab is to guide your learning to not feel so overwhelmed by the complexity. Ultimately, that is the learner objective of this entire lab -- to learn how to break down something incredibly complex into "bite size" pieces that can be understood at a 100-level.

Please take a minute to watch this video and try to identify different aspects of the landforms you are seeing.

Grand Canyon: Aerial Flight by Escalante and Cardenas Buttes



Now, please take 30 seconds to see how this landscape is portrayed in the geovisualization that you will need to purchase ... **Grand Canyon Rock Formations and Topography:**

https://gamejolt.com/games/2BC_GrandCanyonRocksAndTopo/461813

https://gamejolt.com/games/2BC_GrandCanyonRocksAndTopo/461813

in this youtube video:

<https://www.youtube.com/watch?v=lpkCVlu3I9M> <https://www.youtube.com/watch?v=lpkCVlu3I9M>



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and also try to identify different components of the Grand Canyon landscape.

There is just so much going on with this short list just for starters.

- the plateau surrounding the canyon
- the layers of rock (strata) in the canyon
- the cliff faces
- ramps made up of steep slopes and less steep slopes
- tributary canyons of different shapes and sizes
- giant mountains inside the canyon (called Temples)


Our goal for you is to guide you to understand a few of the different parts of the geomorphology story of the Grand Canyon. Then, hopefully, these parts can coalesce for you a bit by the end of the labs and then some more when you next visit the Grand Canyon in person.


After you watch the opening presentation (and take the quiz) and then finished the tutorial quiz, you will gain access to labs that break down the Grand Canyon into separate pieces. The very last lab on the Origin of the Grand Canyon gives you a chance to put some of the pieces together. All of the labs are based on the geovisualization as a means for you to interact with and interrogate the Grand Canyon landscape:


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These are the geovisualization labs in the next section.

 **Grand Canyon Geomorphology: What comes first ... last?**
7 pts | Submit

 **Grand Canyon Geomorphology: Cliffs and their Retreat**
4 pts | Submit



 **Grand Canyon Geomorphology: Rates of Change Part 1**
6 pts | View

 **Grand Canyon Geomorphology: Rates of Change Part 2**
12 pts

 **Grand Canyon Geomorphology: Origin of the Grand Canyon**
3 pts | Submit

Some students have found helpful two presentations about the Grand Canyon made for the 1 credit Arizona Landscapes course. They both will ask you for a **logon: landforms** and **password: rock**. Both presentations are Adobe Presenter, and sometimes require refreshing to start -- and if it gets stuck, you jump to slide 2 to get the audio going.

These are NOT REQUIRED. There are no questions asked about these presentations. They are just overviews of the Grand Canyon that have helped some students.

<p><u>Professor Ron Dorn's Arizona Landscape lecture on the Grand Canyon</u> <u>(https://www.asu.edu/courses/gph211/ArizonaLandscapes/PublishGrandCynIntro/)</u></p> <p>logon: landforms password: rock</p>	 <p>(https://www.asu.edu/courses/gph211/ArizonaLandscapes/PublishGrandCynIntro/)</p>
<p>Professor Phil Larson (a former Ph.D. student of ASU) presenting <u>an overview of the strata (layers of rock) and geomorphic landscape</u> <u>(https://www.asu.edu/courses/gph211/ArizonaLandscapes/PublishGrandCanyonHike/)</u> in the Grand Canyon:</p> <p>logon: landforms password: rock</p>	 <p>(https://www.asu.edu/courses/gph211/ArizonaLandscapes/PublishGrandCanyonHike/)</p>

