

GCSE Geography – Personal Learning Checklist

Exam Board - EDUQAS B

G	I am very confident, and I know this well
A	I am not very confident. I may need to check with my teacher and spend more time working on this
R	I am not confident about this at all. I need to check with my teacher and ensure I have what I need to become confident

Topic - Coasts	Support	R	A	G	RC
1. Types of <u>waves</u> – characteristics, reasons for them and where they are found.	https://www.bbc.co.uk/bitesize/guides/zyp98qt/revision/1				
2. Types of <u>erosion</u> – what are they and what do they mean.	https://www.bbc.co.uk/bitesize/guides/zyp98qt/revision/4				
3. Types of <u>transportation</u> – what are they and what do they mean.	https://www.bbc.co.uk/bitesize/guides/zyp98qt/revision/5				
4. Types of <u>weathering</u> – what are they and what do they mean.	https://www.bbc.co.uk/bitesize/guides/zyp98qt/revision/2				
5. Types of <u>mass movement</u> – what are they and what do they mean.	https://www.bbc.co.uk/bitesize/guides/zyp98qt/revision/3				
6. <u>Bays & headlands</u> – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/1				
7. <u>Wave cut-platforms</u> – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/1				
8. <u>Stacks</u> – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/1 https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/3				
9. <u>Deposition</u> – what is it and what factors affect it.	https://www.bbc.co.uk/bitesize/guides/zyp98qt/revision/6				
10. <u>Longshore drift</u> – what is it and how does it work.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/2				
11. <u>Spits & bars</u> – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/2				
12. <u>Beaches</u> – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/2				
13. <u>Sand dunes</u> – how and why do they form and how do they change over distance from the sea.	https://www.bbc.co.uk/bitesize/guides/zv8b8fr/revision/2				
14. <u>Hard engineering</u> – what are the options, how do they work, and what are the positive and negatives of each.	https://www.bbc.co.uk/bitesize/guides/z38dyd4/revision/1				
15. <u>Soft engineering</u> – what are the options, how do they work and what are the positives and negatives of each.	https://www.bbc.co.uk/bitesize/guides/z38dyd4/revision/2 https://www.bbc.co.uk/bitesize/guides/z38dyd4/revision/3				
16. <u>Shoreline management plans (SMPs)</u> – what are they and what factors affect decisions.	https://www.bbc.co.uk/bitesize/guides/z38dyd4/revision/4				
17. <u>Borth, Wales</u> – what is the SMP for Borth and why was this chosen.	https://www.bbc.co.uk/bitesize/guides/z38dyd4/revision/4				
18. <u>Sea level rise</u> – why is it happening, what could the effects (SEE) be and why are some coastal communities more at risk.	https://www.bbc.co.uk/bitesize/guides/z38dyd4/revision/1				

Topic - Rivers	Support	R	A	G	RC
1 - Types of erosion – what are they and what do they mean.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/1 Video - https://timeforgoography.co.uk/videos_list/rivers/river-erosion-processes/				
2 - Types of transportation – what are they and what do they mean.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/2 Video - https://timeforgoography.co.uk/videos_list/rivers/river-transport-processes/ Video - https://timeforgoography.co.uk/videos_list/rivers/Explain-how-a-river-can-transport-its-load/				
3 - Deposition – what is it and what factors affect it.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/3				
4 - Three courses – what are they called, what are they like and how are they used.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/4				
5 - Drainage basin – what is it, how does water move through it and what factors affect the way water moves through it.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/4 Video - https://www.youtube.com/watch?v=8LChihbsOo Video - https://timeforgoography.co.uk/videos_list/rivers/Study-the-diagram-of-a-drainage-basin/				
6 - Long profile – what are they and what does it look like.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/5				
7 - Cross profiles – what are they, what do they look like in each course and why do they look like this.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/5				
8 - Waterfalls – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/1 Video - https://timeforgoography.co.uk/videos_list/rivers/formation-waterfall-gorge/ Video - https://timeforgoography.co.uk/videos_list/rivers/Explain-the-formation-of-a-waterfall-using-a-sequence-of-annotated-diagrams/				
9 - Interlocking spurs – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/1 Video - https://www.youtube.com/watch?v=Wawm9mGYtU				
10 – Meanders – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/2 Video - https://www.youtube.com/watch?v=9nBkQZFvYs				
11 - Oxbow lakes – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/2 Video - https://www.youtube.com/watch?v=9nBkQZFvYs				
12 - Levees – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/3 Video - https://www.youtube.com/watch?v=e2CT7WkA7ik				
13 - Floodplains – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/3 Video - https://timeforgoography.co.uk/videos_list/rivers/floodplains/				
14 - Estuaries – how and why do they form.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/3 Video - https://www.youtube.com/watch?v=IM2X_8-dk				
15 - Flood risk – what human and physical factors affect flood risk and how.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/1				
16 - Hydrographs – what are they, what factors affect the shape of them and how do those factors affect the shape of them.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/2 Video - https://www.youtube.com/watch?v=gh9bFfo3vc				
17 - Hard engineering – what are the options, how do they work, and what are the positive and negatives of each.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/3 Video - https://timeforgoography.co.uk/videos_list/rivers/river-management-hard-engineering/				
18 - Soft engineering – what are the options, how do they work and what are the positives and negatives of each.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/4 Video - https://timeforgoography.co.uk/videos_list/rivers/problems-hard-engineering-and-soft-alternatives/				
19 - Effects of flooding – what are the social, economic and environmental effects of flooding and how do they differ between a HIC and LIC.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/5 https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/5				
20 - Flooding in Ludlow – what has been done, what should be done and who would have an opinion.	See Appendix 1				

