

Year 9, Geography – 15 minutes

Lesson plan

Curriculum Link: *Use fieldwork in contrasting locations to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information.*

Learning Objective: To evaluate the threats to water quality and assess the role of ecologists and other professions in monitoring and protecting water quality.

Learning Outcomes:

- To understand sources of pollution for rivers and other water stores in the UK
- To evaluate the role of individuals and organisations in assessing and protecting water quality
- To justify the choice of field work techniques and make recommendations about future management

Success Criteria:

1. **Describe** – what does an ecologist do?
2. **Understand** – what are the threats to water quality – how can they be managed?
3. **Apply** – what does the data tell us about water quality?
4. **Analyse** – what are the main threats to water quality? What is the role of other key stakeholders in preserving water quality?
5. **Reflect** – what are the challenges for people working in the water quality industry?

Timings	Activity	Details	Resources
2 mins	Starter: Why water?	Think - Pair task – A quick 1 minute discussion in pairs before brining ideas together in class discussion.	Slide 3
2 mins	Introduction: What is the problem? <u>Success criteria:</u> <i>Analyse – what are the main threats to water quality? What is the role of other key stakeholders</i>	Slide 4: Explain that faecal contamination comes from the release of raw sewage into waterways. Tap water has to be treated to ensure it is safe to drink. There are many jobs involved in making this happen.	Slide 4, 5



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	<i>in preserving water quality?</i>		
4 mins	<p>Introduce & explore the role of a water quality inspector</p> <p><u>Success criteria:</u> <i>Describe – what does an ecologist do?</i></p>	<p>Show the video embedded in slide 5.</p> <p>Students come up with one sentence to describe the job.</p> <p>Explain that one of roles ecologists do is assess water quality. Introduce the CHALLENGE on slide 6. Discuss what sort of thing Aaron would want to find out about the water in the River Ouse.</p>	Slide 5,6
5 mins	<p>Challenge task: suggest potential actions to help improve water quality</p> <p><u>Success Criteria:</u> Apply – what does the data tell us about water quality? Understand – what are the threats to water quality – how can they be managed? Reflect – what are the challenges for people working in the water quality industry?</p>	<p>Show the slides and highlight agricultural runoff as the most widespread threat to water quality.</p> <p>Read through the detail of the problem on slide 8 – students then discuss in pairs or small groups which of the options on slide 9 they think would tackle the problem best.</p> <p>Further prompts:</p> <ul style="list-style-type: none"> • Why did you choose the solution you did? • Are there any issues with the solution? • Why did you not pick the others? • Are there any other potential solutions you can think of? 	Slide 7-9
2 mins	<p>Optional Extension/ Independent work</p> <p><u>Success Criteria:</u> Reflect – what are the challenges for people working in</p>	<p>Students can complete one or both these activities as a final reflection on the ideas they have explored.</p>	Slide 10



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	<i>the water quality industry?</i>		
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