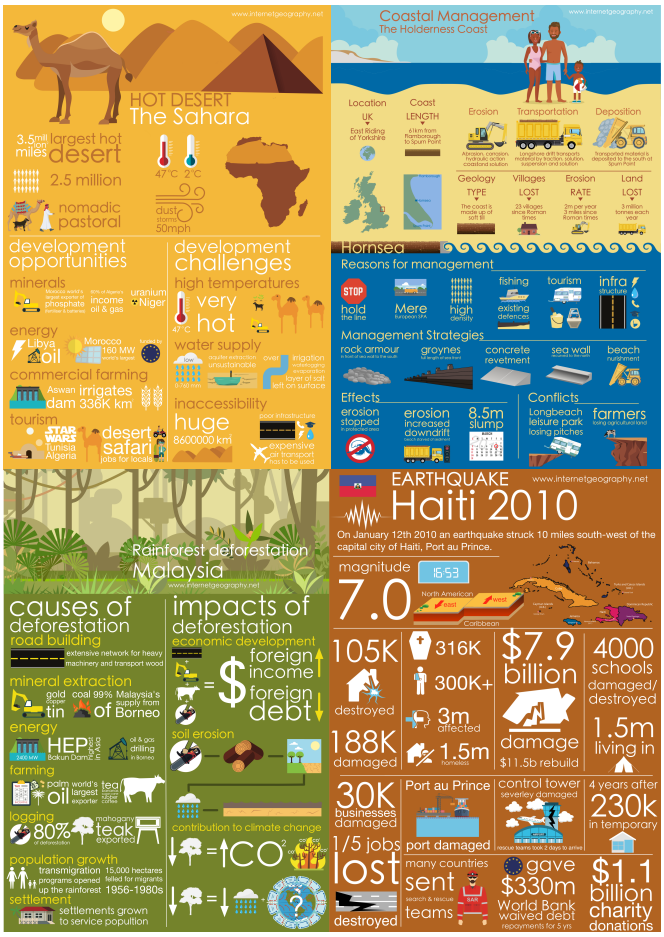
Montgomery Academy

GCSE Geography



Physical Geography

Infographics

EARTHQUAKE

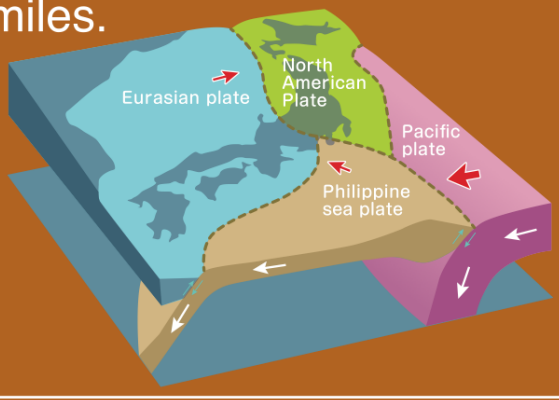
www.internetgeography.net

Kobe, Japan 1995

An earthquake struck on January 17th 1995 on Japan's southern coast near the city of Kobe at a depth of only 10 miles.

magnitude
7.2

05:46



100K destroyed

240K damaged

6000

30K+

35K+ rescued from buildings

300K homeless in high quality shelters

$200 billion damage

Hanshin expressway collapsed

major fires

broken gas pipes

liquifaction on reclaimed **land**

central Kobe worst affected

factories closed
Mitsubishi
Panasonic

Kobe port damaged

emergency committee **set up**

self-defence **forces** responded

UK sent

within 6 months **restored**

new instruments for monitoring **installed**

new building **laws** earthquake proof

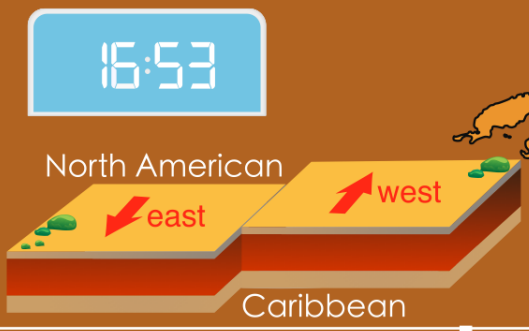
EARTHQUAKE Haiti 2010

www.internetgeography.net

On January 12th 2010 an earthquake struck 10 miles south-west of the capital city of Haiti, Port au Prince.