Topic - Weather & climate	Support	R	A	G	RC
1 - Weather & climate – what do they mean and how are they different.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/1				
2 - UK climate – what is it called, what is it like and how does it vary across the UK.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/1 Video - https://www.youtube.com/watch?v=INWc1c6jZ8U&list=PLK3TwBn2ob8Gau6ob8NskVKSolTnXv&index=5				
3 - Precipitation in the UK – what is the pattern of precipitation across the UK and what are the types of rainfall.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/2				
4 - Reasons for the UK climate – why does the UK get the climate that it does.	https://www.bbc.co.uk/bitesize/guides/ztg7hw/revision/3				

5 - Depression (low pressure) – what is it and what weather does it bring.	https://www.bbc.co.uk/bitesize/guides/zq2g82/revision/4 Video - https://www.youtube.com/watch?v=QPlc-DJ290y0&list=PLk3Tw8n2obBGavAobBNsIKvVSGolTnXv&index=6				
6 - Anticyclone (high pressure) – what is it and what weather does it bring.	https://www.bbc.co.uk/bitesize/guides/zq2g82/revision/4 Video - https://www.youtube.com/watch?v=8EnGCxqctM&list=PLk3Tw8n2obBGavAobBNsIKvVSGolTnXv&index=7				
7 - Extreme weather – is the UK weather becoming more extreme, if so, what types of weather and what examples do you have.	https://www.bbc.co.uk/bitesize/guides/zq2g82/revision/5				
8 - Hot semi-arid climate – what is it like and why is it like this.	https://www.bbc.co.uk/bitesize/guides/zc3hcty/revision/1				
9 – Temperate deciduous climate – what is it like and why is it like this.	https://www.bbc.co.uk/bitesize/guides/zcsmmb/revision/1				
10 - Global atmospheric circulation system – what is it, where are areas of low and high pressure and how does it work.	https://www.bbc.co.uk/bitesize/guides/zykxsg/revision/1 Video - https://www.youtube.com/watch?v=Q9Fq3VwZb1s&list=PLk3Tw8n2obBGavAobBNsIKvVSGolTnXv&index=4				
11 - California, USA – what happened, why did it happen, what were the SEE effects and what were the responses.	https://www.bbc.co.uk/bitesize/guides/z92q97h/revision/5				
12 - Tropical storms – where are they found, why are they found there, and how do they form.	https://www.bbc.co.uk/bitesize/guides/z37vdmf/revision/1				
13 - Vanuatu – what happened, when, what were the SEE effects and what were the responses.	https://www.bbc.co.uk/bitesize/guides/z92q97h/revision/4				

