How have physical processes impacted the landscape of Yorkshire?

Video summary	Before watching the video	During the video
Julia Bradbury visits Malham Cove in the Yorkshire Dales to explain how the landscape has changed: the area was once ancient woodland but is now characterised by limestone paving. The clip explains how the limestone pavement is formed, including the significance of ice and glaciers. It includes an animation of how the area was once underwater and how the seabed was impacted by tectonic movement, becoming desert, then being covered in ice, and eventually - millions of years later - becoming the landscape that is seen today.	Locate Malham Cove in the UK and show images of the location to students. Ask students to write a locational description of Malham Cove. Ask them to identify what they can see in the images and whether they can predict how this landscape was formed. If you have pieces of limestone available for students to examine, this would be useful. **Introduce key terms such as:** **Clints:** A block forming part of a natural limestone pavement. **Grikes:** A crevice or crack between clints. **Limestone pavement:** A horizontal or gently sloping expanse of bare limestone which consists of large blocks called clints that are separated by grikes.	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: • What type of rock is this landscape formed from? • What are clints and grikes? • What types of plants live in the grikes? • What does this landscape used to look like? • How has this landscape changed over time? • What evidence is there that this location was once covered in water? • What type of rock is limestone?

After watching
Discuss with students whether they were correct in their predictions of how the landscape was formed. Look closely at the clints and grikes to see whether students can identify the differences between them. Use online mapping to look closely at the limestone pavement at Malham Cove, ask students to describe the landscape.

Task students with creating a storyboard on how the landscape has changed over time from being an area covered in water to what it looks like today. This storyboard will help students to describe how the landscape was formed. The animation towards the end of the clip will help with this and can be paused at each stage to help break down the formation of this landscape.

Other examples of limestone pavements could be looked at such as the Burren in County Clare, Ireland, the Stora Alvaret in Öland, Sweden, the Great Northern Peninsula on Newfoundland, and the Désert de Platé in the French Alps. Students could make comparisons between Malham Cove and these landscapes.

Curriculum notes	Where next?	Links
This topic appears in Geography at KS3 (Geological processes) and KS4 / GCSE (UK Landscapes) in England, Wales and Northern Ireland and National 4/5 in Scotland.	Examine igneous and metamorphic rocks – how they are similar and different to the sedimentary rocks we have examined in this film. Look at a geology map of the UK, can igneous and metamorphic rocks be found in the UK? Is there a pattern to where they are found. What characteristics do igneous, metamorphic and sedimentary rocks have? If samples of these rocks are available, hand these out to students. Can students classify these rocks based on the characteristics discussed?	Limestone pavement: https://www.bbc.co.uk/scotland/education/int/geog/limestone/surface/limestone_pavement.html Upland limestone landscapes: https://www.bbc.co.uk/bitesize/guides/zvp82hv/revision/3 Distribution of UK rock types: https://www.bbc.co.uk/bitesize/guides/zsg639q/revision/2 The formation of sedimentary rocks https://www.bbc.co.uk/programmes/p019bqfp