



*Saint Joseph's*  
CATHOLIC SCHOOL

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Geography Department

# KS4 High Achievers Booklet



Remember to read the relevant pages in the cool geography textbook or on the website BEFORE you do the tasks

<http://www.coolgeography.co.uk/members/>

Username: [smo@sjcs.org.uk](mailto:smo@sjcs.org.uk)

Password: Geog16



## Contents:

### Paper 1 (Physical Geography)

- |                       |              |
|-----------------------|--------------|
| • Natural Hazards     | Page 2 – 13  |
| • Physical Landscapes | Page 14 - 28 |
| • Living World        | Page 29 – 38 |

### Paper 2 (Human Geography)

- |  |              |
|--|--------------|
| • Urban issues and challenges                      | Page 39 – 49 |
| • The Changing Economic World                      | Page 50 - 64 |
| • The Challenge of Resource Management<br>(ENERGY) | Page 65 – 77 |

**1.01 Types of Natural hazard and**

**1.02 Factors affecting hazard risk.**

1 Read pages 2 to 4 of the Challenge of Natural Hazards textbook

2 Distinguish between a natural hazard and a natural event\_\_\_\_\_

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3 Try to make a list of the types of hazards the UK could face in the table below;

Tectonic hazards	Geomorphological hazards	Atmospheric hazards	Biological hazards

4 Rank the 8 factors that affect the amount of damage created by a hazard from 1, most hazardous, to 8 least hazardous, in the table. Justify your top ranked item and your lowest ranked item.

My top ranked factor is\_\_\_\_\_because\_\_\_\_\_

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My lowest ranked factor is\_\_\_\_\_because\_\_\_\_\_

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Factor	Rank (1 to 8)
Natural factors like rock type	
Magnitude	
Frequency	
Population density and distribution	
Level of development	
Management (prediction, preparation, prevention)	
Education	
Time	

### 1.03 Global distribution (where they are) of earthquakes and volcanic eruptions

Read pages 5 to 6 of the Challenge of Natural Hazards textbook

1. Draw a simple copy of figure 4 then add one fact about each zone of the Earth's Structure

2. Define the terms;

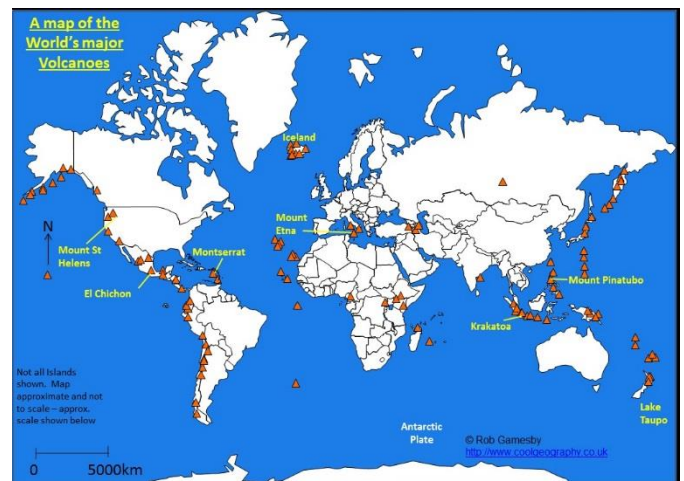
a) Tectonic Plate \_\_\_\_\_  
\_\_\_\_\_

b) Plate margin \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Contrast the characteristics of continental and oceanic crust \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Make a bullet pointed list of where we get volcanoes around the world. Contrast this with the plate margin map on page 6

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**1.04 The physical processes taking place at different types of plate boundaries (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.**

1. Read pages 7 to 8 of the Challenge of Natural Hazards textbook
2. Complete the flow chart below to explain exactly what happens at **Destructive** plate margins.

Mention subduction, oceanic crust, continental crust, earthquakes and volcanoes in your flow chart.

1	
2	
3	
4	
5	
6	

3. Explain why we get earthquakes but not volcanoes at **CONSERVATIVE** plate margin\_\_\_\_\_

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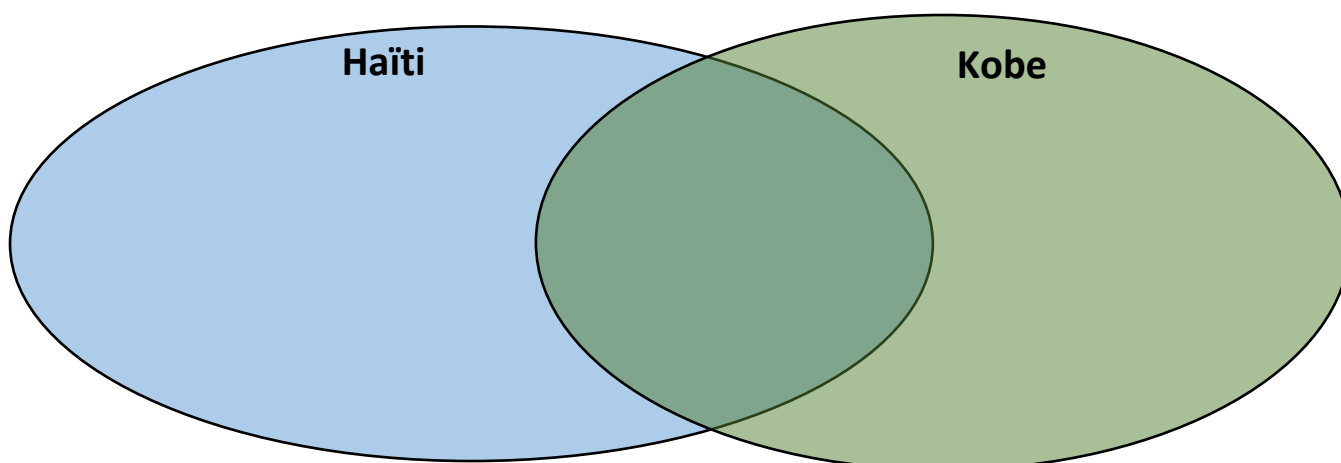
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**1.05 Contrasting tectonic hazard case studies**

1. Read pages 13 to 16 of the Challenge of Natural Hazards textbook
2. Complete the case study table to summarise the ESSENTIAL information about the Kobe and Haiti earthquakes;

		Kobe (HIC)	Haïti (LIC)
Background (where, when, size)			
Causes			
Effects	Short term		
	Long term		
Responses	Individuals		
	Agencies		
	Governments		

3. Complete the Venn diagram below to compare the similarities and differences between the Haïti and Kobe earthquakes



**1.06 Reasons why people continue to live in areas at risk from tectonic hazards and****1.07 How monitoring, prediction, protection and planning can reduce the risks from a tectonic hazard.**

1. Read pages 17 to 19 of the Challenge of Natural Hazards textbook
2. Classify the reasons people live close to volcanoes into social, economic and environmental factors.

Social Reasons	Economic Reasons	Environmental Reasons

3. Is it sensible for people to continue to live in zones with earthquake risks? Fully justify your response using evidence from the 2 pages in the textbook. \_\_\_\_\_

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**1.10 How climate change might affect the distribution, frequency and intensity of tropical storms.**

1. Read page 23 of the Challenge of Natural Hazards textbook

**SKILLS EXERCISE**

**Hypothesis:** *Hurricanes in the North Atlantic pose more of a risk between 1950 to 2008 than from 1880 to 1949*

2. Calculate the mean and range for data opposite. Put the figures in the empty cells in the table.

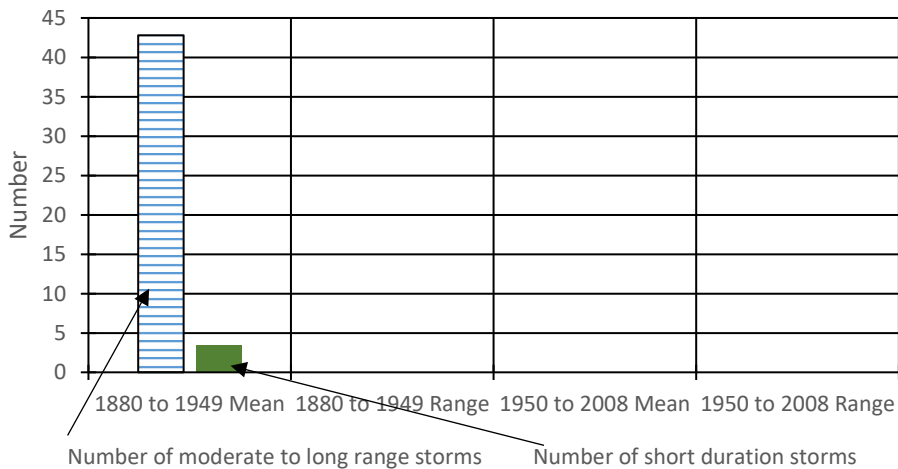
**Help Box****Measures of central tendency**

**Mean** – add all of the values in the column together and divide by the number of results, in the case 14 for the top table and 12 for the lower table

**Range** – subtract the smallest value from the largest value.

3. Complete the simple bar graph to show the mean and the range for both time periods.

Chart Title



4. Respond to the hypothesis: *Hurricanes in the North Atlantic pose more of a risk between 1950 to 2008 than from 1880 to 1949*. Is this true or false? Use data to support your answer\_\_\_\_\_

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Year	Number of moderate to long lived storms adjusted for missing storms	Number of short duration storms
1880-84	41	3
1885-89	64	2
1890-94	47	3
1895-99	43	3
1900-04	43	3
1905-09	45	1
1910-14	25	3
1915-19	42	1
1920-24	36	4
1925-29	30	3
1930-34	54	2
1935-39	39	7
1940-44	48	4
1945-49	44	9
MEAN		
RANGE		
1950-54	50	6
1955-59	37	13
1960-64	36	9
1965-69	37	12
1970-74	35	14
1975-79	33	13
1980-84	34	12
1985-89	36	11
1990-94	32	12
1995-99	54	12
2000-04	54	19
2005-08	47	22
MEAN		
RANGE		

**1.11 A case study of a tropical storm Haiyan**

1. Read pages 24 to 26 of the Challenge of Natural Hazards textbook
2. Look carefully at the data on the table below.
3. Calculate a percentage difference between the 2 countries in the column provided

**Facts about the Philippines & UK (from CIA Fact book 2014)**

Indicator	Philippines	UK	Difference (D) Philippines value – UK value	Average of 2 values (A) Philippines + UK values divided by 2	Percentage difference (D / A) X 100
Population	108 million	64 million	$108 - 64 = 44$	$\frac{108 + 64}{2} = \frac{172}{2} = 86$	$(44/86) \times 100$ $0.51 \times 100 = 51\%$
GDP per capita PPP	\$4700	\$37,700			
People Living in Poverty (less than \$2 per day)	27% of the population	16.2%			
Life Expectancy	72 years	80.4 years			
Literacy Rate	48.7%	99			
People Per Doctor	1.15 doctors per 1000 people	2.81 doctors per 1000 people			

4. Using the data and the information in the textbook, why did the Philippines suffer so badly during Typhoon Haiyan? \_\_\_\_\_

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**1.12 Types of weather hazard experienced in the UK – Depressions**

Read pages 27 to 29 of the Challenge of Natural Hazards textbook

1. List all of the extreme weather events that affect the UK that you can think of \_\_\_\_\_

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2. Explain fully how a depression forms. \_\_\_\_\_

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3. Contrast a depression weather system with an anticyclone \_\_\_\_\_

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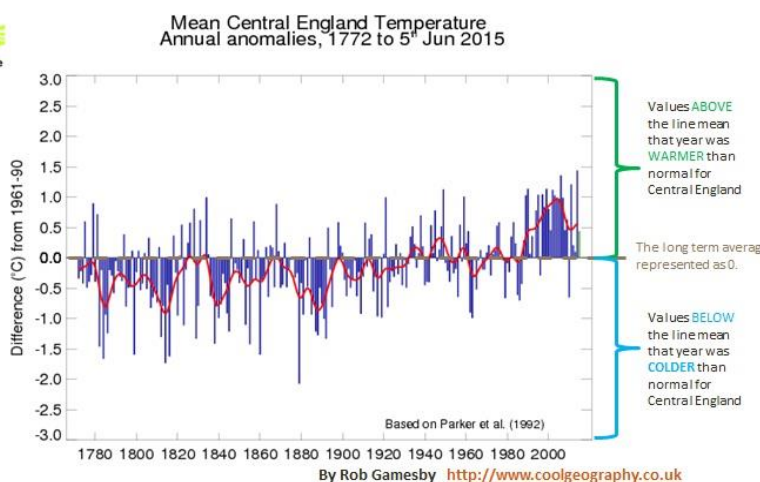
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**1.13 Evidence that weather is becoming more extreme in the UK and****1.14 Extreme weather event in the UK – St Jude storm of 2013**

1. Read pages 30 to 33 of the Challenge of Natural Hazards textbook
2. Look carefully at the graph below. What evidence does it provide for weather in the UK becoming more extreme? Quote figures from the graph in your response.



10  
9  
8  
7  
6  
5  
4  
3  
2  
1  
0

3. Draw then complete the case study table to summarise the ESSENTIAL information about this storm;

Background (where, when, size)		
Causes		
Effects	Short term	
	Long term	
Responses	Individuals	
	Agencies	
	Governments	

**1.15 Evidence for climate change and**

**1.16 Natural and human causes of climate change**

1. Read pages 34 to 36 of the Challenge of Natural Hazards textbook

2. Distinguish between climate change and global warming \_\_\_\_\_

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3. Rank the causes of global warming in an order of importance. Include both physical and human causes in the table opposite.