Topic – Climate change	Support	R	A	G	RC
1 - Past climate change – what has happened to the climate in the past, especially, the Quaternary Period.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/1				
2 - Evidence of climate change – what evidence is there of past and future climate change.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/2 Video - https://timeforgoography.co.uk/videos_list/climate-change/evidence-climate-change/				
3 – The greenhouse effect – how and why does it work.	http://bbc.co.uk/bitesize/guides/ze6dh39/revision/1				
4 - Human (anthropogenic) causes – what are the human causes of climate change and how do they cause climate change.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/3 Video - https://timeforgoography.co.uk/videos_list/climate-change/human-causes-climate-change/				
5 - Physical (natural) causes – what are the physical causes of climate change and how do they cause climate change.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/3 Video - https://timeforgoography.co.uk/videos_list/climate-change/natural-causes-quaternary-climate-change/				
6 - Consequences of climate change on tourism and fishing – what are the effects, where is this an issue, why is it such a significant issue.	See printed textbook.				
7 - Consequences of climate change on water supply – what are the effects, where is this an issue, why is it such a significant issue.	See printed textbook.				
8 - Effects in the UK – what are the SEE effects of climate change in the UK.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/5				
9 - Global effects – what are the global effects of climate change.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/5				
10 - Mitigate (reduce) effects – what are the options to reduce the effects of climate change and what are the positives and negatives of this.	https://www.bbc.co.uk/bitesize/guides/zcn8k7h/revision/6				

11 - <u>Adaptation</u> – what are the options to adapt to climate change and what are the positives and negatives of them.	https://www.bbc.co.uk/bitesize/guides/zcn6k7h/revision/6				
--	---	--	--	--	--

Topic – Ecosystems	Support	R	A	G	RC
1 - <u>Ecosystem interactions</u> – what is an ecosystem and a biome, and what interactions take place within an ecosystem, living, non-living.	https://www.bbc.co.uk/bitesize/guides/zx3hqty/revision/1				
2 - <u>Ecosystem biotic components</u> – what are decomposers, producers, primary consumers, secondary consumers and tertiary consumers					
3 - <u>Nutrient cycle</u> – what is it, what are the stores, what are the flows, how do the stores and flows vary by biome.					
4 - <u>Hot semi-arid biome</u> – what is the climate like, what is the soil like and how have the plants and animals adapted.	https://www.bbc.co.uk/bitesize/guides/zx3hqty/revision/1 https://www.bbc.co.uk/bitesize/guides/zx3hqty/revision/2 https://www.bbc.co.uk/bitesize/guides/zx3hqty/revision/3				
5 - <u>Damage to hot semi-arid biome</u> – how do people use and damage this biome and what are the effects of this.	https://www.bbc.co.uk/bitesize/guides/zx3hqty/revision/4				
6 - <u>Management of hot semi-arid biome</u> – what strategies can be used to manage this biome and what are the positives and negatives of them.	https://www.bbc.co.uk/bitesize/guides/zx3hqty/revision/2				
7 - <u>Temperate biome</u> - what is the climate like, what is the soil like and how have the plants and animals adapted.	https://www.bbc.co.uk/bitesize/guides/zvm8k7/revision/1 https://www.bbc.co.uk/bitesize/guides/zvm8k7/revision/2 Video - https://timeforgoography.co.uk/videos_list/ecosystems/temperate-deciduous-woodlands-1/ Video - https://timeforgoography.co.uk/videos_list/ecosystems/temperate-deciduous-woodlands-3/				
8 - <u>Damage to temperate biome</u> – how do people use and damage this biome and what are the effects of this (Whitcliffe Common).	See Appendix 2				
9 - <u>Management of temperate biome</u> – what strategies can be used to manage this biome and what are the positives and negatives of them.	See Appendix 3 https://www.bbc.co.uk/bitesize/guides/zvm8k7/revision/4				
10 - <u>Distribution</u> – what are the main biomes and where are they distributed.	https://www.bbc.co.uk/bitesize/guides/zc7hwx/revision/6				
11 - <u>Reasons for distribution</u> – what factors affect the distribution of biomes.	https://www.bbc.co.uk/bitesize/guides/zc7hwx/revision/5				

Topic – Globalisation and development	Support	R	A	G	RC
1 - <u>Measuring development</u> – what is development, how can development be measured, what do they tell you and what are the limitations of some measures of development.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/1				
2 - <u>Classifying levels of development</u> – how can countries be grouped according to wealth.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/1				
3 - <u>Factors that influence development</u> – what causes some countries to be developed and others not.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/2				
4 - <u>DR Congo</u> – where is it, what are the causes of low levels of development and what are the opportunities for development.	Video - https://www.youtube.com/watch?v=43TqpxWLV4				