magnitude **7.0**

16:53



105K destroyed

188K damaged

316K

300K+

3m affected

1.5m homeless

$7.9 billion damage

$11.5b rebuild

4000 schools damaged/ destroyed

1.5m living in

30K businesses damaged

1/5 jobs lost

destroyed

Port au Prince

port damaged

control tower severley damaged

rescue teams took 2 days to arrive

4 years after **230k** in temporary

many countries sent search & rescue teams

gave **$330m** World Bank waived debt repayments for 5 yrs

$1.1 billion charity donations

www.internetgeography.net

Hurricane Katrina

Hurricane Katrina initially formed about 200 miles (322 km) southeast of the Bahamas on Aug. 23, 2005. The storm was a Category 3 storm when it made landfall near New Orleans on the morning of Aug. 29.

193 kph
120 mph

380mm

6m

3m without

1800

10k+

1m homeless

400k displaced

$300 billion damage

slow evacuations

3 days

300k homes destroyed

levèes broke

flooding 80% New Orleans

$1.1 billion cotton & sugar cane crops destroyed

looting occured

25k sheltered in the New Orleans Superdome

1.5m evacuated

national guard deployed

$800m rebuilding flood defences

$35 billion rebuilding homes schools

$105 billion government aid

EXTREME WEATHER

www.internetgeography.net

Big Freeze 2010

The Big Freeze hit in Nov/Dec 2010, caused by high pressure over the polar region. This pushed cold air towards northern Europe. Winds from the north and north east, rather than the south and south east brought freezing temperatures to the UK.

lows of -19°

A sudden stratospheric warming reverses the jet stream, and means that the UK's weather starts coming from the east - meaning the freezing mass of Siberia.

50cm snow

high ground

40k A&E

7

100k without water

1/3 increase insurance claims

power cuts

cost economy £1.6 billion

14000 cancelled

roads closed

businesses closed

7000 schools closed

Gatwick closed for 2 days

shops lost xmas sales

panic food buying

doubled

M62 army

rescued vehicles

grit supplies almost run out

300k+ more potholes £20m to fix

Met Office warning

stockpiling salt and grit

councils set up emergency plans

Rainforest deforestation
Malaysia

www.internetgeography.net

causes of deforestation

road building

extensive network for heavy machinery and transport wood

mineral extraction

gold
copper
tin

coal 99% Malaysia's supply from of Borneo

energy

2400 MW HEP Bakun Dam highest in Asia

oil & gas drilling in Borneo

farming

TAX INCENTIVE

palm oil world's largest exporter

tea
bananas
sugar cane
rubber
coffee

logging

80% of deforestation

mahogany teak exported

population growth

transmigration programs opened up the rainforest

15,000 hectares felled for migrants 1956-1980s

settlement

settlements grown to service popultion

impacts of deforestation

economic development

foreign income

= $

foreign debt

soil erosion

contribution to climate change

= ↑CO^2

CO^2 CO^2 CO^2

= +

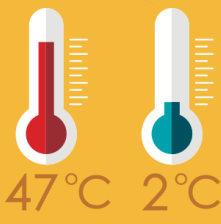
www.internetgeography.net

HOT DESERT
The Sahara

3.5 million miles² largest hot desert

2.5 million

nomadic pastoral



dust storms 50mph

development opportunities

minerals

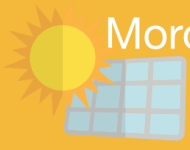
Morocco world's largest exporter of phosphate (fertiliser & batteries)

