



## The Geography of Science

### Lesson 5: Flood in London: A Mission Impossible?

#### Key ideas:

- 1) Climate change poses potential risks of flooding in London.
- 2) London is not very well prepared for major flooding.
- 3) Major floods could devastate London and kill many people.
- 4) The government and relevant agencies need action plans in place to prepare for such a disaster.

#### Starter:

*What if London really flooded?*

Imagine what it would be like if London really flooded. Watch this film trailer for the 2007 film ["Flood"](#).

Whilst this film is a story and many scientists believe that London is unlikely to flood in this way, a major flood in London is what students will have to deal with in this lesson.

Discuss initial thoughts about the film trailer and what it would be like if London flooded.

#### Main activity:

*Mission Impossible?*

Climate change has the potential to cause increased flood risks in the London area. The aim of this exercise is to imagine what it would be like if there was a storm surge which threatened London and what could be done to help prevent damage to the city and loss of life. Students work in groups as teams of 'agents', to decide on an action plan to save London from a devastating storm surge. They hand their ideas to the Prime Minister (the teacher).

The lesson is designed to make students feel like it is an impossible mission or 'Mission Impossible'. The film is fast paced and set to tight time frames. For this reason, the lesson is designed to be fast paced where students try to come up with ideas to save London quickly and to time, using a stopwatch if you choose.

For this activity you will need some large paper for each group, copies of the London flood map from [Flood London](#) and a stopwatch (optional). Also copies of a London population density map from [UK National Statistics](#) would be helpful. Students will sit in teams.

#### Tasks

- 1) Play the downloadable PowerPoint "Mission Impossible". The theme music for Mission Impossible can be found at [YouTube](#). The background briefing slide has a range of resources which help to set the scene of just how prepared London is for a major flood. Refer back to the video in the starter as well. (It might be useful to set some of these for homework, so there is more time in the lesson.) These resources can be found at:
  - Picture of Thames Barrier at [freefoto.com](#):

- [BBC news article](#), "London ill-prepared for flood risk":
  - [BBC Video](#) "The Thames Barrier" - see right hand column to launch.
- 2) The decision making slide (slide 3) is designed to give students an opportunity to think about how London could cope with a major flood – would you need to put in emergency flood defences, ask people to prepare buildings, evacuate large numbers of people, would you only evacuate certain areas and who would be involved in this operation?

This task is designed to be a quick brainstorm where groups write their three ideas on the large paper. Once this is done, students can share their ideas with other agents (classmates).

- 3) The Worsening situation: Action plan slide (slide 4) is designed to allow students to work as a team to produce a more detailed action plan to save London from devastation and loss of life. It might be useful to have some extra map resources to help identify areas of high population density and the location of hospitals in the London area:
- Map of London population density from
  - Location of London's hospitals, use Google Maps and type in "London hospitals". You can click on the red dots or bubbles to identify different hospitals. Likewise for schools, you can type "London schools." You could show these maps on an interactive whiteboard, or if students have access to computers, they could scroll around the map themselves.

For less able students, the downloadable sentence stem resource sheet can be used to help guide students on the writing.

### **Plenary:**

The storm abatement slide (slide 5) is designed to encourage a discussion about the lesson, allowing students to reflect on their work as a group and whether their ideas would actually have worked or maybe have made more of a catastrophe.

Students may like to share their finished action plans with the class or finish them for homework.

### **Extension:**

The Thames Barrier was designed to be operational until 2030. Since climate change threatens to cause sea level rise and there is the increased likelihood of surges reaching the Thames, students can design a new Thames Barrier to take London through the rest of the century.

The following resources may be useful to help:

- [The Environment agency](#) – Thames Barrier
- [Flood London](#)
- [21<sup>st</sup> Century Challenges](#) – Thames Barrier
- [Wikipedia](#) – Thames Barrier