5 - <u>Drivers of globalisation</u> – what factors are making the world more connected and how are they making the world more connected.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/4				
6 - <u>Multinational companies (MNCs)</u> – what are they, where do they operate, what is your example, what are the positives and negatives for host countries.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/4 Video (NEE is the same as a NIC and a TNC is the same as a MNC) - https://www.youtube.com/watch?v=gKxq3-g6i_w				
7 – <u>NICs</u> – what are they, how are they distributed, reasons for emergence of them, positive and negative consequences of this development.	See textbook chapter 006 on One Drive.				
8 - <u>Patterns of world trade</u> – what do HICs import/export and why, what do LICs import/export and why, how do these patterns affect development	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/2				
9 - <u>Fair Trade</u> – what is it, how does it benefit people and the development of countries, what are the positives and negatives of Fair Trade.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/6 Video - https://www.youtube.com/watch?v=PLKTGWH398Q				
10 - <u>Globalisation</u> – what are the positives and negatives of the world being more connected.	https://www.bbc.co.uk/bitesize/guides/z8436fr/revision/5				
11 - <u>Aid</u> – what are the positives and negatives of short term and long-term aid, include examples.	https://www.bbc.co.uk/bitesize/guides/z3sq6fr/revision/4 https://www.bbc.co.uk/bitesize/guides/z3sq6fr/revision/5 Video - https://www.youtube.com/watch?v=0rbKkes2lpE Video - https://www.youtube.com/watch?v=eA4aXa8T_rs				

Topic – Urbanisation	Support	R	A	G	RC
1 - <u>Patterns of urbanisation</u> – what is urbanisation, how has this changed over time and why in HICs, NICs and LICs.	https://www.bbc.co.uk/bitesize/guides/zxf36fr/revision/1				
2 - <u>Megacities</u> – what are they, how are they distributed across the world.	https://www.bbc.co.uk/bitesize/guides/zxf36fr/revision/1				
3 - <u>Push and pull factors</u> – what do they mean, examples for each.	https://www.bbc.co.uk/bitesize/guides/zxf36fr/revision/1				
4 - <u>Mumbai, India (NIC)</u> – a description of its location, reasons for its location, how and why has the population changed over time.	https://www.bbc.co.uk/bitesize/guides/zxf36fr/revision/2				
5 - <u>Mumbai challenges</u> – what are the specific challenges facing Mumbai (informal settlements, mass transit, waste management & traffic congestion)	https://www.bbc.co.uk/bitesize/guides/zxf36fr/revision/3 https://www.internetgeography.net/topics/what-challenges-have-been-caused-by-urban-growth-in-mumbai/ https://www.coolgeography.co.uk/gcsen/Mumbai_Challenges.php				
6 - <u>Mumbai progress</u> – how are Mumbai tackling the challenges mentioned above (must include slum clearance and self help) and what are the factors that restrict progress.	https://www.coolgeography.co.uk/gcsen/Mumbai_Improving_Areas.php				
7 - <u>Birmingham, UK (HIC)</u> – a description of its location, how and why has the population changed over time.	https://www.bbc.co.uk/bitesize/guides/z9y47hr/revision/2				
8 - <u>The way of life in Birmingham</u> – what is the structure of the city, what are the social, economic and environmental positives and negatives of the city.	https://www.bbc.co.uk/bitesize/guides/z9y47hr/revision/2				
9 - <u>Birmingham challenges</u> – what are the challenges and what are the solutions.	https://www.bbc.co.uk/bitesize/guides/z9y47hr/revision/2 Appendix 4				
10 - <u>Sustainable Birmingham</u> – what is a sustainable city, what examples are there of Birmingham being sustainable.	https://www.bbc.co.uk/bitesize/guides/z9y47hr/revision/2 Appendix 4				