4. Justify your ranking in exercise 2 \_\_\_\_\_

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Factor	Rank
Physical: Volcanoes	
Physical: Sunspots	
Physical: Changes in Earth's orbit	
Human: Agriculture	
Human: Fossil Fuel use	
Human: Deforestation	

5. Does the evidence suggest that humans or nature is to blame for our changing climate? Justify your view. \_\_\_\_\_

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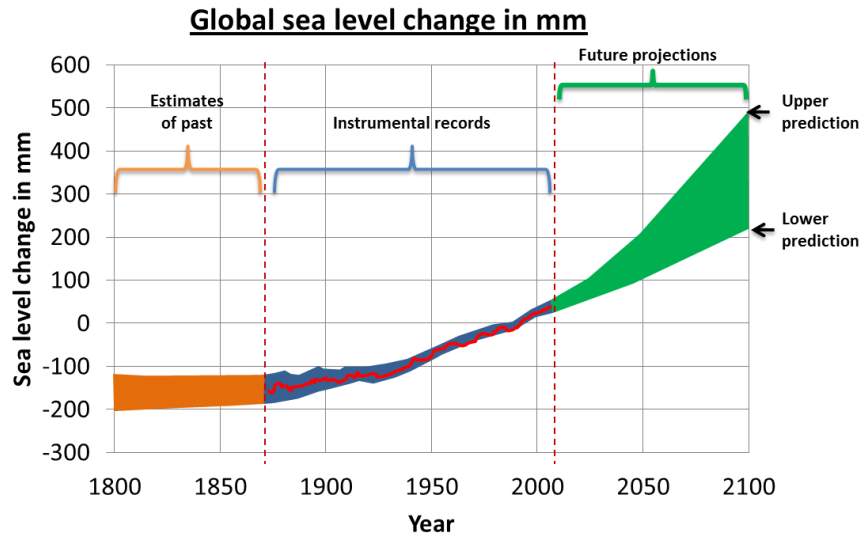
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**1.17 Managing the impacts of climate change: MITIGATION & ADAPTATION**

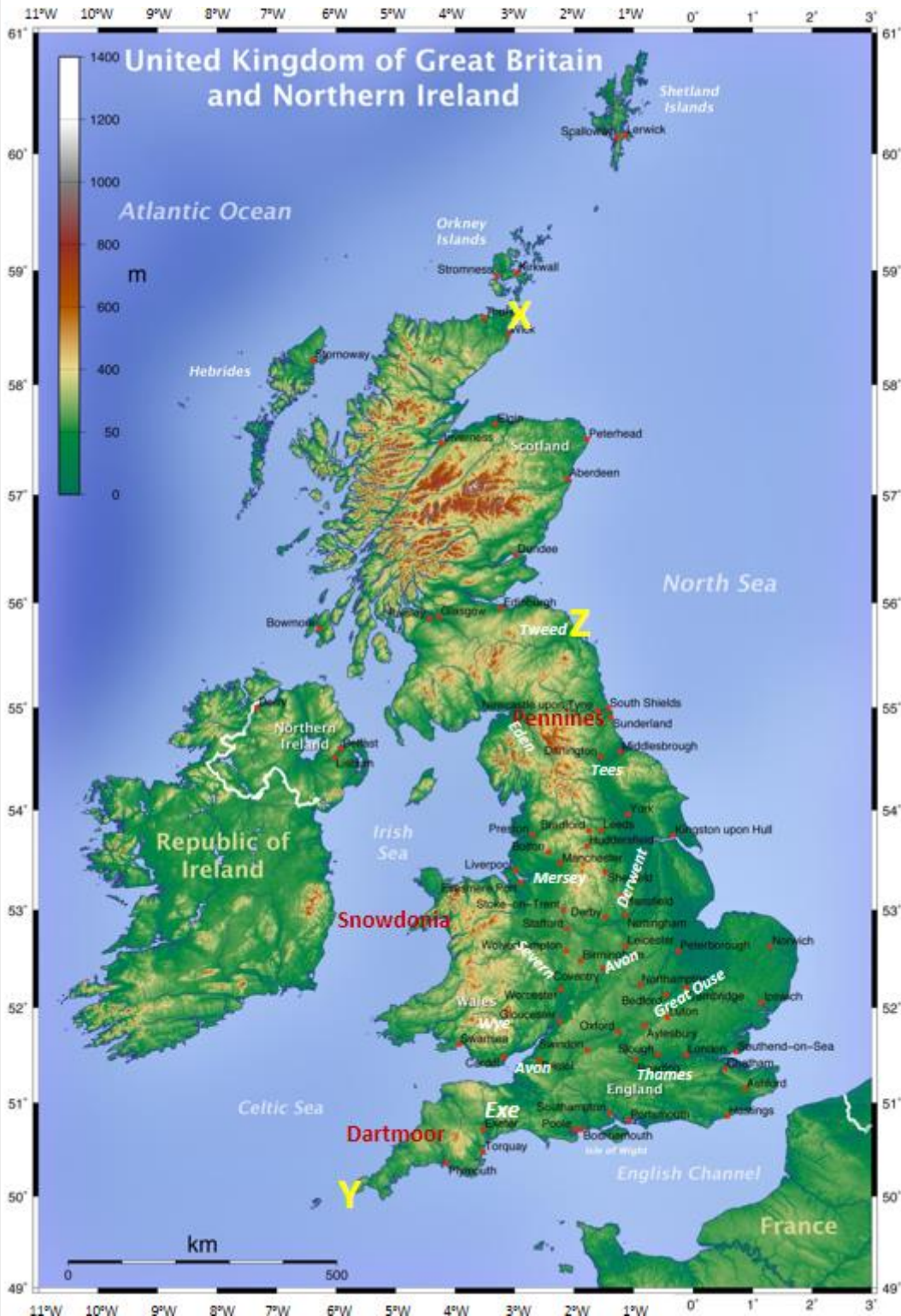
Read pages 37 to 42 of the Challenge of Natural Hazards textbook



- Describe the changes in sea level predicted on the graph above. Ensure that you include data in your answer. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- Read through all of the options to mitigate and adapt to climate change.
- Produce a clear 4-point plan for the UK government on the KEY things we should do as a country to cope with climate change. Your plan should be in the form of a catchy poster.

### 3.01 The location of major upland/lowland areas and river systems and wave types and characteristics

(READ pages 2 to 4)



Using the map opposite answer the following questions:

1. Give the compass directions;  
a) From The Hebrides to the Pennines\_\_\_\_\_

b) From The River Thames to the River Mersey\_\_\_\_\_

c) From the Orkney Islands to the River Tweed\_\_\_\_\_

2. Use the scale to measure the following straight-line distances

a) From Middlesbrough to Exeter (the Tees Exe Line!)\_\_\_\_\_

b) From X (John O'Groats) to U (Lands end)\_\_\_\_\_

c) From Liverpool to Kingston upon Hull\_\_\_\_\_

3. Provide the latitude and longitude of;

a) X\_\_\_\_\_

b) Y\_\_\_\_\_

c) The mouth of the River Tweed (Z)\_\_\_\_\_

4. Describe where the upland areas of the UK are.

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**3.02 Waves**  
**Read pages 2 to 4 first**

1. Explain why waves break\_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
2. Label the photograph with the key features of a wave – mention wave height, length, crest, trough breakers



3. Complete the table below to contrast Constructive and Destructive waves

	Constructive	Destructive
Which is stronger, swash or backwash ?		
Erosion or deposition ?		
Large or small wave height ?		
Frequent or infrequent ?		
Is the gradient of the beach steep or gentle ?		



**3.03 Coastal processes.****(READ pages 5 to 6)****Odd One Out**

1. Hydraulic Power	2. Land slide	3. Abrasion	4. Rock Type	5. Long shore Drift
6. Backwash	7. Freeze Thaw	8. Attrition	9. Solution	10. Chemical Weathering
11. Acids	12. Biological Weathering	13. Constructive Waves	14. Cracks in Rocks	15. Limestone
16. Mass Movement	17. Destructive Waves	18. Roots	19. Swash	20. Burrowing Animals
21. Soil Creep	22. Mechanical Weathering	23. Rotational Slipping	24. Slumping	25. Water
26. Low energy	27. Deposition			

**Instructions****For each set**

- Write down the word that corresponds to the number.
- State which word is the *odd one out*.
- Give a reason why.
- Now that you have started to see a pattern, add another word from the table, but keep the **same odd one out**.

	Write down the word that corresponds to the number			Reason	Extra word to keep the odd one out the odd one out!
Set A	16	20	21		
Set B	11	3	9		
Set C	23	25	22		
Set D	13	18	20		
Set E	16	1	8		
Set F	22	7	10		
Set G	14	4	17		
Set H	6	17	19		
Set I	15	27	26		

**Extension**

- Try to put together your own group of words with an odd one out. You must have a good and obvious reason. Swap your group of words with a partner and see if they can work yours out and vice versa.
- Now try and sort out all of the words in the table into 4 to 6 groups. Write a justification of your groupings. \_\_\_\_\_

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### 3.04 Erosion Landforms – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.

(READ pages 8 to 10)

1. Label the diagram below to describe the key features of this coastal environment



2. Produce a sequence on how stumps are created, mention processes of weathering and erosion in your answer

1	
2	
3	
4	
5	
6	

Useful words to use;

- Cliffs, cliff face
- Crack/fault, Crevice, cave Arch, Stack Stump
- Low and High Tide
- Erosion – Wave Pounding, Abrasion
- Weathering – Freeze Thaw, biological, chemical
- Rock falls

### 3.05 Deposition Landforms – beaches, sand dunes, spits and bars.

**(READ pages 11 to 12)**

1. Complete the flow chart below to explain FULLY how a SPIT is created. Mention Longshore drift in your answer.

1	
2	
3	
4	
5	
6	

2. Explain how a bar differs from a spit \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
3. Describe how sand dune vegetation changes from the front of a sand dune system to the back (mature Dune)



**Foredune**



**Mature Dune**

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**3.06 Different management strategies can be used to protect coastlines from the effects of physical processes.**

**Read pages 15 to 17**

1. Define the terms below:

- Hard engineering
  
- Soft engineering

2. Annotate the photograph below to EXPLAIN how sand dune management can protect the coastline



3. Which do you prefer, hard or soft engineering? JUSTIFY fully your choice

**3.07 The Holderness coastline - A case study of a coastal management scheme.****(READ pages 18 to 19)**Complete the case study table below

Background to Holderness (where, when, why)		
Causes of cliff collapse		
Effects	Environment	
	People and economy	
Responses and management	Individuals	
	Agencies	
	Governments	

### 3.08 The shape of river valleys changes as rivers flow downstream.

**(READ pages 20 to 21)**

A) What is the difference between abrasion and attrition? \_\_\_\_\_

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**A) Sediments in Northumberland**



**B) Silt found in Idaho, USA**

B) Compare the sediment (stones) in photographs A and B in terms of its size and shape \_\_\_\_\_

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C) Which part of the LONG Profile of a river do you think the 2 photographs are situated?

Photograph A	Photograph B
Upper Course	Upper Course
Middle course	Middle course
Lower Course	Lower Course

D) Complete the odd one out in the sets below in your book and give a reason why:

**Set 1 - Hydraulic action**

**Traction**

**Abrasion**

REASON: \_\_\_\_\_

**Set 2 - Low river velocities**

**Suspension**

**Saltation**

REASON: \_\_\_\_\_

**Set 3 - Deposition**

**Mountainous areas**

**Erosion**

REASON: \_\_\_\_\_

**Set 4 - Solution**

**Saltation**

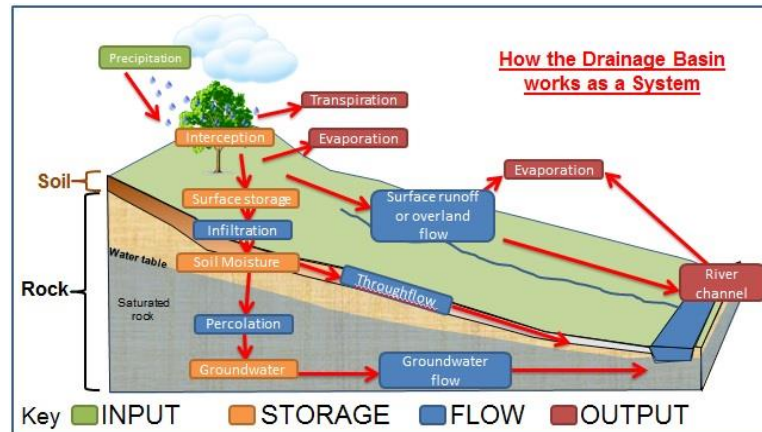
**Corrosion**

REASON: \_\_\_\_\_

### 3.09 The long profile and changing cross profile of a river and its valley.

**(READ pages 22 to 24)**

1. Define 4 of the key terms around the drainage basin systems diagram



2. Explain what would happen to the features of the drainage basin system shown above if an area was deforested (and hence interception removed) \_\_\_\_\_

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3. Draw a picture to show what happens to the shape of river valleys as you move from the source to the mouth of a river.



### 3.10 River erosion landforms – interlocking spurs, waterfalls and gorges.

**(READ pages 24 to 25)**

1. Produce a labelled sketch to show all of the features of the V shaped valley with its interlocking spurs shown in the photograph.



**Bob Bowyer via Wikimedia Commons**

**SKETCH**

2. Produce and complete the flow chart below to explain FULLY how a GORGE is created. Mention erosion processes, rock resistances, Plunge pools and rock types in your answer.

1	
2	
3	
4	

3. On the High Force in Teesdale image below add full labels– labels to add – Whin Sill (harder rock), Limestone (softer rock), Sandstone (baked hard by Whin Sill), Plunge pool, Waterfall, Gorge sides, Bedding planes.





### 3.11 Erosion and deposition Landforms – meanders and ox-bow lakes, levées, flood plains and estuaries.

READ pages 29 to 30)

1. Draw a sequence of diagrams to EXPLAIN the development of Ox bow lakes mention processes of erosion and deposition on your diagrams

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2. Annotate fully the photograph below to DESCRIBE the key river features



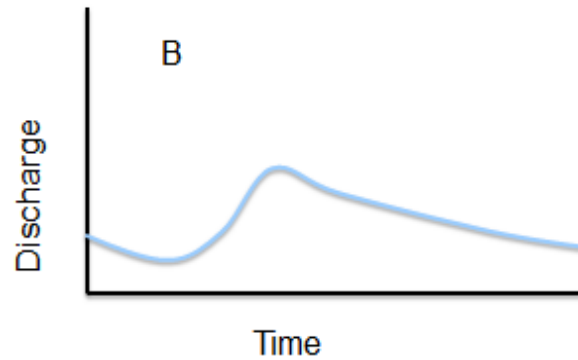
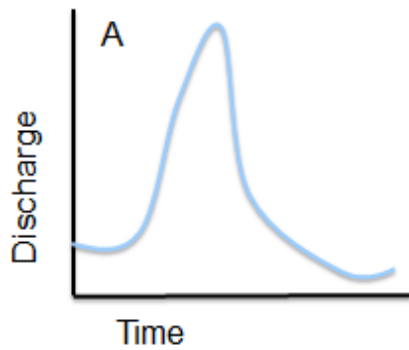
By Oliver Kurmis

3. Produce a flow chart explaining how estuaries are created

1	
2	
3	
4	

### 3.14 Hydrographs. (READ pages 32 to 33)

1. Define the term discharge \_\_\_\_\_  
\_\_\_\_\_
2. Explain why discharge can vary over the course of a year in the UK. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Look at the images below and complete the table



Which of the 2 hydrographs is most likely to:	A	B	REASON
Flood			
Have thick deciduous vegetation			
Be in an Urban area			
Have flood defences along the river			
Have permeable soils			
Have had a prolonged period of rainfall prior to this event			
Have a LOW water table			

Draw a **simple annotated sketch hydrograph** for a river close to saturated fields. Assume that the valley is steep sided, the soils are permeable and that 24 hours of heavy rainfall have just fallen.