60% of Algeria's income oil & gas

uranium Niger

energy

Libya oil



Morocco 160 MW world's largest

funded by

commercial farming

Aswan irrigates dam 336K km²

tourism

STAR WARS Tunisia Algeria

desert safari jobs for locals

development challenges

high temperatures

very hot

water supply

aquifer extraction unsustainable

over irrigation
waterlogging
evaporation
layer of salt left on surface

inaccessibility

huge 8600000 km²

poor infrastructure

expensive air transport has to be used

Coastal Management
The Holderness Coast

www.internetgeography.net

Location
UK

East Riding of Yorkshire

Coast
LENGTH

61km from Flamborough to Spurn Point

Erosion

Abrasion, corrasion, hydraulic action coastand solution

Transportation

Longshore drift transports material by traction, solution, suspension and solution

Deposition

Transported material is deposited to the south at Spurn Point

Geology
TYPE

The coast is made up of soft till

Villages
LOST

23 villages since Roman times

Erosion
RATE

2m per year
3 miles since Roman times

Land
LOST

3 million tonnes each year

Hornsea

Reasons for management

hold the line

Mere
European SPA

high density

fishing

existing defences

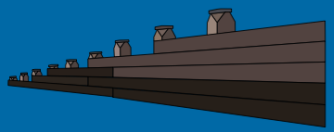
tourism

infra structure

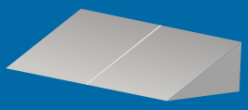
Management Strategies

rock armour
in front of sea wall to the south

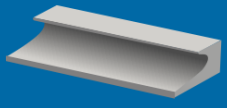
groynes
full length of sea front



concrete revetment



sea wall
recurved to the north



beach nurishment

Effects

erosion stopped
in protected area

erosion increased downdrift
beach starved of sediment

8.5m slump

Conflicts

Longbeach leisure park losing pitches

farmers
losing agricultural land

The River Tees

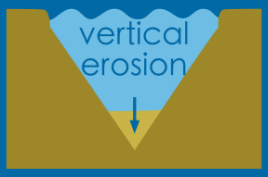
www.internetgeography.net

Landforms of Erosion and Deposition

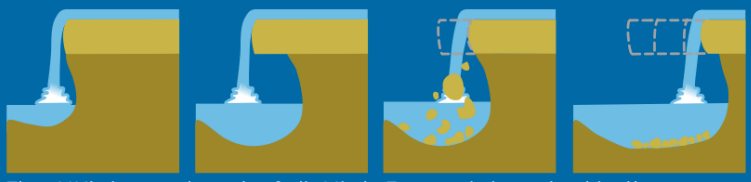
The River Tees is located in the north of England. It flows east from its source in the Pennines to its mouth, on the North Sea coast.