Topic – Urban and rural change in the UK	Support	R	A	G
<u>Urbanisation</u> – what is it, when did it start in the UK, why did/does it take place in the UK.	https://www.bbc.co.uk/bitesize/guides/ztvtdm3/revision/4 https://www.bbc.co.uk/bitesize/guides/ztvtdm3/revision/1			
<u>Counterurbanisation</u> – what is it, why is it taking place now, what are the effects of it taking place.	https://www.bbc.co.uk/bitesize/guides/ztvtdm3/revision/1			
<u>Commuter settlements</u> – what are they, what examples could you use, what are the positives and negatives of commuter settlements for the settlement.	Appendix 5			
<u>Urban zones</u> – what are the different urban zones, what are they like, why are they like this.	https://www.bbc.co.uk/bitesize/guides/zckdq82/revision/2 PAGES 2-5			
<u>Greenfield Vs Brown</u> – what are they, where do they tend to be found, what are the positives and negatives of building on them.	https://www.bbc.co.uk/bitesize/guides/ztvtdm3/revision/6			
<u>Inequalities</u> – what does it mean, what inequalities exist in the UK (North South Divide), how does this affect population.	https://www.bbc.co.uk/bitesize/guides/zqhvmtb/revision/2			
<u>Sustainable communities</u> – what does this mean, what makes a sustainable community, how is Cambourne a sustainable community.	https://www.bbc.co.uk/bitesize/guides/zcvfh39/revision/4			
<u>Retail</u> – how has retail in the UK changed over time, why has retail in the UK changed over time, what are retail parks, where are the located, why are they located there.	https://www.bbc.co.uk/bitesize/guides/cwopk2p/revision/1 PAGES 1-5			
<u>Leisure use/Tourism</u> – how do people use rural areas, what is a honeypot site, what are examples, what are the positive and negatives of honeypot sites, how can they be managed.	https://www.bbc.co.uk/bitesize/guides/z2mqstj/revision/3			
<u>Major sporting events</u> – what major sporting events have been held in the UK, what are the positives and negatives of hosting these events.	https://www.coolgeography.co.uk/gc-sen/London_Regeneration.php			

Appendix 1 - Flooding in Ludlow

1. River Scientist - Building hard engineering schemes, like the flood walls and embankments in Shrewsbury, would speed up the flow of water and prevent it flooding onto the land they are protecting. Unfortunately this funnels the river water downstream and can cause flooding problems somewhere else. This can spoil the view of Ludlow for visitors. What we should do is return the river valleys to a more natural state and allow rivers to use their floodplains as temporary water stores, so that flooding can occur away from built up areas.	6. RSPB Spokesperson - Poor land management in the Welsh mountains where farmers have drained marshland to increase yields (amount of crops) has increased discharge of the River Teme as the rivers lag time has been shortened. We are restoring old peat bogs in the Cambrian Mountains by using bales made from heather. This slows down overland flow and forces the water to soak into the soil, thereby increasing the lag time once more. Not only will this help to reduce the risk of floods it will also improve the moorland ecosystem and will help to protect rare birds of prey like the merlin and hen harrier.	1. River Scientist - Building hard engineering schemes, like the flood walls and embankments in Shrewsbury, would speed up the flow of water and prevent it flooding onto the land they are protecting. Unfortunately this funnels the river water downstream and can cause flooding problems somewhere else. This can spoil the view of Ludlow for visitors. What we should do is return the river valleys to a more natural state and allow rivers to use their floodplains as temporary water stores, so that flooding can occur away from built up areas.	6. RSPB Spokesperson - Poor land management in the Welsh mountains where farmers have drained marshland to increase yields (amount of crops) has increased discharge of the River Teme as the rivers lag time has been shortened. We are restoring old peat bogs in the Cambrian Mountains by using bales made from heather. This slows down overland flow and forces the water to soak into the soil, thereby increasing the lag time once more. Not only will this help to reduce the risk of floods it will also improve the moorland ecosystem and will help to protect rare birds of prey like the merlin and hen harrier.		
2. Council Planner - Householders should be encouraged not to pave over their gardens. Paving and tarmac are impermeable. Rainwater cannot infiltrate the soil and goes straight into rivers through drains. Advice needs to be given so that gravel and permeable surfaces are used instead of tarmac. We also need to replace old drains that are too small to cope with heavy rain storms. However motorists would not like this as it would mean digging up urban roads which would cause disruption over a long period.	River management in Ludlow - conflicting views Key Benefit (advantage/positive) Cost (disadvantage/negative)	5. House Builder - Homes can be made more flood resilient with measures such as putting plug sockets higher up the walls and replacing wooden floors and carpets with tiles. This will cost more for householders and they may not want to be told what to do with their houses, however it would reduce the damage caused by flooding and perhaps lower building insurance costs for householders and business owners.	2. Council Planner - Householders should be encouraged not to pave over their gardens. Paving and tarmac are impermeable. Rainwater cannot infiltrate the soil and goes straight into rivers through drains. Advice needs to be given so that gravel and permeable surfaces are used instead of tarmac. We also need to replace old drains that are too small to cope with heavy rain storms, however motorists would not like this as it would mean digging up urban roads which would cause disruption over a long period.	River management in Ludlow - conflicting views Key Benefit (advantage/positive) Cost (disadvantage/negative)	5. House Builder - Homes can be made more flood resilient with measures such as putting plug sockets higher up the walls and replacing wooden floors and carpets with tiles. This will cost more for householders and they may not want to be told what to do with their houses, however it would reduce the damage caused by flooding and perhaps lower building insurance costs for householders and business owners.
3. Resident in Shrewsbury - I am really pleased with the new flood defences in Shrewsbury. My property has flooded in the past but is now protected. The Shrewsbury flood defence scheme cost £4.6 million but I think it was worth it. The cost of the flood defence scheme is less than the cost of the damage from future floods. Shrewsbury is the largest town in Shropshire so must be protected.	4. Government Housing Minister - We need to build an extra 3 million homes in the UK by 2025. Almost half of them need to be in the Midlands and the south of the country. Some of these will have to be built on greenfield sites. However, we should restrict building on floodplains in the future. Flood risk is only going to increase in the future due to anthropogenic climate change.	3. Resident in Shrewsbury - I am really pleased with the new flood defences in Shrewsbury. My property has flooded in the past but is now protected. The Shrewsbury flood defence scheme cost £4.6 million but I think it was worth it. The cost of the flood defence scheme is less than the cost of the damage from future floods. Shrewsbury is the largest town in Shropshire so must be protected.	4. Government Housing Minister - We need to build an extra 3 million homes in the UK by 2025. Almost half of them need to be in the Midlands and the south of the country. Some of these will have to be built on greenfield sites. However, we should restrict building on floodplains in the future. Flood risk is only going to increase in the future due to anthropogenic climate change.		

