



# River Landscapes: Hydrographs

## Lesson Plan and Teachers Notes

This GCSE / Key Stage 4 River Landscapes package is designed to support all major examination boards, including OCR, Edexcel, and AQA. However, some content included may not apply to every specification. **Teachers must ensure they follow the requirements of their own exam board's specification when delivering lessons.**

The lessons can be worked through at any pace, and can be split into multiple lessons if needed. This flexibility allows you to adjust the flow based on the class's understanding and time constraints. If some sections require more in-depth exploration, feel free to extend them over additional lessons to ensure students fully grasp the concepts before moving on.

The worksheets can be used in-class or as homework, depending on the pace of the lesson.

### Lesson Objectives:

- To understand what a hydrograph is and how they are used
- To be able to interpret a flood hydrograph and understand the components

### Assumed Prior Knowledge:

Hydrographs may be new to students at GCSE level, however this lesson will explain what they are and show students how to read and understand them.

### Resources:

- Worksheets
- YouTube videos

### Notes for each slide:

Teachers should decide what information students record into their workbooks.

#### Slide 1:

- Read through the learning objectives so students are aware of what they will be learning through this lesson.

#### Slide 2:

- Read out the definition of a hydrograph. There is an example hydrograph shown on the slide. Remind students of the meaning of river discharge if necessary.

#### Slide 3:

- Using the example hydrograph, show students the X axis and the Y axis and what each one displays.

#### Slides 4 - 8:

- These slides highlight each component of a hydrograph and provides a definition of each one.



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### Slide 9:

- Hydrographs can be used to display a flood event. A hydrograph can be either 'gentle' or 'flashy'. A gentle hydrograph shows a lazy watercourse with a low risk of flooding, whereas a flashy hydrograph shows a strong watercourse with an increased risk of flooding.

### Slide 10:

- Play the YouTube video (<https://www.youtube.com/watch?v=XYPpuCrTR2M>) which shows the features of a hydrograph and what it shows us.

### Slide 11:

- This slide can be worked through as a class, in partners or individually depending on class capabilities. There are two hydrographs displayed, one showing Stream A and a second showing Stream B. Ask students to make comparisons about the characteristics of each watercourse.

### Slide 12:

- The features of a flashy hydrograph are shown here with a list of several factors which can influence flood risk. The slide provides a discussion as to how each factor might present to create a flashy hydrograph.

### Slide 13:

- The features of a gentle hydrograph are shown here with a list of several factors which can influence flood risk. The slide provides a discussion as to how each factor might present to create a gentle hydrograph.

### Slide 14:

- These practice questions can be completed in class time or as homework, depending on the class ability.