Upper course

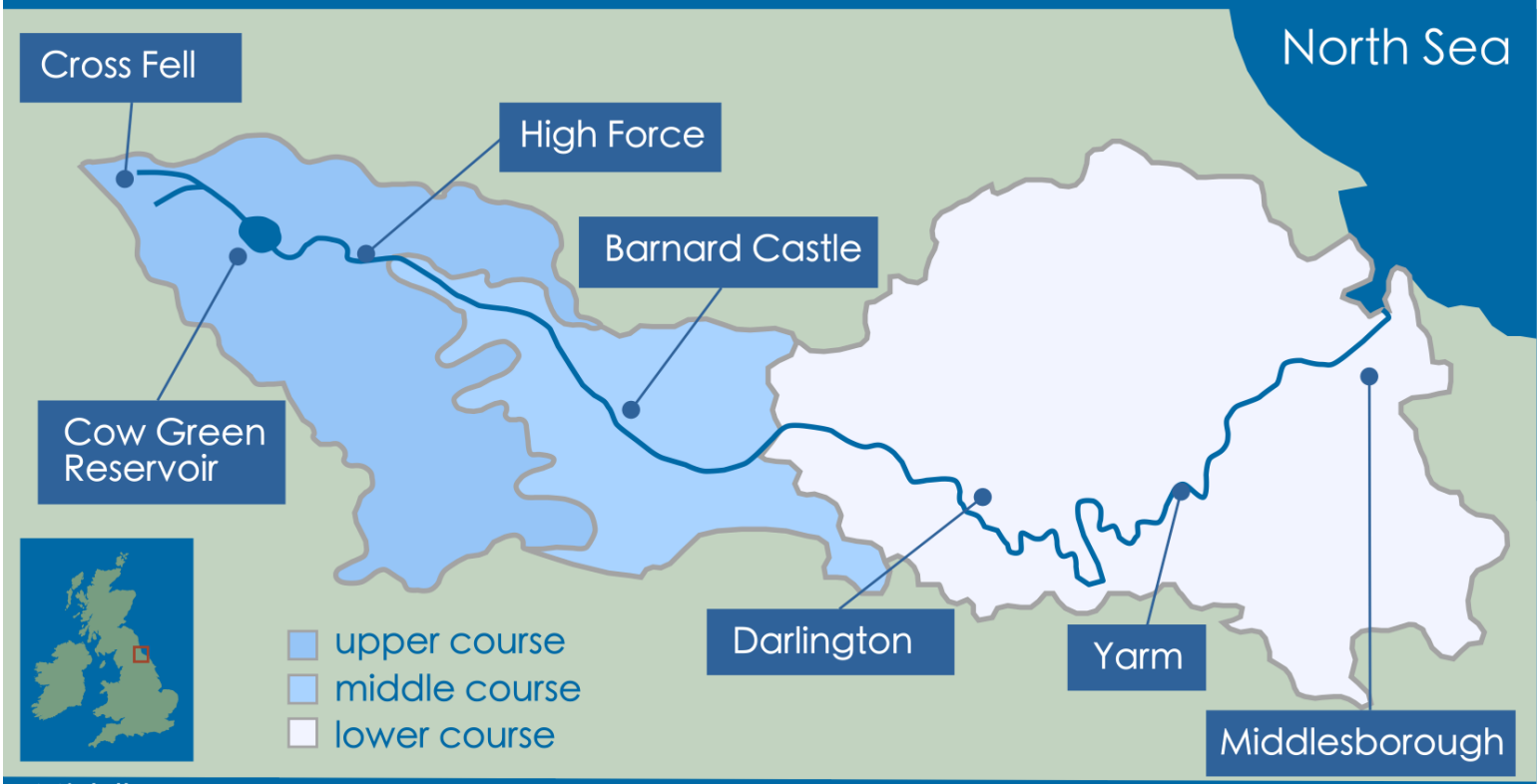
The source of the River Tees is Cross Fell in the Pennines.



The River Tees flows over impermeable rock. Vertical erosion has formed classic V-shaped valleys.

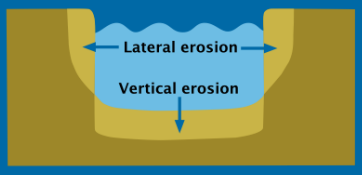


The UK's largest waterfall, High Force, is located in the upper course of the River Tees. An area of hard rock, called Whin Sill (or Whinstone), is located above a layer of soft rocks (sandstone and shale) and together they create the waterfall.

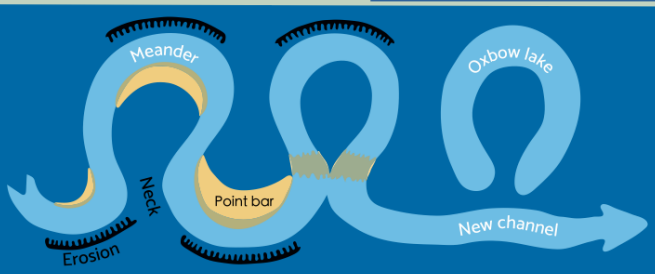


Middle course

The middle course of the River Tees meanders through the County of Durham.



