

Video summary	Before watching the video	During the video
<p>The Lake District is England's largest National Park and covers an area of 912 square miles (2362 square kilometres).</p> <p>Within the area of national park can be found England's highest mountain, Scafell Pike (3210 feet/978 metres), and England's largest lake, Windermere.</p> <p>The Lake District is of significant cultural and economic importance and attracts millions of visitors. In 2019, its modest population of 40,000 people was visited by 20 million tourists. In recent years Lake Windermere has suffered from algae blooms, which can occur naturally but are made worse by a combination of high temperatures, the presence of nutrient-rich sewage, and run off from farmland and septic tanks.</p> <p>In its natural state. Windermere is naturally an oligotrophic lake, which means it is low in nutrients and high in oxygen. The rise in nutrients from pollutants is transforming the lake into a eutrophic state, causing low oxygen levels and detrimental impacts on wildlife. The pressure of visitors is a contributing factor to the pollution, damaging the environment that attracts tourists in the first place.</p>	<p>Recap what students know of the Lake District. Locate it on a map and ask students to explain why it is such an iconic landscape and its importance as a National Park.</p> <p>Ask students to suggest what the impact of large visitor numbers might be on the environmental health of the lakes as well as other detrimental factors.</p>	<p>If students have not been fully introduced to the terms oligotrophic and eutrophic, reinforce these terms when they appear and check students' understanding.</p> <p>Ask students to identify any other words and phrases during the film that would be useful to create a glossary and to note causes and impacts of the environmental threats affecting the lakes.</p>

After watching

- Using their glossary and understanding of causes and impacts, students could work in pairs to create a diagram and short presentation, explaining the causes and impacts of eutrophication in Windermere.
- Students could map evidence of algae blooms in Lake Windermere as provided by the [Environment Agency](#) onto digital maps. They could then discuss the relevance of the dates and locations of recorded incidences.

Curriculum notes	Where next?	Links
<p>All these short clips build on students' understanding of human and environmental interactions and provide opportunities to practice geographical skills such as enquiry, mapping and fieldwork.</p> <p>At KS3, students can learn more about how human and physical processes interact to influence, and change landscapes, environments and the climate. At KS4, the film supports understanding about fluvial environments, flooding hazards and climate change, environmental management and fieldwork investigation.</p> <p>The film might also be used for example, to contribute to studies of small-scale eco-systems (CCEA), how human activities modify processes and interactions within ecosystems (WJEC), and the impact of conflict between social, economic and environmental needs (SQA). This clip could be used to support the delivery of geography to KS3 and KS4 students. Specifically, this topic appears in OCR, Edexcel, AQA KS4/GCSE in England, WJEC Progression Step 4/5 in Wales, CCEA GCSE in Northern Ireland and SQA S4/5 in Scotland.</p>	<p>Using the evidence from the film and other research, such as newspaper articles, ask students to create a list of facts explaining the situation. Which factual statements can they be certain are true and why? Where has the evidence come from and is it verifiable from other sources?</p> <p>Ask students what the long-term impact of this pollution might be for the region as a whole in environmental, social and economic terms. What workable solutions might they propose? There may be local opportunities for fieldwork investigating the impacts of tourism and/or agricultural practices on local environments.</p>	<p>KS3: Causes of climate change GCSE: Ecosystems – pollution and nutrient cycles GCSE: Resource management - water GCSE: Managing impacts of climate change GCSE: Environmental challenges GCSE Geography - exam practice Bitesize Careers: Jobs that use Geography</p>