### 3.15 Factors that increase the flood risk.

**(READ pages 34 to 35)**

1. Describe the patterns on the graph below – be sure to QUOTE DATA in your response\_\_\_\_\_

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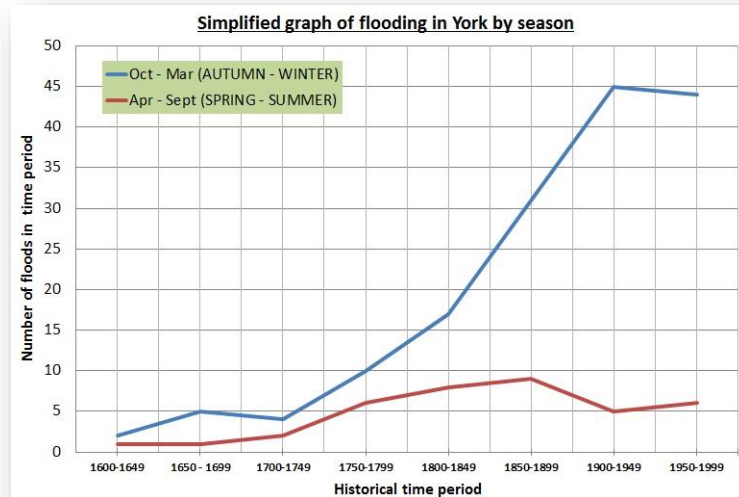
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2. Produce a mind map of all of the factors that can affect discharge below

### 3.16 Flood management for rivers - Hard and soft engineering management strategies

**READ Pages 36 to 37**

JUDGE which strategies to manage river processes and flooding (hard or soft engineering) are most effective and why?\_\_\_\_\_

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**3.18 Morpeth - A case study of a flood management scheme in the UK. (READ pages 38 to 40)**

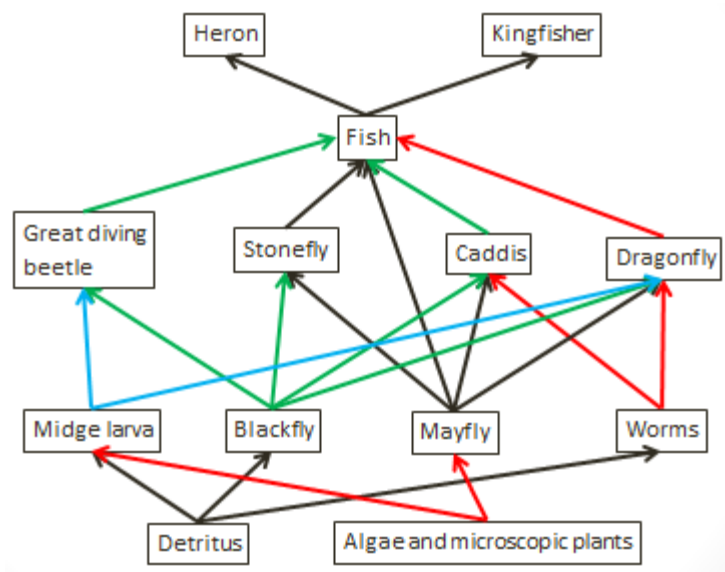
**Complete the case study table below to summarise the ESSENTIAL information about this flood;**

Background (where, when, size)		
Causes		
Effects	Short term	
	Long term	
Responses	Short term	
	Long Term	

## The Background to Ecosystems (READ pages 2 to 4)

1. Draw a simple food web for your back garden or a local park.

2. What would happen to the pond ecosystem if the great diving Beetles was wiped out?\_\_\_\_\_



3. Should we protect native British species against invasive species? Justify your view. \_\_\_\_\_

## 2.2 – the Distribution of Ecosystems (READ pages 5 to 6)

1. Which ecosystem would you most like to visit and why? \_\_\_\_\_

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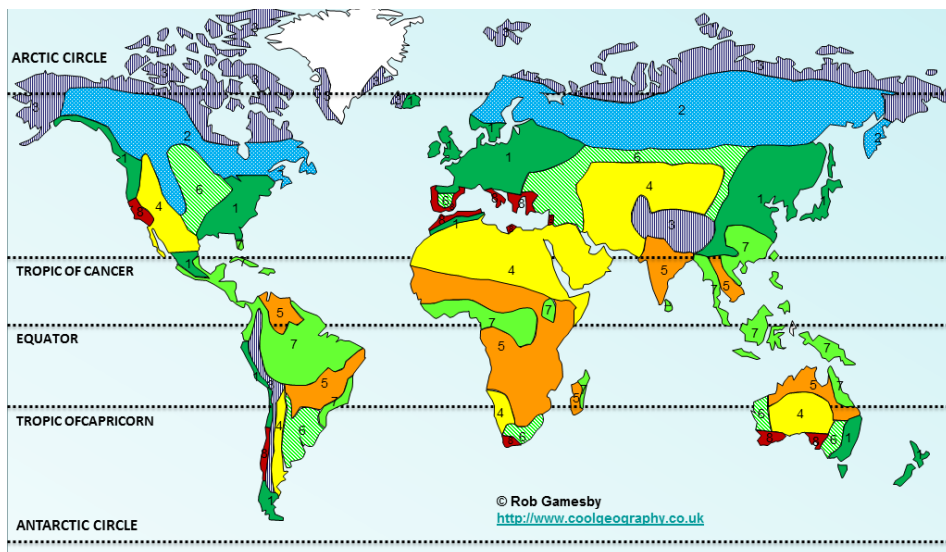


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2. Describe the distribution of temperate deciduous forests using the map below \_\_\_\_\_



7 Tropical Rainforest	6 Grassland
5 Tropical Savanna	1 Temperate Deciduous Forest
4 Desert	2 Temperate Boreal Forest
8 Chaparral (Mediterranean)	3 Arctic and Alpine Tundra

**Map of world  
ecosystems  
(biomes)**

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3. Explain why temperate deciduous forests are found where they are. \_\_\_\_\_

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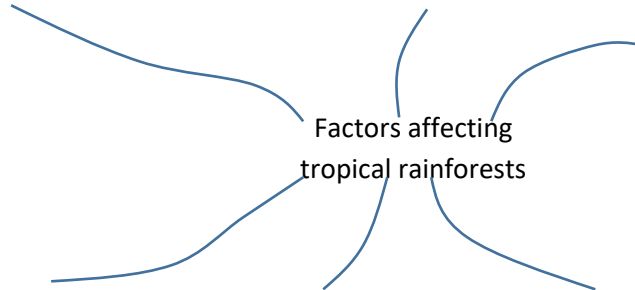
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### 2.3 – Tropical Rainforest Characteristics (READ pages 7 to 11)

1. Make a mind map of all 6 of the factors that affect tropical forests



1. What would happen to the nutrient cycle if tropical trees are cut down? \_\_\_\_\_

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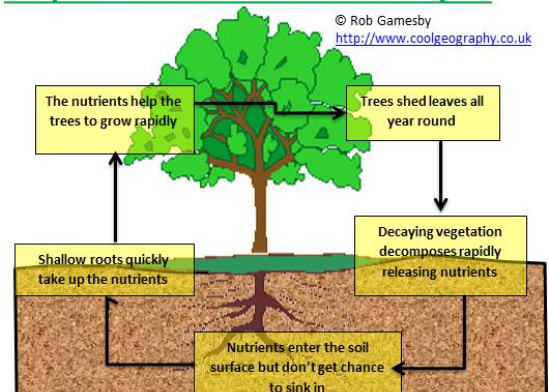
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#### Tropical Rainforest Nutrient Cycle

© Rob Gamesby  
<http://www.coolgeography.co.uk>



2. Rank the six factors that affect tropical forests in an order of importance from 1 to 6. Justify your ranking.

I have placed \_\_\_\_\_ first because \_\_\_\_\_

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I have placed \_\_\_\_\_ last because \_\_\_\_\_

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Factor	Rank
Climate	
Soils and nutrients	
Water Cycling	
Adaptions of plants and animals	
Competition	
People	



**2.4 – Impacts of deforestation (READ page 12)**

1. List as many environmental and economic impacts of tropical rainforest clearance as possible

Economic	Environmental

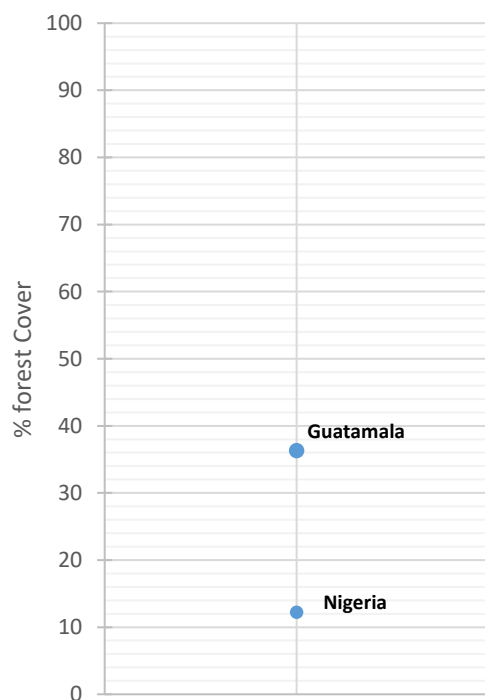
2. Annotate the photograph to show the features of and the damage done by, slash and burn agriculture



**2.5 – Rates of deforestation (READ page 13)**

1. Study the data in the table opposite
2. Identify the country with the greatest loss in forest cover between 1990 and 2005. \_\_\_\_\_
3. Which country had the least forest cover in 2005? \_\_\_\_\_  
\_\_\_\_\_
4. Which country had the most forest cover in 2005? \_\_\_\_\_  
\_\_\_\_\_
5. What is the range for % forest cover in 2005? (subtract the smallest value from the largest value) \_\_\_\_\_  
\_\_\_\_\_
6. Calculate the mean, mode and median for the data shown. Add these to the table.
7. Draw a dispersion graph of the % forest cover data using the template provided below.
8. Add on the upper and lower quartiles

Country	% forest cover 2005	% change 1990 to 2005
Bolivia	54	-7
Brazil	57	-8
Brunei	53	-11
Cambodia	59	-19
Colombia	59	-1
Congo	66	-1
Guatemala	36	-17
Indonesia	49	-24
Madagascar	22	-6
Nigeria	12	-36
Panama	58	-2
Papua New Guinea	65	-7
Peru	54	-2
Senegal	45	-7
Sri Lanka	30	-18
Mean		
Mode		
Median		

Dispersion graph showing % forest cover**Help Box****Measures of central tendency**

**Mode** - Mode is the value that appears the most times

**Mean** – add all of the values in the column together and divide by the number of results, in the case 15

**Median** – rank the results in order from smallest to biggest. The median is the middle value on the list. In this case the 8<sup>th</sup> result in your list.

**Inter Quartile Range**

Upper quartile (UQ) = Number of results (15) + 1/4 x 3

Lower quartile (LQ) = number of results (15) + 1/4

IQR = Upper Quartile – Lower Quartile

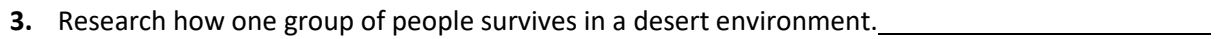
## **2.6 – Deforestation Case study (READ pages 14 to 16)**

1. Define the term deforestation\_\_\_\_\_
2. Should countries develop and deforest parts of the Tropical rainforests? Discuss with reference to a case study you have studied (9 Marks + 3 SPGST)\_\_\_\_\_

**2.7 – Sustainable rainforest management (READ pages 17 to 18)**

Design a poster aimed at helping people understand to understand deforestation and what can be done to help save the tropical rainforest. Include factual evidence, pictures and diagrams in your poster.

2. How do plants in the desert help develop soils and retain water?\_\_\_\_\_



**2.10 – Thar desert case study - (READ pages 22 to 24)**

1. Describe the location of the Thar Desert. \_\_\_\_\_

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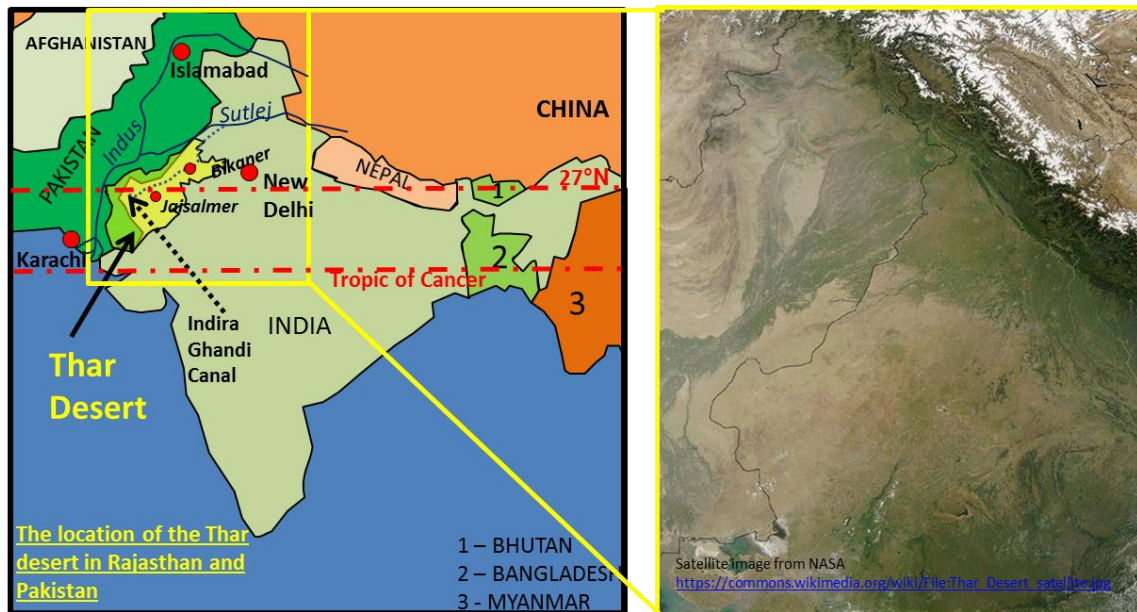
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2. Explain why the Thar desert is a difficult place to live \_\_\_\_\_

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3. Produce a table on the ways in which the Thar desert is used;

Land use	Description	Positives	Negatives

**2.11 – Desertification (READ pages 25 to 26)**

1. Describe the location of the Sahel \_\_\_\_\_

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2. Explain how the process of desertification works \_\_\_\_\_

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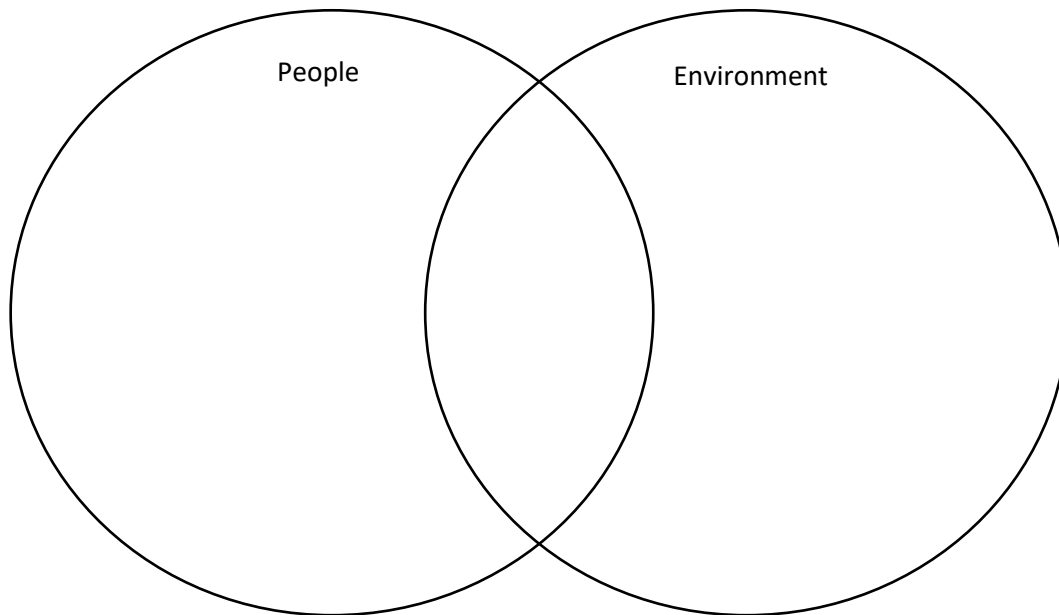


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3. What impact does desertification have on people and the environment?



