

Assessing the Impact of Damming and Reservoirs: a fieldwork project for post-16 students focusing on the Troutbeck reservoir, Lake District

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In this fieldwork project, an assessment of the impact of damming and reservoirs is explored:

- Through discovering why there are ghosts in Manchester's water
- Through critically evaluating Troutbeck as a potential site for damming and a reservoir

Designed for post-16 students and specifically linked to Edexcel A specification:

Aim: **To understand how water is managed in the Lake District**

Objectives:

- To understand and describe physical and human impacts of reservoirs
- To understand the need for hard engineering
- To know what happened to Wythburn - using OS map and enquiry skills
- To investigate new locations for a reservoir – using OS map and different field techniques
- To link water management in the Lake District and UK with other countries

Synoptic links:

- Building on **1.2 Fluvial Environments –1.2.3** The need for, and methods of, managing river processes
- → **Synoptic Link: The hydrological is used and managed (regional/local scale)**
- = The reasons for and methods of groundwater and river management in countries in different states of development
- = Decision-making issues related to management of the hydrological cycle.

Resource list (in running order of the fieldwork day):

Morning activity resources:

1. Wythburn Mystery – “Why does Manchester's water have ghosts?”
2. Fieldsketch worksheet
3. Concept Map – linking human and physical impact of reservoirs
4. Mystery plenary activity – sentence starters

Afternoon activity resources:

1. 'Reservoir Dogs' Article – extra information relating to water supply in the UK
2. Landscape Evaluation
3. Cost Benefit Analysis – of damming Troutbeck site
4. Troutbeck Conflict Matrix
5. To dam or not to dam? – drawing together ideas

Evening activity:

1. Evening Activity sheet – explaining presentations

Extra Information can be found in the planning summary and a risk assessment is also included.

Additional information regarding the Wythburn Mystery: “Why does Manchester’s water have ghosts?”

The title of this mystery sounds more cryptic than it really is, but it will hopefully get students thinking! To save you having to think, here is a quick explanation:

When the Thirlmere reservoir was being built, one consequence was that a small village called Wythburn was flooded. All that remains today is Wythburn church and graveyard. Thirlmere supplies Manchester with its water and hence why Manchester's water has ghosts!