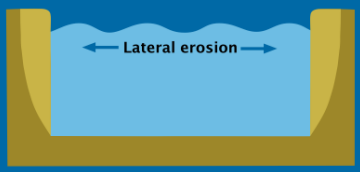
The middle course is typified by the valley becoming wider. This is due to the increase in lateral erosion. Flood plains are common.



As the River Tees reaches its middle course lateral erosion overtakes vertical erosion and is evidenced by winding meanders.

Lower course

The lower course of the River Tees includes its mouth at Middlesborough.



The River Tees becomes very wide due to increased lateral erosion.

The River Tees carries a large amount of sediment in the lower course. Repeated flooding has formed natural levées.

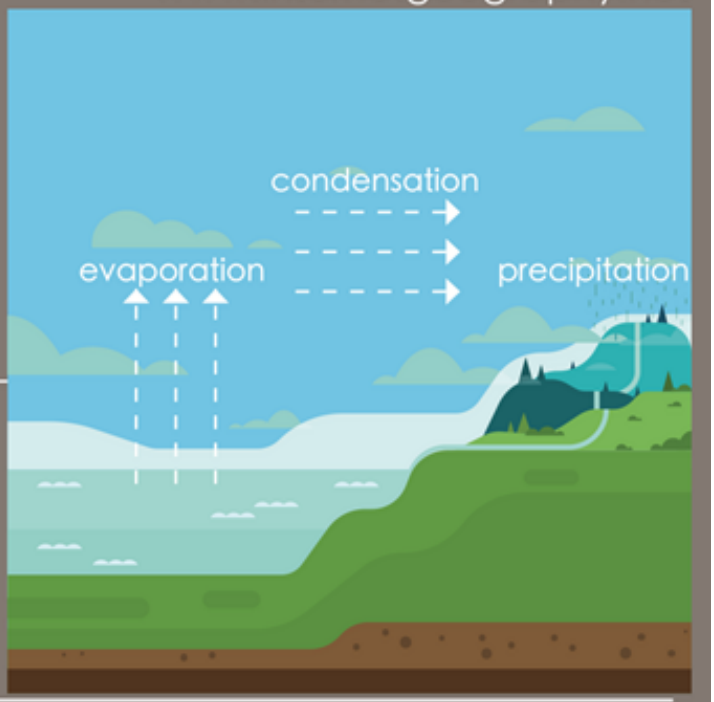
Towards its mouth The River Tees is a large tidal estuary with mudflats and sandbanks. Large scale deposition occurs here due to the reduced competence of a river.

RIVER FLOODING

www.internetgeography.net

Cumbrian Floods 2009

In November 2009, over 31 cm of rain fell in a 24-hour period. This is a record amount of daily rainfall for the UK. This led to the flooding of the town of Cockermouth.



rainfall

31 cm

Warm air from the Atlantic Ocean caused relief rainfall over the Cumbrian mountains. As the warm, wet air rose it cooled, condensed and caused significant rainfall on saturated land.

ground saturated

steep slopes

river Derwent & Cocker already swollen

PC Bill Barker

198 psychological help

1300 homes flooded

50 evacuated by helicopter

insurance costs £100 million

average £28k per affected house

Cockermouth town centre flooded

4 collapsed

12 closed

total cost £270 million

£124 shops,farms & factories

£91m homes

£34m bridges and roads

£15m tourism loss

£1 million for clean up and repairs from Government

Cumbria Flood Recovery Fund raised £ 1m

temporary station Workington

£4.4m Cockermouth flood management scheme

flood defence walls

river dredged

new embankments

new flood gates