4. Explain how you could stop the process of desertification \_\_\_\_\_

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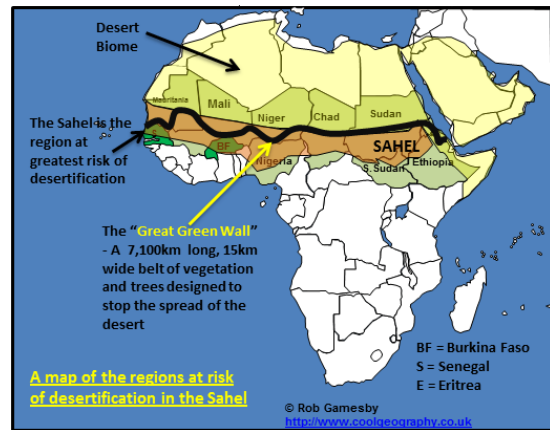
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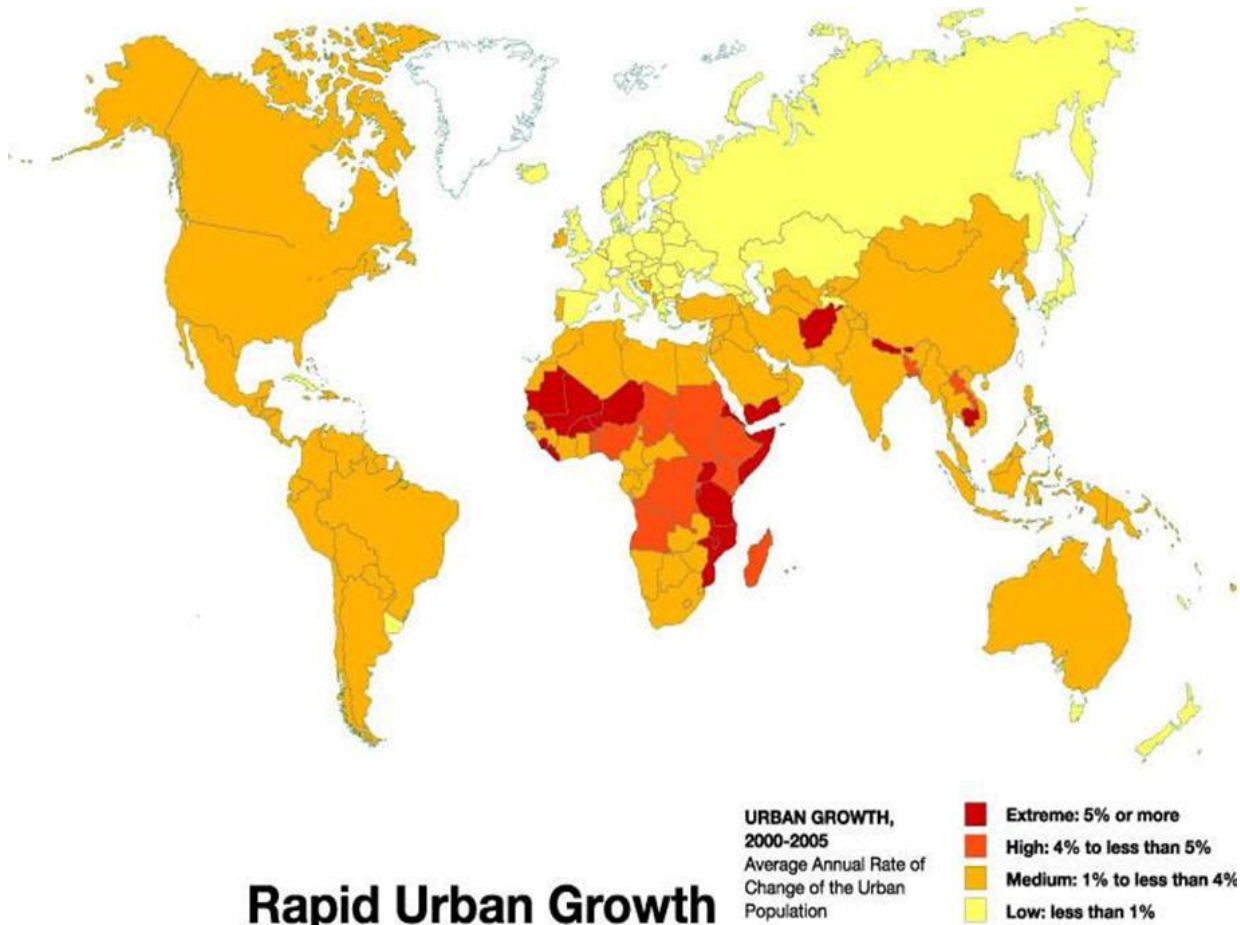


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**4.1 Global patterns of urban change and Factors affecting the rate of urbanisation and the emergence of mega-cities. (READ pages 2 to 3)**

**Study the map below on rates of Urbanisation growth**



## Rapid Urban Growth

1 Use the map and key to complete the table below:

Continental area	South America	North America	Western Europe	Sub Saharan Africa	South East Asia
Average Rate of growth					

2 Which types of nations, LICs, NEEs or HICs, is urbanisation happening fastest? \_\_\_\_\_

3 Which types of nations, LICs, NEEs or HICs, is urbanisation happening slowest? \_\_\_\_\_

4 Explain the patterns on the map. Ensure that you include one area of low growth and one area of high/extreme growth. \_\_\_\_\_

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**4.2.1 Factors affecting the rate of urbanisation and Mumbai introduction. (READ pages 5 to 7)**

1. Using page 8 define the following terms:

- Migration – \_\_\_\_\_
- Push Factor - \_\_\_\_\_
- Pull Factor - \_\_\_\_\_
- Natural Increase – \_\_\_\_\_

2. How do migration and natural increase affect the population size of cities?

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3. Use the information on pages 9 and 10 to rank the factors about how Mumbai has grown into an order of importance. Give reasons for your ranking

	Rank out of 6
Location in West of India	
Shipping routes	
Location as a port	
Entertainment and fashion industries	
Foreign companies	
Location of Indian Banks	

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**4.2.1 and 4.2.2 Causes of growth in Mumbai: natural increase and migration (READ pages 2 to 4)**

Look at table 4.4.2– Contrasts between Mumbai and Maharashtra state

	Maharashtra State	Mumbai
GDP per head (US \$)	1,660	2,845
Life expectancy	68.4	<b>52.6</b> (men) and <b>58.1</b> (women)
Infant Mortality	28	26
Literacy rate	82.9%	90.81%
Birth rate	17.6	20.1
Death rate	6.7	6.0

1. What factors would attract migrants to Mumbai and why? \_\_\_\_\_

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2. Which factors might stop or deter people from moving? \_\_\_\_\_

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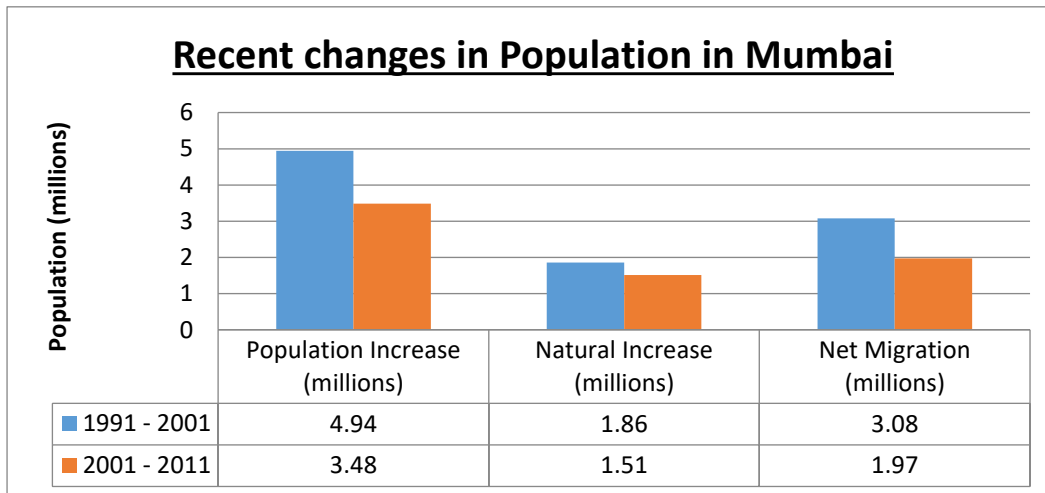


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3. Study the graph below on causes of urban growth in Mumbai



4. Describe the patterns on the graph \_\_\_\_\_

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5. Which factor is most important in the growth of Mumbai? \_\_\_\_\_

6. What has happened to the growth of Mumbai over time? \_\_\_\_\_

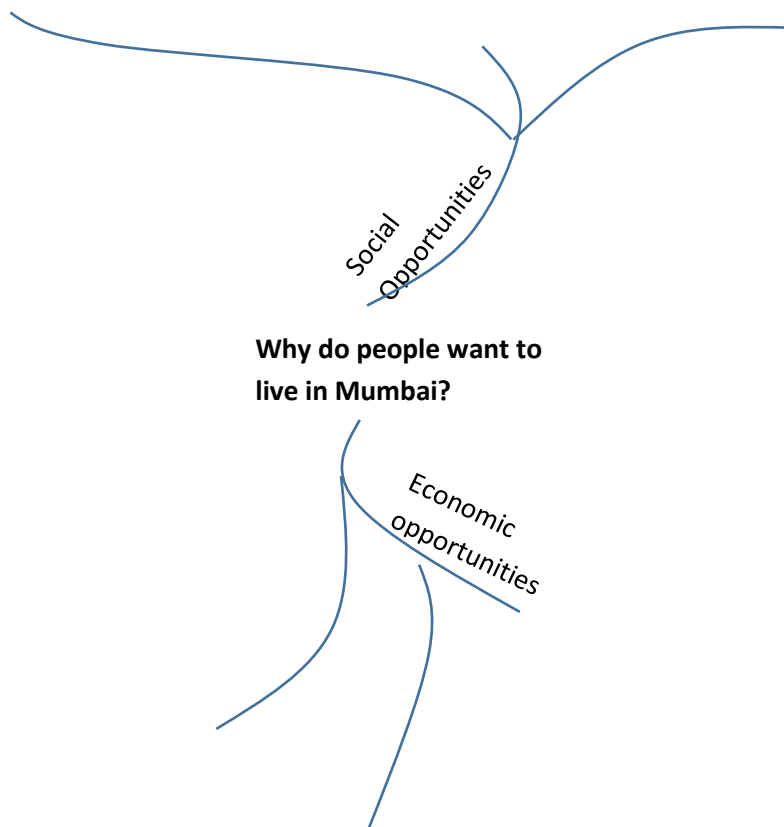
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**4.3.3 Opportunities of living in Mumbai: Social AND economic (READ pages 10 to 11)**

Produce a mind map that summarises all of the reasons why people would want to live in Mumbai;



#### **4.3.4 Challenges in Mumbai: Social, economic AND environmental (READ pages 12 to 13)**

Complete the Case Study Crib Sheet below to cover all of the challenges facing Mumbai;

<p><b><u>Case study name –</u></b></p>	
<p><b><u>Introduction &amp; Location – Write a short sentence about what the case study is about and WHERE it is</u></b></p>	<p><b><u>Key facts to remember (include at least 4 – dates, names of places, figures etc.)</u></b></p>
<p><b><u>Sketch map</u></b></p>	
<p><b><u>Key Geography Terminology associated with case study</u></b></p>	
<p><b><u>What the case study is about in 5 sentences</u></b></p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	
<p><b><u>A Question I could be asked:</u></b>  <i>Common Command words to help – Describe, Compare, Contrast, Explain, Suggest why</i></p>	

Is Mumbai a city of hope or despair? \_\_\_\_\_

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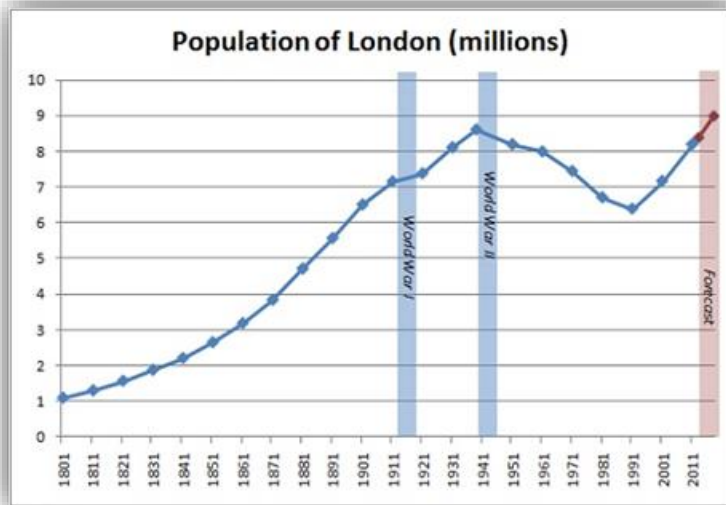
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**4.3.5 An example of how urban planning is improving the quality of life for the urban poor. (READ pages 15 to 16)**

