

Getting the best out of a Media City home learning Geography Lesson

- ✓ Create a distraction free environment.
- ✓ Read all the information carefully and work independently.
- ✓ Try to read one slide at a time in order – Don't look ahead for answers before you've had a go!
- ✓ Read through the information sheets and complete the tasks **BEFORE** having a go at the separate assignment sheets



L2 Effects of river flooding in a HIC.

Learning Objective: to **understand** the causes and effect of river flooding in a HIC.

DO NOW:

1. Rock that does not allow water to soak into it is called.....?
2. What does HIC stand for?
3. Deforestation is when.....?

Write the date, title and LO then complete the 'Do now' questions.

L2 Effects of river flooding in a HIC.

Learning Objective: to **understand** the causes and effect of river flooding in a HIC.

DO NOW:

1. Rock that does not allow water to soak into it is called *impermeable*
2. What does HIC stand for? **High Income Country**
3. Deforestation is when **humans cut down trees and forests**

Write the date, title and LO then complete the 'Do now' questions.

L2 Effects of river flooding in a HIC.

Learning Objective: to **understand** the causes and effect of river flooding in a HIC.

Over the next 6 lessons we will be studying River Flooding:

- ~~1. Causes of floods~~
2. Effects of floods in a HIC
3. Effects of floods in a LIC
4. Comparing floods
5. Flood management – Hard Engineering
6. Flood management – Soft engineering

Today we will discover:

- ✓ What caused the River Thames in London to flood
- ✓ The social, economic and environmental effects of the river flood

Recap from last lesson:

A river flood is when water overflows the river channel and spreads across the surrounding land.



A river flood occurs when precipitation finds its way quickly into the river channel. There are a number of physical and human factors that cause this.



Recap from last lesson:

Physical (natural) causes of river flooding

Precipitation (rainfall)



Rock type

Slope steepness

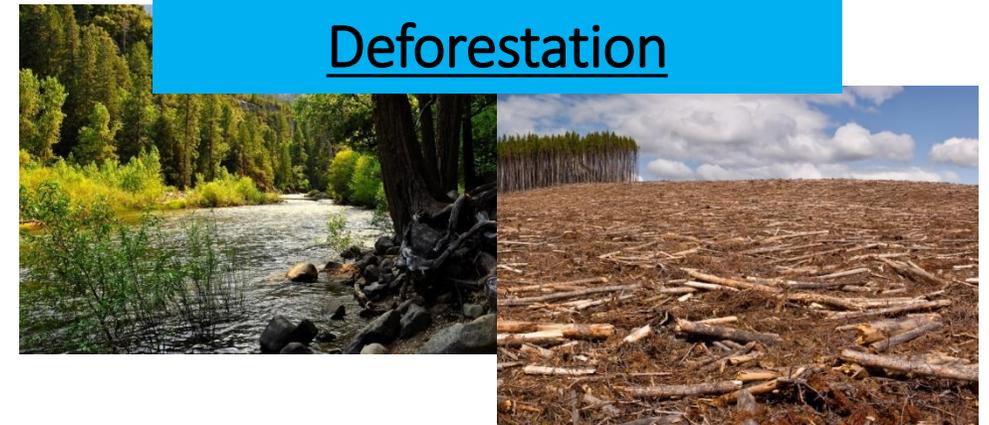


Human causes of river flooding

Settlements (towns and cities)



Deforestation

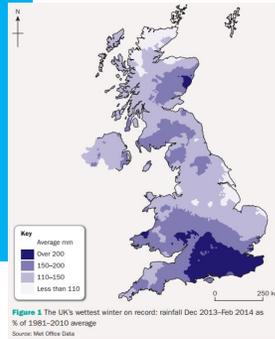


Causes of River Thames floods - 2014:

Physical (natural) causes of river flooding

Precipitation (rainfall):

The Thames Valley (south-east England) experienced over 200mm of rain, which was more than double the average rainfall.



Rock type: Most of the rock type under London is London Clay. This is impermeable rock.



Slope steepness: The river Thames and all of the small rivers that feed into it start in the Cotswold hills. The land is steeper here.



Human causes of river flooding

Settlements (towns and cities):

In 2013, 36,000 new homes were built in London. This gives an indication of the growth of this city. New buildings and roads in the city and surrounding villages have covered large areas of land in concrete



Deforestation: As the area surrounding the River Thames has become more urban, trees have been cut down to allow for new developments.



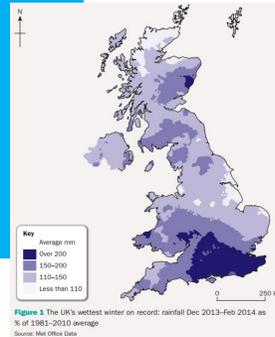
Causes of River Thames floods - 2014:

Physical (natural) causes of river flooding

Precipitation (rainfall):

How much rain fell?

