Explain this – The erosion of the Grand Canyon

Video summary	Before watching the video	During the video
Liz Bonnin introduces the Grand Canyon with its complex and very ancient geology. The Grand Canyon was carved out of rock by the Colorado River over millions of years. The strata of the canyon are discussed to explain what the layers tell us about how the canyon formed. Every human step into the canyon represents about 20,000 years' worth of erosion.	Locate the Grand Canyon on a map of the USA and ask students to write a locational description. Look at images of the Grand Canyon and ask students how they think it was formed. Talk about the Colorado River and ask students what processes help to shape a river environment. **Introduce key terms such as:** **Geologist:** A scientist who studies geology. **Canyon:** A deep narrow valley with a river flowing through it. **Erosion:** The process where natural forces like wind, water, or ice wear away and transport soil, rock, and other materials from one location to another. **Strata:** Layers of rock or sediment. **Sedimentary rocks:** Rocks formed from the accumulation of sediment.	You may wish to stop at relevant points during this short film to pose questions and check understanding or wait until the end. Useful questions might include: • Where is the Grand Canyon? • What has created the Grand Canyon? • How long has erosion been taking place? • What do the different layers of rock tell us? • What are strata?

After watching		
Discuss with students whether their predictions were correct about how the Grand Canyon was formed. Introduce the concept of erosion and how this can be categorised into four types: abrasion, attrition, hydraulic action and solution. Students should draw diagrams of each type of erosion. Ask students what types of erosion may have caused the Grand Canyon to be formed. Look closely at images of the Grand Canyon. This is a good opportunity to practice field sketches. Ask students to sketch what they can see and to annotate the processes that have happened. The sketches could be drawn from different angles to demonstrate this dynamic landscape. Ask students to predict what the Grand Canyon will look like in the future. Students could draw a storyboard to demonstrate how the Grand Canyon was formed and how it will look in the future, using clear geographical vocabulary to describe each step of its formation.		
Curriculum notes	**Where next?**	**Links**
This topic appears in Geography at KS3 (Hydrology) and KS4 / GCSE (Rivers and water) in England, Wales and Northern Ireland and National 4/5 in Scotland.	Investigate the Grand Canyon further. It is a major tourist destination, but also a location of huge importance to many indigenous communities such as the Hualapai who are located in the western Grand Canyon Region of Arizona. Students could research why tourists visit the Grand Canyon, the activities that tourists do there and why there may be conflict between the indigenous communities, tourists and the government.	History of the Grand Canyon: https://www.bbc.co.uk/newsround/47362852 River processes: https://www.bbc.co.uk/bitesize/guides/zq2b9qt/revision/1 Erosion, weathering and mass movement: https://www.bbc.co.uk/bitesize/guides/zcjprdm/revision/1