Which do you prefer, the high rise tower blocks proposed by the Slum Rehabilitation Authority or Local based improvements suggested by SPARC? Justify your answer.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

**4.4.1 The location and importance of London in the UK and the wider world (READ pages 18 to 19)**



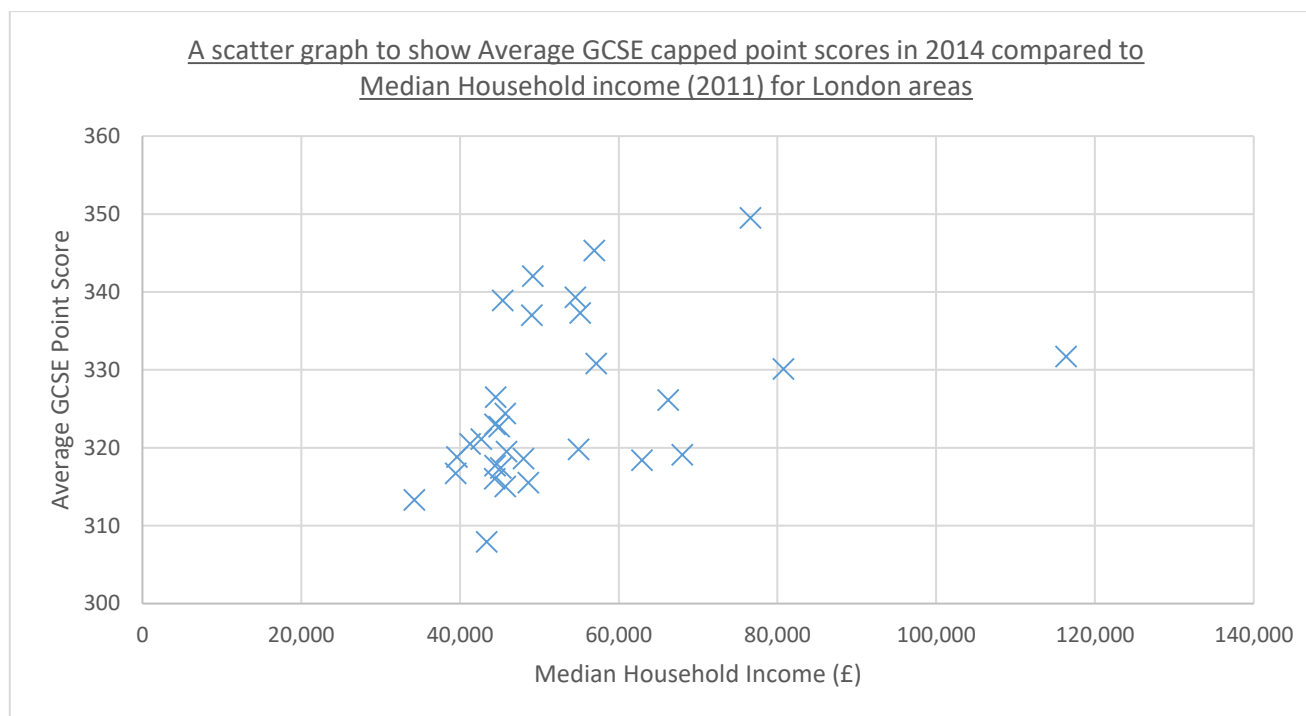
- Describe what has happened to the population using the graph above. Use figures in your answer.

- Using the fact file select 5 facts that prove the London is influential within the UK and 5 facts that show it is influential world wide

London is influential within the UK because...	London is influential worldwide because...

#### 4.4.2 Geographic skills and Impacts of national and international migration on the growth and character of the city

**(READ pages 20 to 21)**



1. Locate the following 2 points onto the graph

Area	Median Household Income	Average GCSE Point Score
Barking and Dagenham	34,080	307
City of London	63,620	355

2. Add a line of best fit to the graph above
3. Hypothesis: Students in wealthier areas of London perform better in their GCSE examinations.
4. Respond to the hypothesis above using evidence from the graph

#### Calculating % Change

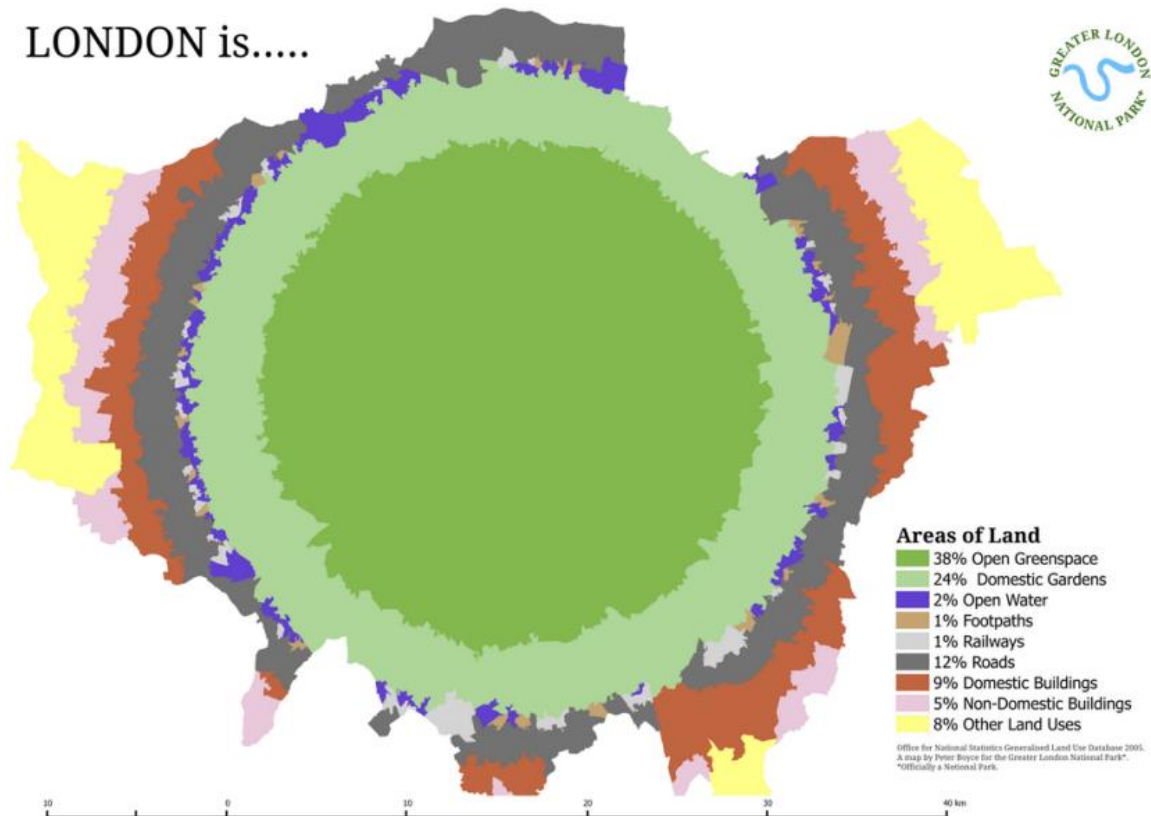
5. Calculate the % change for the statistics below from the 2001 and 2011 census for London

	Population - 2015	Ethnicity - % White	Religion - % Christian
2001	7,172,091	71	58
2011	8,632,850	60	48
2011- 2001 (increase or decrease)			
% change = Increase or decrease ÷ Original Number (2001) × 100			

Note - If your answer is a negative number then this is a percentage decrease.

**4.4.3 Opportunities in London: Social, economic and environmental (READ pages 22 to 25)**

LONDON is.....



<http://londontopia.net/londonism/london-maps-intriguing-map-london-shows-just-much-green-space-amount-will-surprise/>

Look at the map above and use it to complete the table below;

Total percentage of green areas in London	Total Percentage of BUILT environments in London

How does the amount of green space compare to the amount of built environments? Is this surprising?

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Why do people live in London? Include as many opportunities in your answer as possible

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**4.4.4 Challenges in London: Social, economic and environmental (READ pages 2 to 4)**

**Produce a mind map with images and colour on the challenges that London faces**



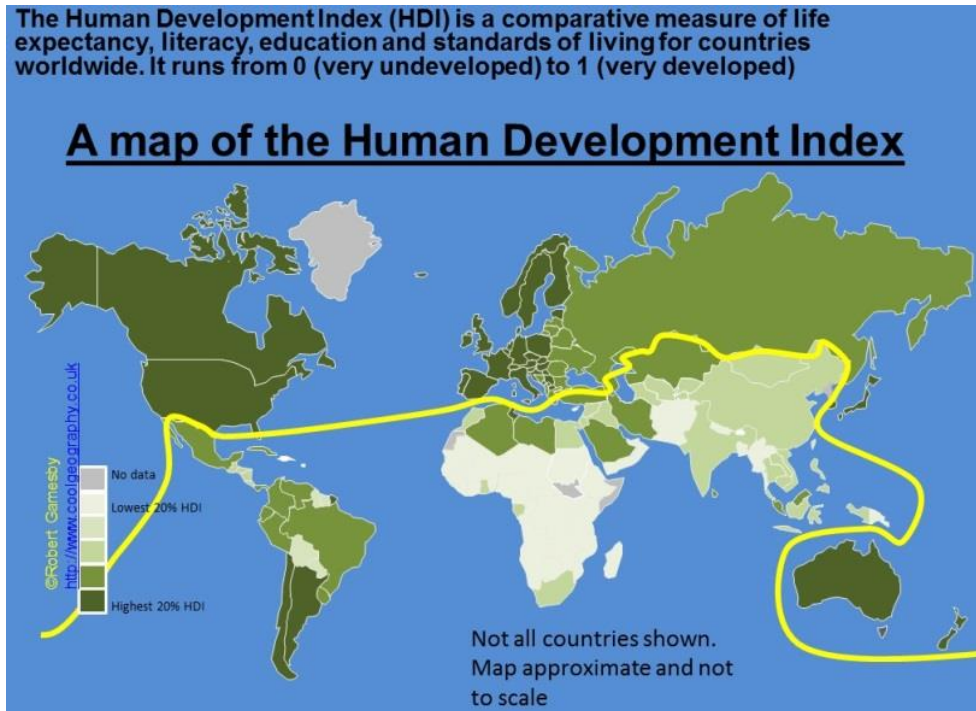
#### 4.4.5 (READ pages 2 to 4)

**The London Olympics was a success in regenerating East London. Discuss. (9 marks)**

[illegible]

5.1Read pages 2 & 3

1. Annotate the map below to describe the patterns of HDI



2. Pick your top 3 measures for showing the development of a place (e.g. Life expectancy, GNI, HDI, Infant mortality, education, Literacy rate, Happy planet index etc.)

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

3. Justify your ranking – why are these the best indicators? \_\_\_\_\_

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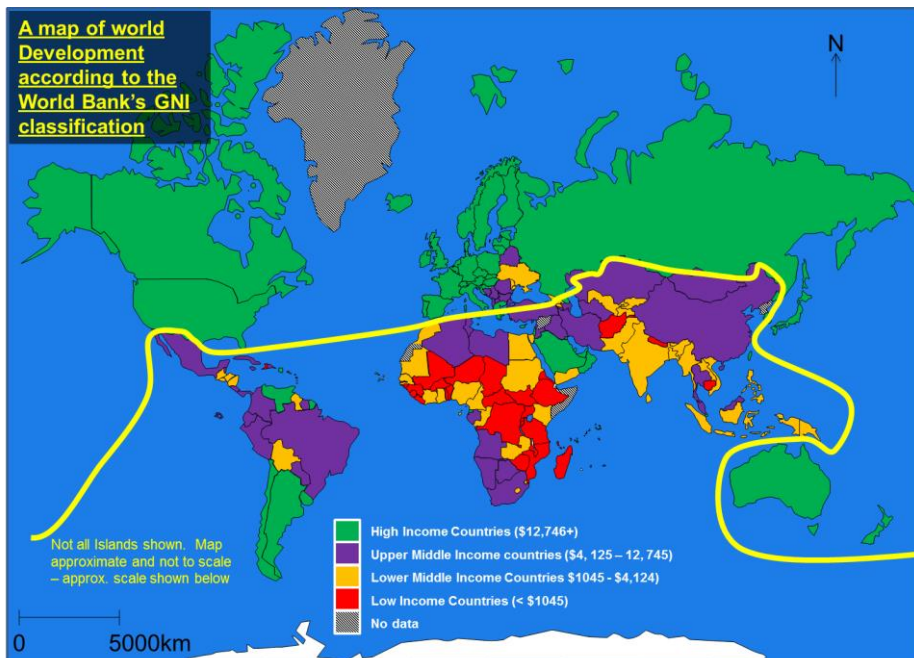
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**5.2****Read pages 4 to 5**

1. Using an Atlas and the GNI map below complete the table below;

Country	GNI on map	North or South of the Brandt Line?
UK		
South Africa		
Madagascar		
Brazil		
USA		
Ukraine		

2. According to the data in the table above, which countries are correctly classified as North or South?

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3. According to the data in the table above, which countries are INCORRECTLY classified as North or South?

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4. What does this information reveal about the VALIDITY (how accurate it is) of the North South Divide line from 1971?

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5. Which method of classifying countries do you prefer (First, second and third world method; North-South divide; HIC-LIC; or 5 fold division of wealth) and WHY?

