



# River Landscapes: Flooding

## 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:

- Define what river flooding is
- Explain the physical and human causes of river flooding
- Discuss the impacts of flooding

### Assumed Prior Knowledge:

Prior to GCSE level, students will likely have already learnt about the types of flooding, the causes (both human and physical), case-study examples, and some hard and soft engineering flood risk management techniques. This lesson expands and explores these further.

### Resources:

- Worksheets
- To access the full River Management GCSE case study and accompanying worksheets, visit the dedicated page here: <https://thefloodhub.co.uk/low-crosby-gcse-case-study/>

### 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:

- As a recap exercise, ask students to list some of the physical and human factors which could affect river discharge. Students should remember that the factors listed in the table can all increase or decrease discharge.

#### Slide 3:

- Define flooding to students and discuss the different types of flooding listed in the graphic on the right hand side.



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### Slide 4:

- Read out the definition of river flooding. The image shows an aerial image of the River Eden in flood conditions.

### Slide 5:

- Discuss with the class which factors shown on the graphic could increase or decrease flood risk and why.

### Slide 6:

- This slide expands on the previous slide and displays the physical factors which could influence flood risk. In sequence, a text box will appear over each term and give further detail as to how each one could increase or decrease flood risk.

### Slide 7:

- This slide expands on slide 5 and displays the human factors which could influence flood risk. In sequence, a text box will appear over each term and give further detail as to how each one could increase or decrease flood risk. .

### Slide 8:

- The flooding event which Low Crosby, Cumbria, experienced due to Storm Desmond over 5<sup>th</sup> - 6<sup>th</sup> December 2015 is explained here.

### Slide 9:

- Additional detail of the case study is provided. Talk through this with the class and use the map to highlight the watercourses and areas. To access the full River Flood Management GCSE case study on Low Crosby, Cumbria, [click here](#).

### Slide 10:

- This slide lists factors which can influence flood risk along the river Eden. Using knowledge from slides 6 and 7, ask students to identify which factors could reduce the risk of flooding. Students should identify that moorlands and fields, rural ground use and defences like embankments should all reduce the risk of flooding.

### Slide 11:

- The following slides will assess the impacts of flooding. These are categorised into social, environmental and economic and they can have short term or long term impacts.

### Slide 12:

- Ask students to complete **exercise 1** in their worksheets and correctly identify which of the impacts listed below are social, economic or environmental. Remind students that some impacts can affect multiple categories.



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### Slide 13:

- Play the video to the class which displays the damage and impacts a community in Whalley, Lancashire experienced after they were flooded.

### Slide 14 & 15:

- These practice questions can be completed in class time or as homework, depending on the class ability. The number of marks available can be adjusted in-line with the chosen examination board.