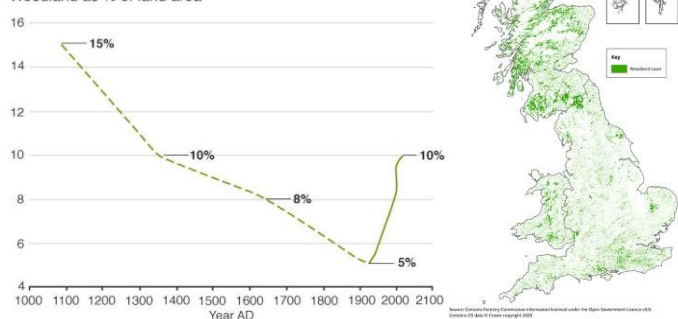
Possible Solution	Short-term benefits and costs	long-term benefits and costs	Who might agree and disagree with this solution?	Possible Solution	Short-term benefits and costs	long-term benefits and costs	Who might agree and disagree with this solution?
Build flood defences like those in Shrewsbury.	Expensive, look ugly Prevent flooding, less damage	Expensive, look ugly, effect on tourism? Increase house prices, lower insurance costs, less damage	Tourist businesses Residents, business owners, council	Have tighter controls on building on floodplains and paving over gardens.	People objecting to being told what to do, Where do you build then? Increase natural storage and lag time reducing flood risks.	Increased demand for new houses to be built - where? Increased bio diversity.	House builders, residents Naturalists, Environmentalists
Restore bogs and moorland in Wales by blocking drains.	Loss of land for farming, expensive Increase lag time, reduce flood risk, Improve habitats	Loss of land for farming, farmers lose yields and profits, expensive (compensation?) Increase lag time, reduce flood risk, Improve habitats, environmentally friendly	Farmers, Ramblers? Residents, Naturalists, Environmentalists	Allow rivers to flow naturally and spill over onto the floodplain.	Loss of land Increase natural storage and lag time reducing flood risks.	Loss of land (compensation cost?) Cheaper option to do nothing, Increase lag time, reduce flood risk, Improve habitats, environmentally friendly	Landowner Naturalists, Environmentalists

Appendix 2 - Damage to temperate biome

Damage to temperate deciduous woodlands

Long-term woodland coverage in England

Woodland as % of land area



Damage to temperate deciduous woodlands

Removal of trees for timber is an economic activity in the primary sector that has been taking place for centuries. Today, this usually involves removing trees but not the whole woodland.

However, there is increasing pressure on removing woodland for development. This pressure exists in Ludlow and nationally.

In Ludlow, there was a planning application for 68 luxury log cabins in Mortimer Forest. This would have created 100 jobs and generated £2.5 million for the local economy each year.