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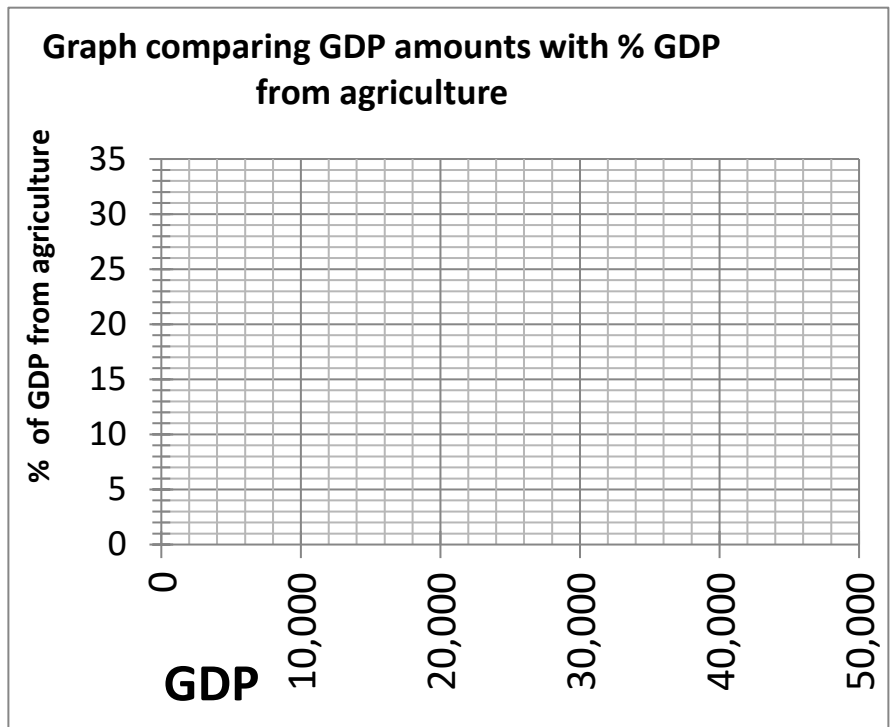


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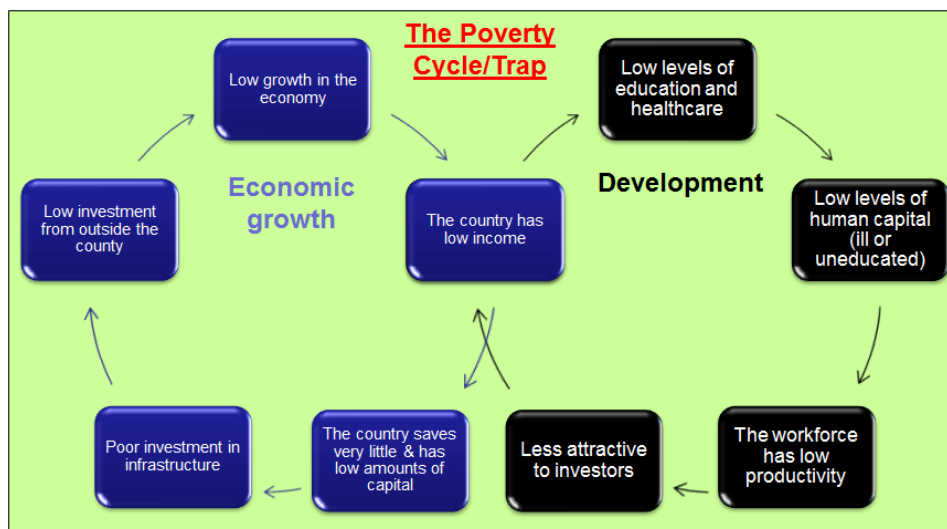
Country	GDP US\$ per Capita	% GDP from agriculture
Japan	34,000	3.9
USA	47,200	1.2
Italy	30,500	1.8
UK	34,800	0.9
Kuwait	48,900	0.3
Mexico	13,900	4.2
Malaysia	14,700	9.1
Brazil	10,800	6.1
Egypt	6,200	13.5
India	3,500	16.1
Kenya	1,600	22
Bangladesh	1,700	18.4
Burkina Faso	1,200	30.1



- Give reasons for your answer. \_\_\_\_\_

5.3

Read pages 9 and 10



1. **Add to the diagram** above at least **4 ways** that you could break the cycle of poverty.
2. How do PHYSICAL factors affect the level of development of your country?

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3. Explain how world trade is UNFAIR on LICs, the world's poorest countries

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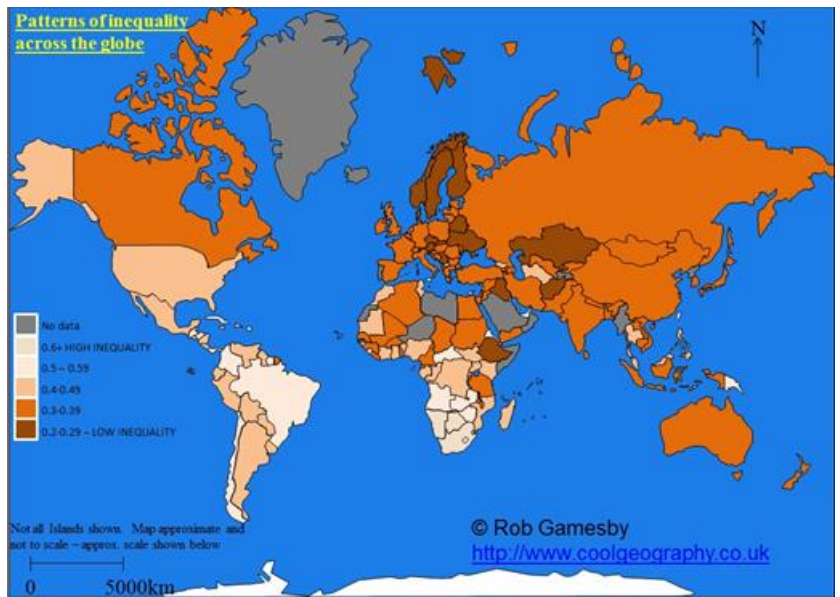


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## 5.5

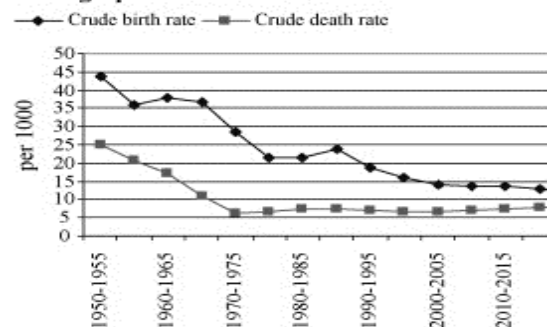
## Read pages 12 to 14

1. Describe the patterns on the map of inequality opposite. The higher the figure shown, the greater the inequality between rich and poor in the country. \_\_\_\_\_

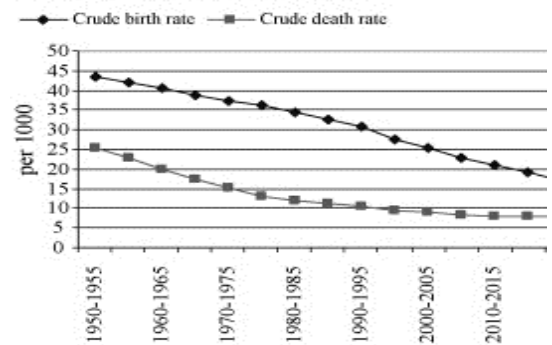


2. Use the graphs opposite to answer the questions below;
- What stage of the demographic transition model was INDIA in in 1950-55?
  - What stage of the demographic transition model was CHINA in in 1960-65?
  - What stage of the demographic transition model was INDIA in in 2010-2015?
3. Draw an annotated population pyramid to show the stage of the demographic transition model China had reached by 2010.

Demographic Transition in China






Demographic Transition in India



5.6Read pages 16 to 18

Complete the table below to assess the impacts of the various ways to help countries out of poverty. Remember that impacts can be positive and negative.

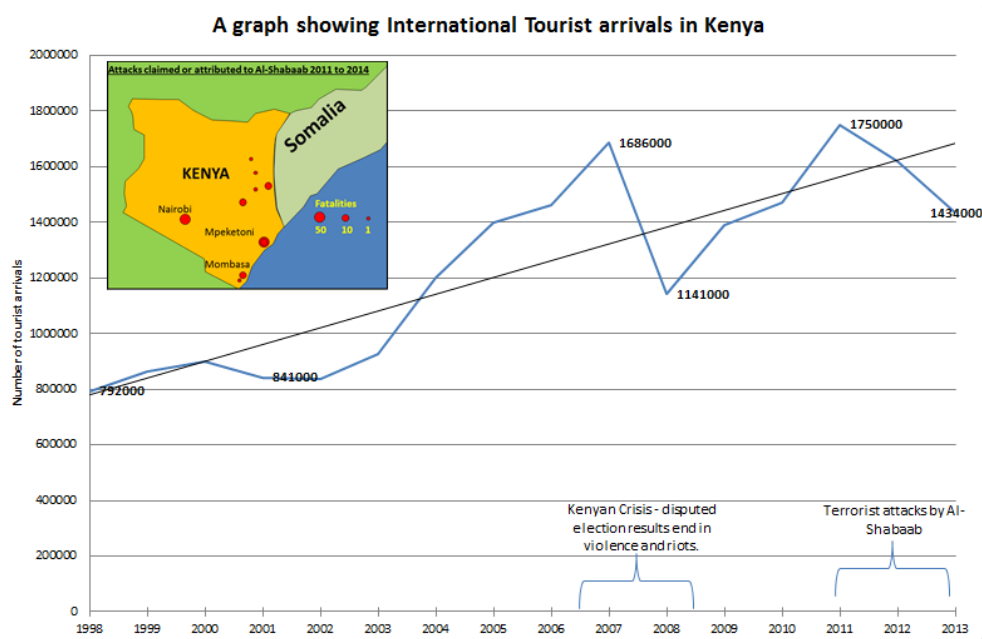
	Socially 	Economically 	Environmentally 
Trade			
Fair Trade			
Investment			
Loans			



## 5.7

**Read pages 20 and 21**

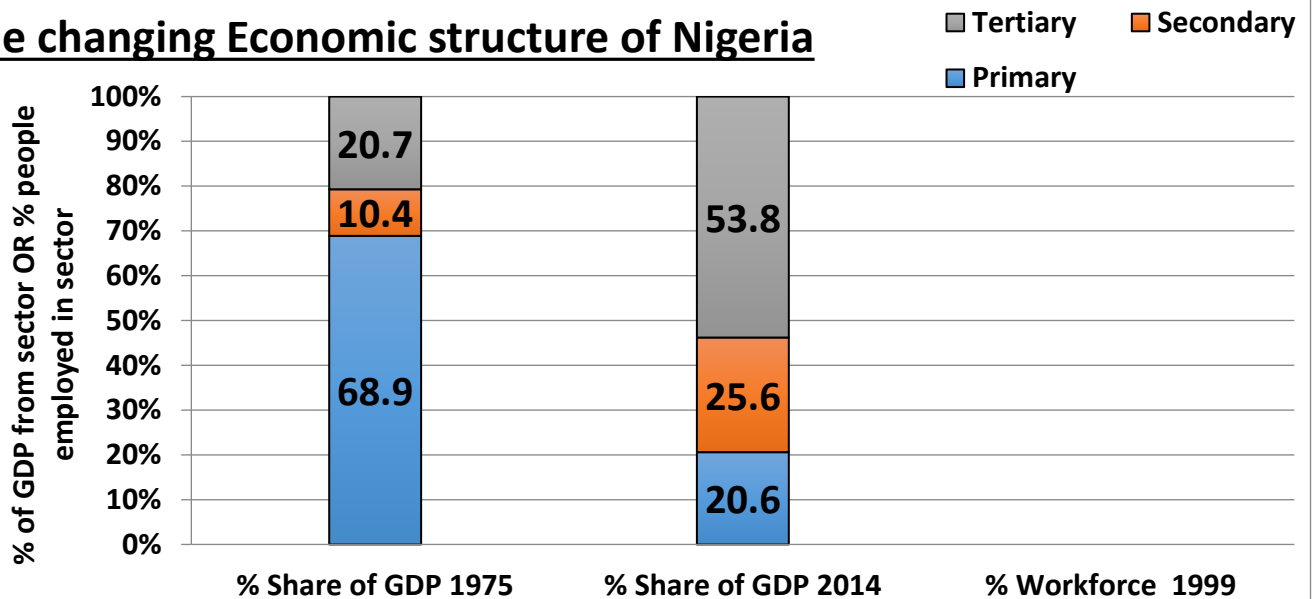
1. Describe the changes in the number of tourists arriving in Kenya over time. Use data in your response.



2. Is tourism a good industry for Kenya to use to bridge the development gap? Use the table on page 21 Evaluate the impact of tourism on Kenya.

## 5.9

Read pages 24 to 25

**The changing Economic structure of Nigeria**

3. COMPLETE the graph above by making a stacked column for % workforce in 1999 using the data below;

Primary	70
Secondary	10
Tertiary	20

4. Using the graph what has happened to primary, secondary and tertiary % share of GDP OVER TIME?

Primary: \_\_\_\_\_

Secondary: \_\_\_\_\_

Tertiary: \_\_\_\_\_

5. CONTRAST the % share of GDP with the % workforce in each sector in 1999. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Should Nigeria be more developed than it currently is?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Is Shell a positive force In Nigeria? Discuss this with reference to both sides of the argument

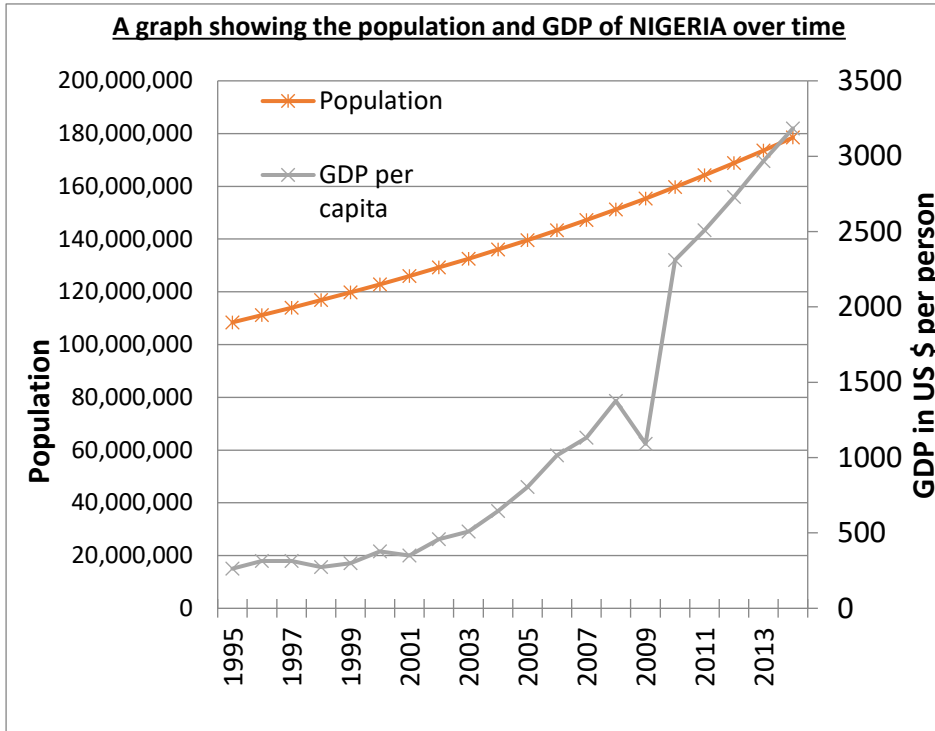
Conclusion –Your opinion and why you hold that view