How much more than normal was this?



Rock type:

What type of rock is mainly under London?

Why is this a problem?



Slope steepness:

What is the name of the hills where the River Thames starts?



Human causes of river flooding

Settlements (towns and cities):

How many more new homes have been built in London?

Why is this a problem when it comes to rivers?



Deforestation:

Why have lots of trees been cut down in this area?

Why is this a problem?

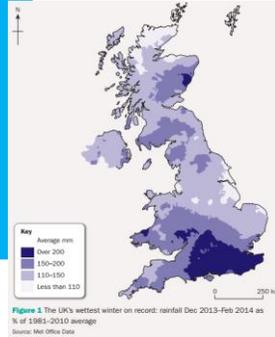


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Human causes of river flooding

Settlements (towns and cities):

In 2013, **36,000 new homes were built** in London. This gives an indication of the growth of this city. New buildings and roads in the city and surrounding villages have covered large areas of land in concrete



Deforestation: As the area surrounding the River Thames has **become more urban**, trees have been cut down to allow for new developments.



Learning Objective: to understand the causes and effect of river flooding in a HIC.

Effects can be categorised into social, economic and environmental.

Social

Impact on the people.



Economic

Impact on the economy (business and money).



Environmental

Impact on the natural world (nature).



EFFECTS OF THE RIVER THAMES FLOODS

More than 1000 homes flooded, with families moving into temporary housing.

Many people did not return home for 6 months.

Crime rates increased as people stole from the evacuated homes.

Transport lines were flooded, preventing commuters getting to work.

Local businesses were flooded, affecting jobs and local economies. Overall the flood cost £500 million.

Floodwater covered agricultural fields and destroyed crops.

Habitats were flooded, affecting wildlife.

Homes in Datchet, Singleton and East Marden experienced powercuts.

Homes lost water services due to contamination.



EFFECTS OF THE RIVER THAMES FLOODS

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Homes lost water services due to contamination.

	EFFECTS OF THE RIVER THAMES FLOODS	
1	More than 1000 homes flooded, with families moving into temporary housing.	S
2	Many people did not return home for 6 months.	S
3	Crime rates increased as people stole from the evacuated homes.	S
4	Transport lines were flooded, preventing commuters getting to work.	EC
5	Local businesses were flooded, affecting jobs and local economies. Overall the flood cost £500 million	EC
6	Floodwater covered agricultural fields and destroyed crops.	ENV/ EC
7	Habitats were flooded, affecting wildlife.	ENV
8	Homes in Datchet, Singleton and East Marden experienced powercuts.	S
9	Homes lost water services due to contamination.	S

Independent Task

- Read the document “L2 The effects of flooding in a HIC”.
- Complete the questions on the document.
- Have a go at the extension task as well!

Consolidation Task



- ✓ Have a look through your work and the information sheets – is there anything more you can add to your assignment? Do this in a different colour pen if possible
- ✓ Ask someone at home to ask you some of the questions from the assignment – can you tell them the answer without looking?!
- ✓ Put your work somewhere safe – it may help you in your next Geography lesson!



Flooding of the River Thames, 2014

Deforestation

As the area surrounding the River Thames has become more urban, trees have been cut down to allow for new developments. Some new developments have tried to reduce this, however by planting trees and creating green spaces.

Source of Tributaries

The tributaries start in the rolling hills of the Cotswolds. Here the land has a steeper gradient. It becomes flatter as you travel along the river.

Tributaries of the River Thames

The size and number of tributaries that flow into the River Thames, as shown on the map, means that water flows off the drainage basin very quickly.

Precipitation

The winter of 2013/14 was the wettest winter since records began in 1910. The UK received 486.8mm of rain between 1st December 2013 and 19th February, 2014. The Thames Valley (south-east England) experienced over 200mm of rain, which was more than double the average rainfall. The intense rainfall came after 4 very wet months of rain. This meant the ground was already saturated with water, resulting in more surface runoff.