5.12

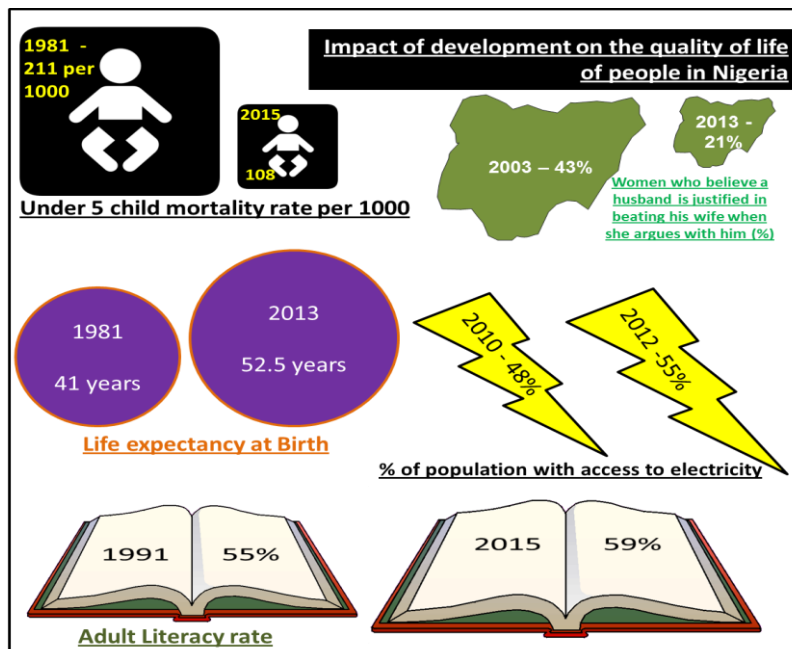
Read page 31

Look at the graph below. Describe the patterns in GDP and population over time

**A graph showing the population and GDP of NIGERIA over time**

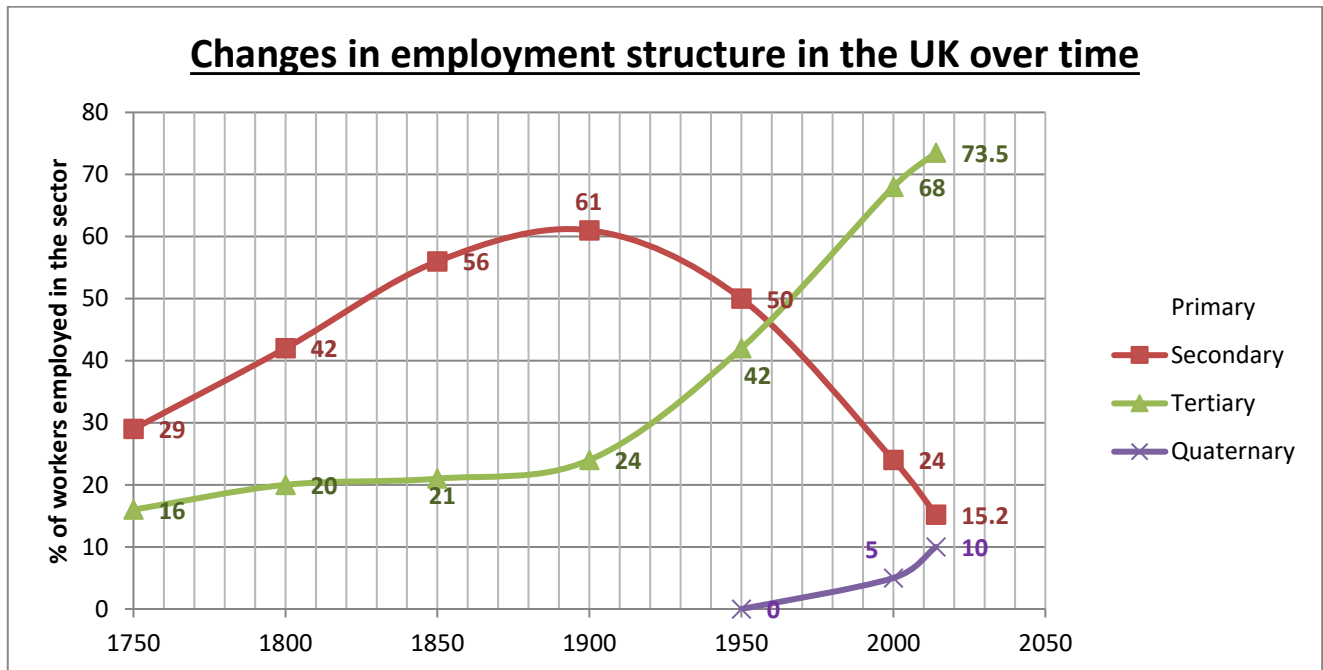


Look at the infographic; has quality of life for Nigerians improved? Use data to support your response



## 5.13

Read pages 33 and 34



1. Use the data below to complete the graph above by adding a line showing the change in the % of people working in Primary industries

	1750	1800	1850	1900	1950	2000	2014
Primary	55	38	23	15	8	3	1.3

2. Describe the change in UK employment structure over time

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3. Which employment area (P,S,T or Q) would you and your friends like to work in? What is your/their dream job? Why? What does this mean for the UK?

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**5.14**

**Read pages 35 and 36**

Produce a revision mind map on how Industry can affect the environment, consider the land, air and water on your mind map.

Read through the information about Teesside on pages 35 and 36. Look also at page 38. What is the future for heavy industry areas like Teesside in the UK? How can they adapt to the new economy of the UK?

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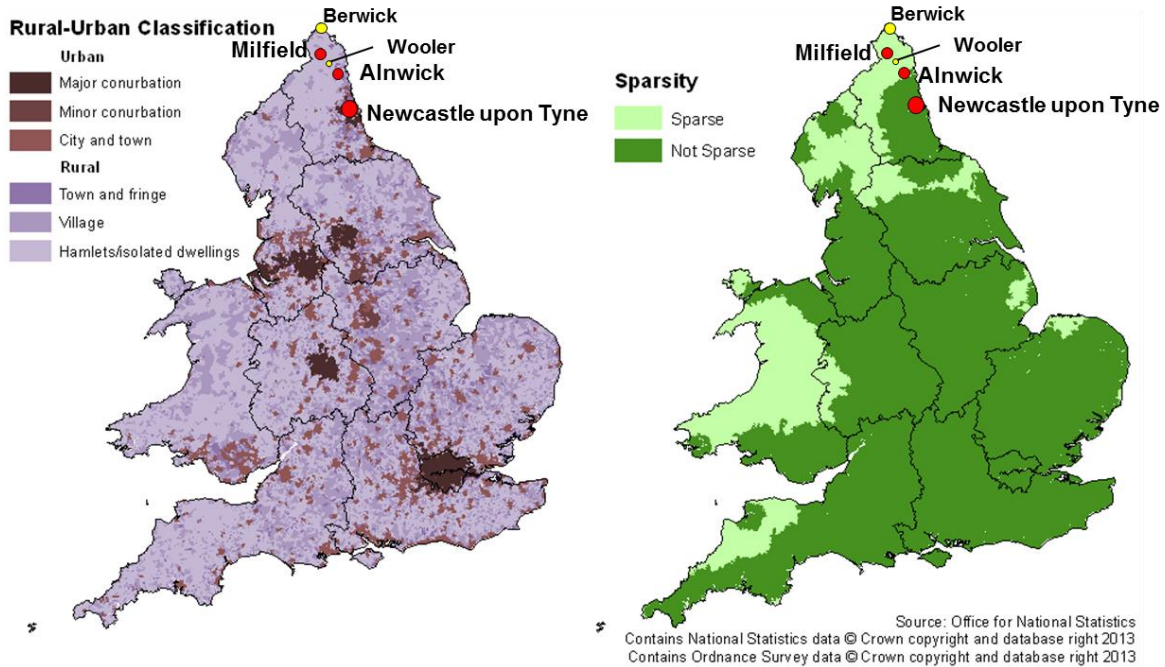
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5.16

Read pages 39 to 41

Look at the maps below, where do Milfield and Alnwick fit in terms of the Rural-Urban classification and Sparsity?



	Rural-Urban classification	Sparsity
Alnwick		
Milfield		

What problems does Milfield face in the long term?

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How would you manage those problems?

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5.17

Read pages 42 to 43

1. Define the term “Infrastructure”

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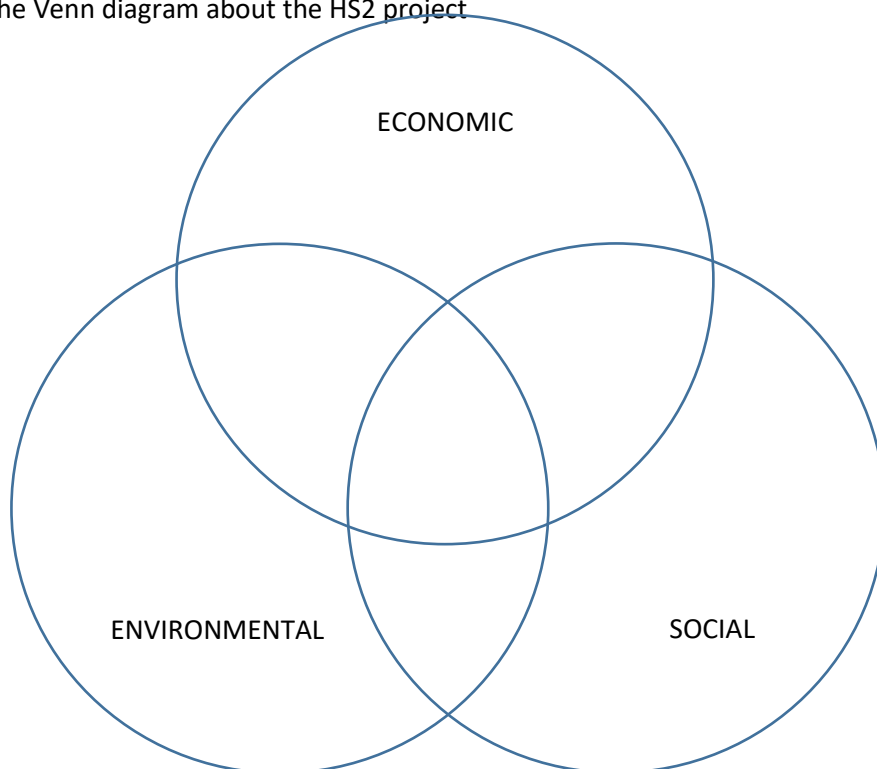
2. List some major Infrastructure links in your local area

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3. Complete the Venn diagram about the HS2 project



4. In your view should HS2 be going ahead? JUSTIFY (give reasons for) your view

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**5.18**

Look at the graphic below. Is enough being done to make the Northern Powerhouse a reality? You might want to research this on the internet to get extra ideas for your response.

## Government Northern Powerhouse investments:

**£235 million**

Sir Henry Royce Institute for advanced materials research, based in Manchester, with centres in Leeds, Liverpool and Sheffield

**£113 million**

Cognitive Computing Research  
Centre in Warrington

**£78 million**

The Factory Manchester, a new theatre and exhibition space

**£20 million**

Innovation Hub for Ageing Science  
in Newcastle

**New National  
College for Onshore  
Oil and Gas** in Blackpool,

**Oil and Gas** In Blackpool, with centres at Chester, Redcar and Cleveland

## Doubling

the number of northern cities to benefit from the Government's superfast broadband programme

### Private Sector investments planned and underway:

## Humber

**£310 million** wind turbine technology from Siemens and Associated British Ports

**£450 million** Logistics and Marine Energy Park from Able UK

**£350 million** bio fuel refineries from Vivergo Fuels

**Liverpool City Region**

**£350 million** Liverpool2 deep-sea container port from Peel Ports

**£920 million** City Centre retail from Grosvenor Group

## Greater Manchester

**£800 million** Airport City Enterprise Zone

**£1 billion** East Manchester housing programme from Abu Dhabi United Group

**North East**

**£150 million** in Newcastle's marine and offshore sector

**£82 million** train construction facility from Hitachi

## Leeds City Region

**£150 million** Victoria Gate Leeds city centre

**£260 million** Broadway Bradford city centre

## Sheffield City Region

**£400 million** Peak Resort, Sheffield city centre

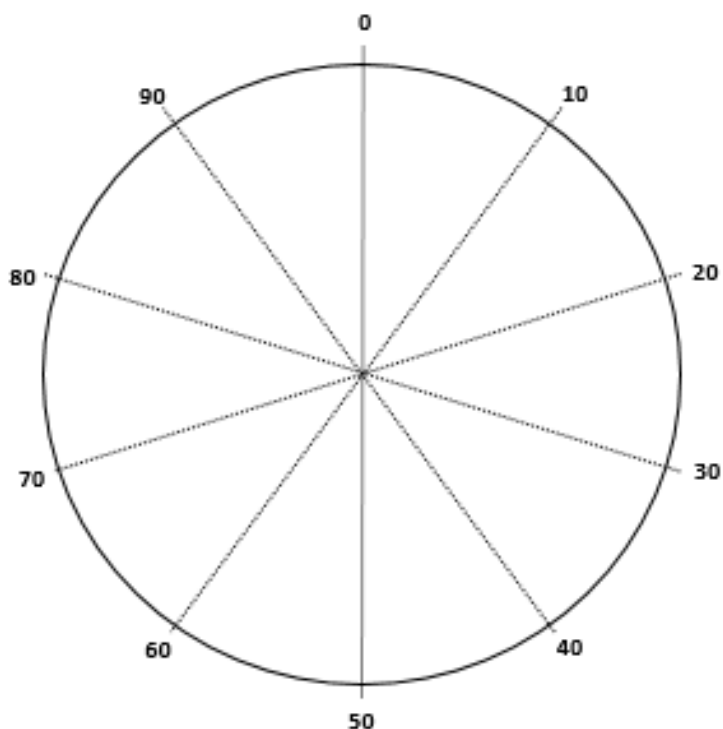
**£400 million** intermodal freight interchange in Doncaster from Veridon.

Source: HM Treasury, Transport for the North and publically available sources.