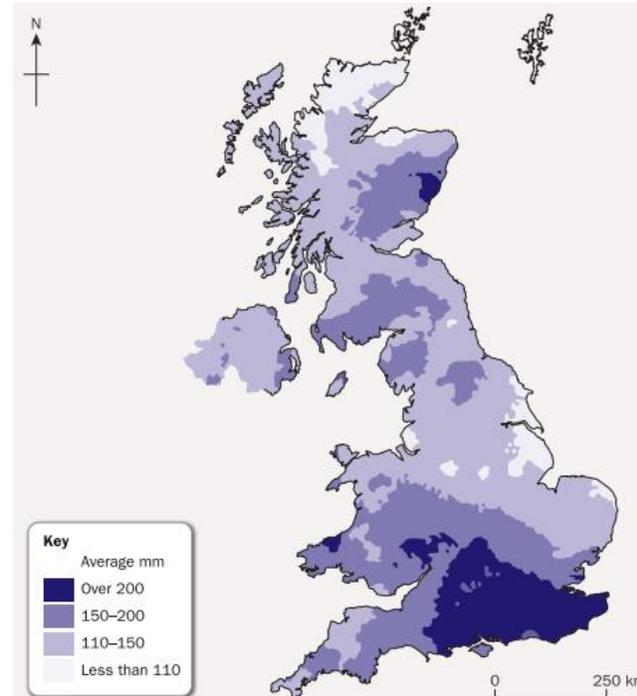
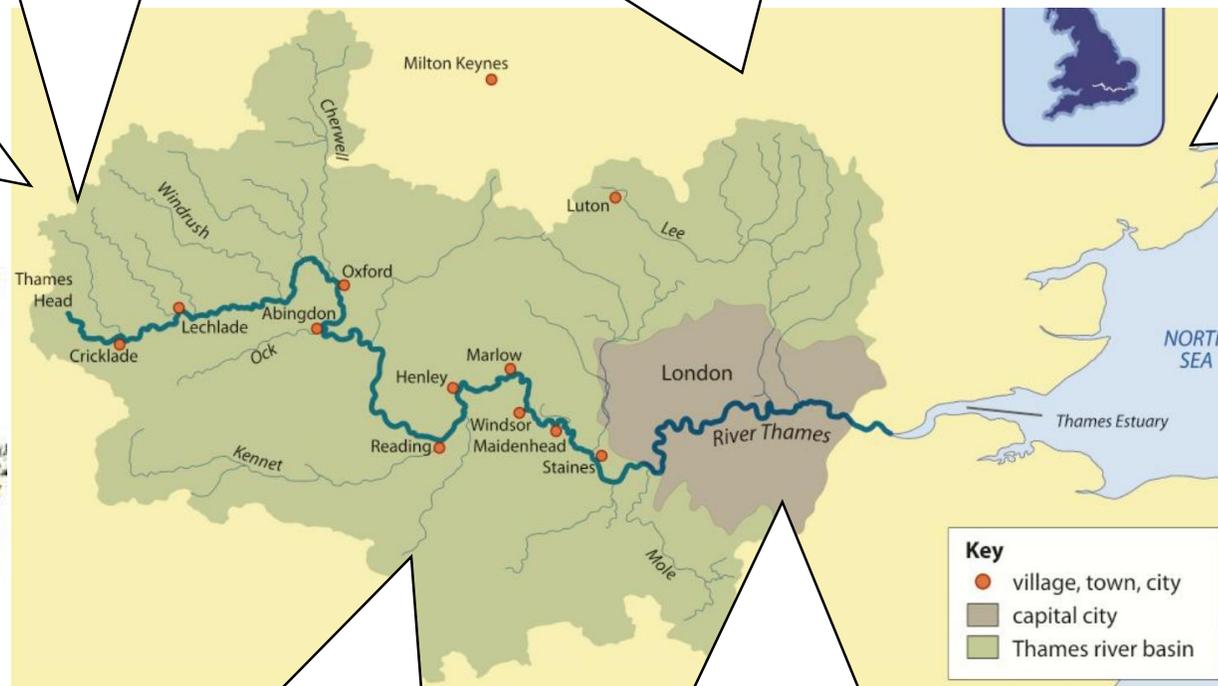
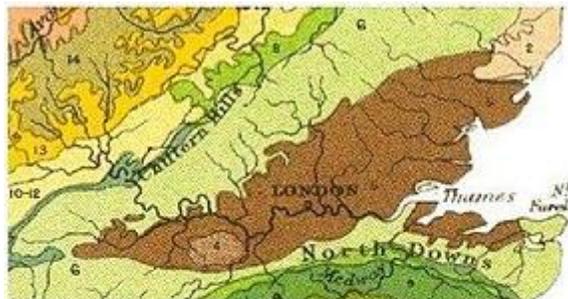


Figure 1 The UK's wettest winter on record: rainfall Dec 2013–Feb 2014 as % of 1981–2010 average
Source: Met Office Data



1 Alluvial	8 Lower Greensand
2 Pleistocene 'Crag'	9 Weald Clay
3 Bagshot Beds etc	10 Hastings Sand
4 London Clay	10-12 Middle & Upper Oolite
6 Chalk	13 Lower Oolite

Rock Type

Most of the rock type under London is London Clay. This is impermeable rock. Impermeable rock does not allow water to infiltrate = more surface run off.

The growth of London and surrounding area

In 2013, 36,000 new homes were built in London. This gives an indication of the growth of this city. New buildings and roads in the city and surrounding villages have covered large areas of land in concrete = impermeable manmade rock = more surface runoff.