**6.01 The significance of food, water and energy to economic and social well-being.****Read pages 2 and 3**

1. Draw a pie chart to show the world energy consumption by source

	Percentage
Oil	33
Coal	29
Gas	24
Nuclear	4
Hydro	7
Wind	1.5
Solar	0.5
Other renewables	1



Source of data -

<https://www.worldenergy.org/wp-content/uploads/2016/10/World-Energy-Resources-Full-report-2016.10.03.pdf>

2. How SUSTAINABLE is this pattern of energy consumption? \_\_\_\_\_

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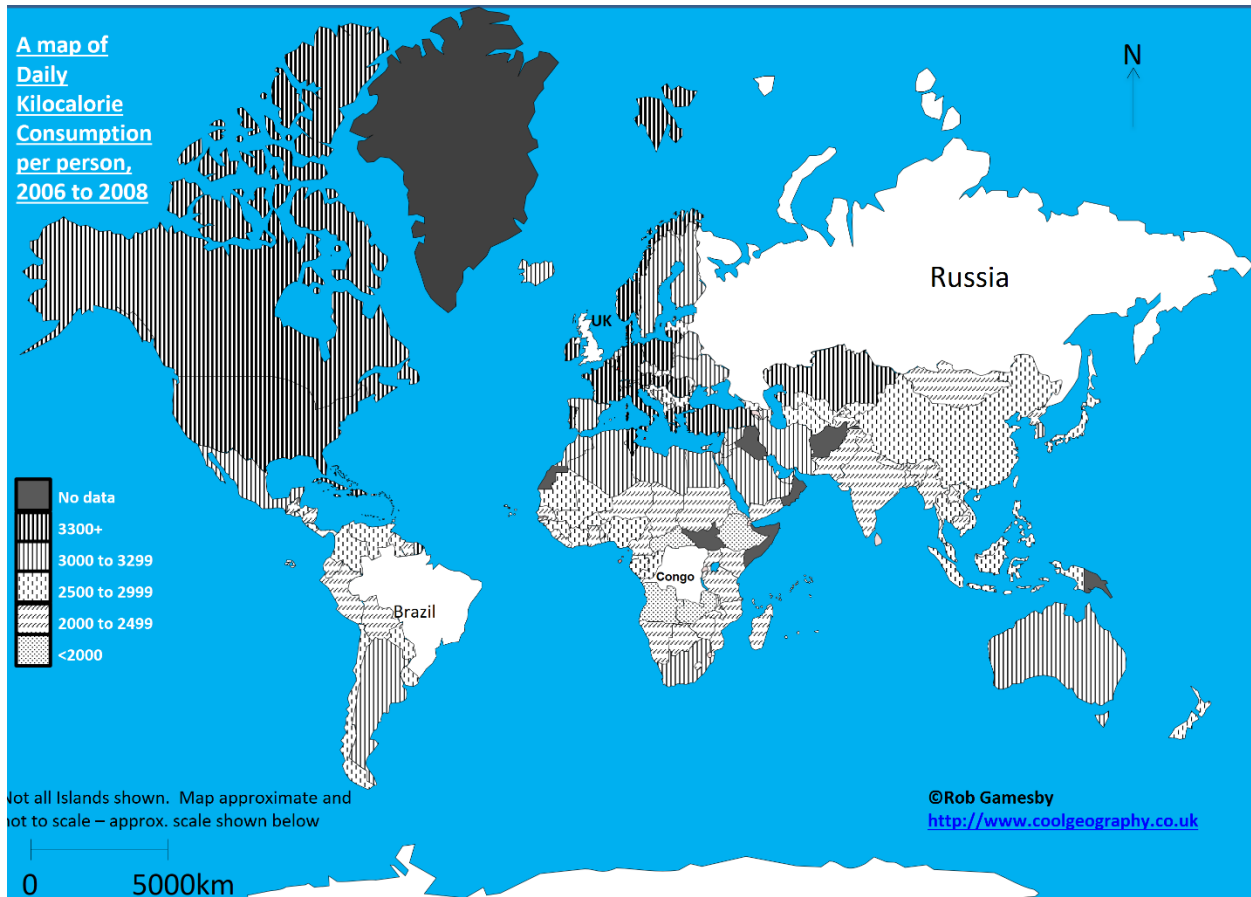
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3. Complete the table below on how essential and desirable these resources are for human life

	Ways in which it is essential to human life	Ways in which it is desirable
Food		
Water		
Energy		

**6.02 An overview of global inequalities in the supply and consumption of resources.****Read pages 4 and 5**

1. Add the following data to the map above

	Kilocalorie consumption per person
UK	3450
Russia	3320
Democratic Republic of Congo	1590
Brazil	3120

2. What inequalities exist in the kilocalorie intake of people across the globe? \_\_\_\_\_

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3. What impacts could this have on people's well-being? \_\_\_\_\_

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4. Why do some countries use more energy than others do? \_\_\_\_\_

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### **6.03 The growing demand for high-value food exports from low-income countries and all-year demand for seasonal food and organic produce**

**Read pages 6 and 7**

1. Define the term high value food export \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. Annotate the picture of Chive farming in Kenya to highlight its key features



Source: <http://www.hortidaily.com/article/22398/Kenya-smallholder-farmers-take-on-export-market-with-chives>

3. Complete the table below to assess the impact of Kenya (a LIC) exporting food to the UK. Use SEEP (Social, Economic, Environmental) to help you think of ideas

	Positives	Negatives
Kenya		
UK		

4. Why is organic produce more expensive than non-organic produce? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Calculate the % change in organic food sales in the UK in the table below

	2000	2015	Change (2015 – 2000)	% Change (Change/2000 figure X 100)
Value of sales in millions	802	1954		

**6.04 Carbon footprints, 'food miles' travelled, local sourcing of food and the trend towards agribusiness.****Read pages 8 to 9**

1. Look in your fridge and food cupboards, complete the table below. Use the website <http://www.foodmiles.com/food/uk> to calculate the distance travelled

Food item	Country of origin	Miles travelled

2. How sustainable is your diet in terms of carbon footprints and food miles? \_\_\_\_\_

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3. How could you make your food consumption more sustainable? \_\_\_\_\_

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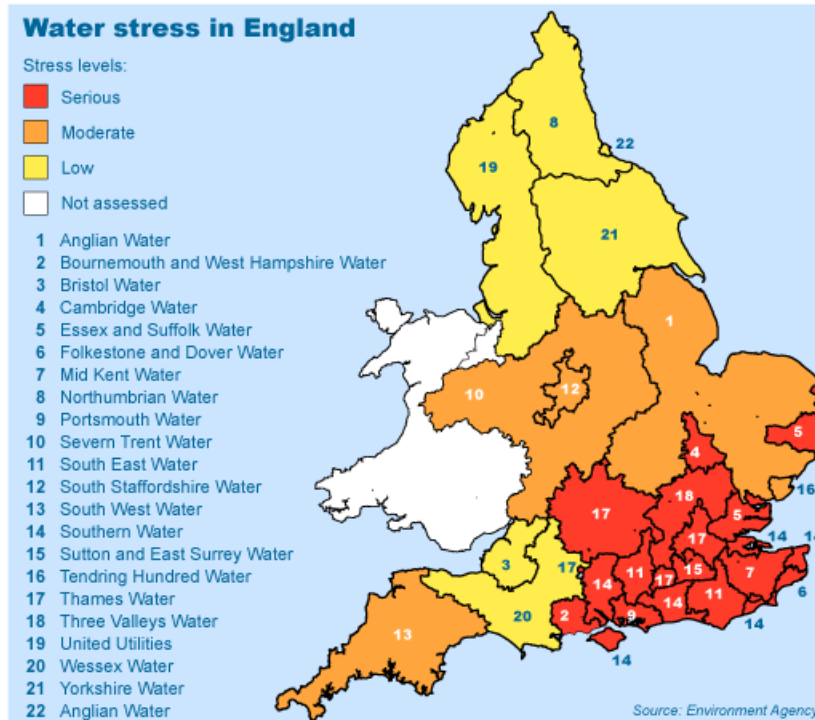
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## 6.05 The changing demand for water and matching supply with demand

Read pages 10 and 11



**Water stress** occurs when the demand for **water** exceeds the available amount during a certain period or when poor quality restricts its use.

1. Annotate the map to describe the pattern of water stress shown
2. Explain why the South East of England has the worst levels of water stress\_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
3. Brainstorm all of the ways that your house uses water

**6.07 The changing energy mix – reliance on fossil fuels, growing significance of renewables & 6.08 Reduced domestic supplies of coal, gas and oil**

**Read pages 14 &15**

1. Complete the table below

	UK energy mix in 2015 %	Proposed government energy mix by 2020	Change (2020 -2015)	% change (Change/2000 figure X 100)
Coal	31	26		
Gas	25	21		
Nuclear	19	8		
Renewable	22	39		
Other	3	5		

2. Describe the changes shown in the table \_\_\_\_\_

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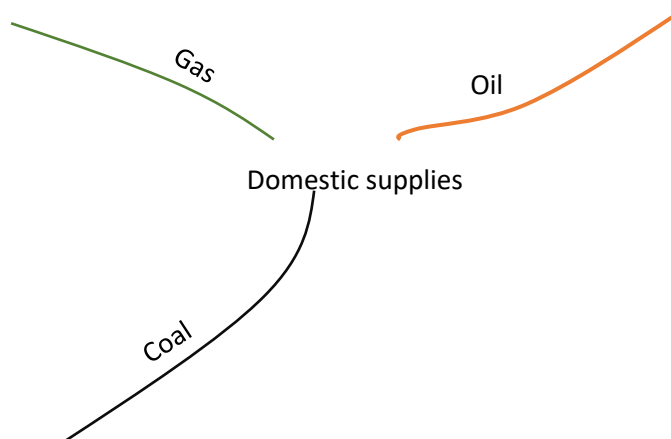


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3. Produce a mind map on why domestic supplies of coal, oil and gas are reduced



### 6.09 Economic and environmental issues associated with exploitation of energy sources.

**Read pages 16 and 17**

*"A key part of our long-term economic plan to secure Britain's future is to back businesses with better infrastructure. That's why we're going all out for shale gas (fracking). It will mean more jobs and opportunities for people, and economic security for our country." David Cameron 2014*

Discuss the extent to which you agree with Mr Cameron on using Fracking of Shale gas as part of our energy mix in the UK. \_\_\_\_\_

**Plan:**

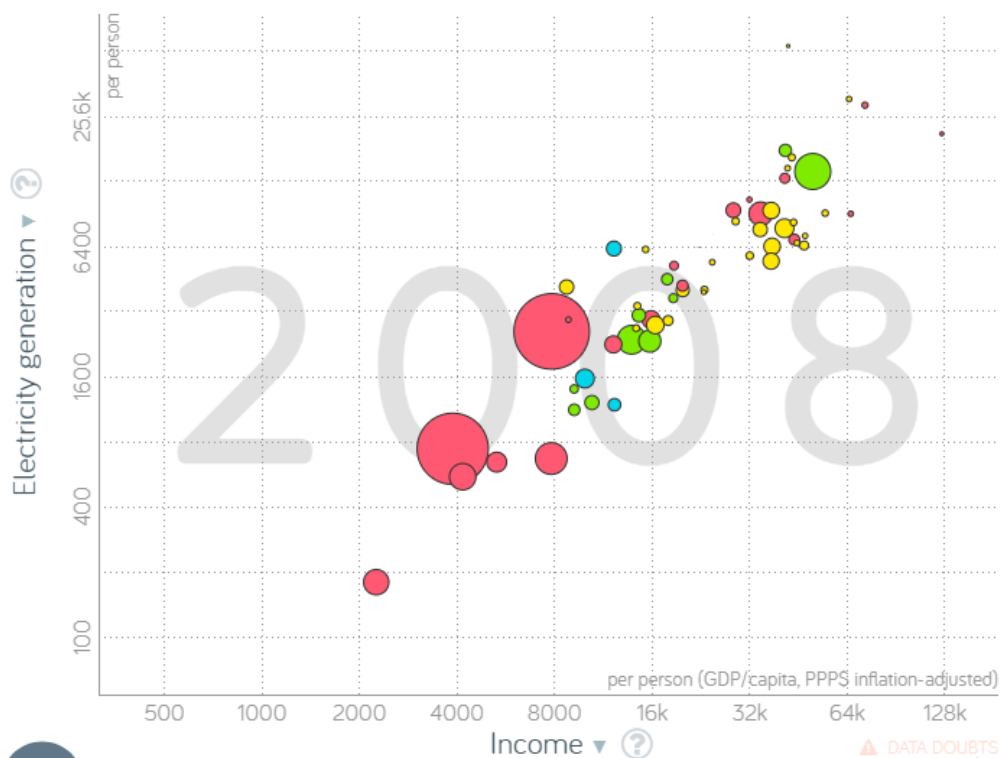
## Introduce – what are Fracking and the UK energy mix?

**Paragraph 1 – what are the advantages of Shale gas and other fossil fuels?**

**Paragraph 2 – what are the pros and cons of the alternatives – renewable energy**

## Conclusion – what do you think?



**6.10 Energy resources – supply and demand and 6.11 Reasons for increasing energy consumption:**Read pages 18 to 21

1. Add the following data to the map with a cross

Country	GDP	Electricity Generation
Uzbekistan	3730	1770
Kuwait	92K	20K
Portugal	27.7K	4300

2. Add a line of best fit to the graph.
3. Hypothesis: As GDP goes up electricity generation goes up  
Respond to this hypothesis using evidence from the graph \_\_\_\_\_

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4. Outline 2 reasons why energy consumption is going up \_\_\_\_\_


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**6.12 Factors affecting energy availability****Read pages 22 to 24**

In the table rank the factors that affect energy supply from 1 (most important) to 6 (least Important). The 6 factors to add to the table are: Geology, climate, environmental conditions, technology, cost of exploitation and government decisions (political factors)

<div> <div>Most Important Factor</div> <div>  </div> <div>Least Important Factor</div> </div>	1	
	2	
	3	
	4	
	5	
	6	

Justify (give full reasons) your selection of the most important and least important factors below

Most important \_\_\_\_\_

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Least important \_\_\_\_\_

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**6.13 Impacts of energy insecurity.**

**Read pages 25 to 26**



Source: <http://priceofoil.org/2013/04/30/canadas-hollow-promises-on-tar-sands/>

1. Use the photograph above to describe the impacts of exploiting oil on the natural environment\_\_\_\_\_

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2. Research one example of how energy insecurity has led to social unrest or conflict\_\_\_\_\_

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3. Record your information source (book, website name etc.)

**6.14 Overview of strategies to increase energy supply**

**Read pages 27 to 28**

1. Complete the table below by classifying the strategies in the book as either sustainable or unsustainable

Sustainable strategies to increase energy supply	Unsustainable strategies to increase energy supply

2. What damage does nuclear Power do to the environment? \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

3. Why have some HICs avoided the use of sustainable energy sources to provide energy? Make a list of points

### 6.15 The North Sea – An example of energy use

**Read pages 29 to 30**

*“Development of the North Sea Oil and Gas field has been a huge success” DISCUSS this statement considering Social, Economic and Environmental factors.*

**Plan:**

## Introduce – what is the North sea Oil and Gas field?

**Paragraph 1 – what are the advantages of using the North Sea for Oil and Gas production?**

**Paragraph 2 – what are the disadvantages?**

## Conclusion – what do you think?

## **6.16 The potential for sustainable energy supplies**

**Read pages 31 to 33**

Design an advertisement for a local paper for an energy firm that is attempting to be as sustainable as possible. You could mention energy conservation in the household and businesses, use of technology and renewable energy in your advert.