<https://www.youtube.com/watch?v=JvgQny8ZJ08>

Damage to temperate deciduous woodlands

Nationally, woodland clearance for one specific project has been in the news a lot in recent years.



High speed 2 (HS2) is an £88 billion project to build a fast train between London and Crewe. It would take less than 60 minutes to get from Birmingham to London.

A total of 29 hectares (80 football pitches) of woodland would need to be cleared.

To make up for this, HS2 will plant 7 million trees.

Damage to temperate deciduous woodlands

Human activity that causes damage	Local effects	Global effects	Effects on biodiversity (the variety of species)
● Removal of trees for timber			
● Clearance of woodland for development			
● Leisure & recreation			
▲ Climate change - more droughts			
▲ Climate change - more extreme weather events			

Human activity that causes damage	Local effects	Global effects	Effects on biodiversity (the variety of species)
● Removal of trees for timber	Less interception so more flood risk. Less pollutants removed from air so more health problems. Less tourism.	Less carbon dioxide taken from atmosphere through photosynthesis so contributes to climate change. Desertification.	More sunlight to the ground layer so more plants. Less habitat & food source for animals. Coniferous trees used.
● Clearance of woodland for development	Permeable surface replaced with impermeable so more surface runoff so higher flood risk. Local loss.	Less carbon dioxide taken from atmosphere through photosynthesis so contributes to climate change.	Whole ecosystem destroyed. Many animals killed. Further fragmentation of UK woodland.
● Leisure & recreation	Pathways created that remove vegetation so more soil erosion. Littering. Traffic congestion.	Probably minimal.	Perhaps slight reduction due to pathways. Although, means area is not developed so maintains woodland.
▲ Climate change - more droughts	Less precipitation or longer between events so less vegetation growth. Drier vegetation so forest fires risk up.	Less vegetation growth so less carbon dioxide locked in the ground. Forest fires contribute to climate change.	Less vegetation growth so less food for primary consumers, knock on effect. Species not adapted for fires.
▲ Climate change - more extreme weather events	Strong winds may knock over trees. Heavy rain could mean more soil erosion and leaching.	Probably minimal but may contribute to desertification.	Less nutrients in soil would mean less producer growth so knock on effect on food web.

Appendix 3 - Management of temperate biome

Management of temperate deciduous woodlands

The Mortimer Forest Plan

A **selective logging** approach has been adopted. This means identifying trees that are old, have disease or would not disturb the woodland structure.

Removing some trees allows more light to reach the ground layer so many types of vegetation flourish.

This provides a source of timber which generates an income over a long time.

Management of temperate deciduous woodlands

The Mortimer Forest Plan

By planting a variety of deciduous tree spalings there is less risk of the woodland being wiped out by pests or diseases. This is important as more pests and diseases could appear in the UK due to climate change.

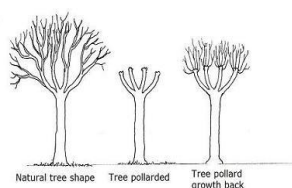
Also, the variety of flora (vegetation) boosts biodiversity. As the woodland looks good and is more biodiverse, there is more leisure and recreational use.

Management of temperate deciduous woodlands

The Mortimer Forest Plan

Coppicing is cutting trees at the base so they regrow denser from there. Pollarding is cutting trees at shoulder height so they regrow denser from there. Both are used in Mortimer Forest.

They allow branches to be sustainably harvested and boost biodiversity by allowing more light.



Appendix 4 - Birmingham

ISSUE	DESCRIPTION OF PROBLEMS FACING BIRMINGHAM	BIRMINGHAM BIG CITY PLAN SOLUTIONS
HOUSING	Increasing UK population (10.5% since 1971) Number of households risen by 30% More single occupants (divorce, widowed renting).	Total 5000 new homes including: Park Central – new low rise affordable housing replacing 1960's tower blocks. The Rotunda (81m high iconic landmark), redeveloped by Urban Splash, opened in May 2008, creating 232 luxury apartments and 6 penthouse suites.
INNER CITY	Derelict and deprived as industry relocated. Poor housing conditions Previous solutions (high rise flats) unpopular Highly polluted Increasing crime rates	Numerous redevelopments of old industrial brownfield sites. Tower blocks demolished for new low rise housing provision. Bardesley Urban Village built on old industrial land (1000 homes, schools and community facilities). Eastside city park covering 8 acres with 310 trees, opened in December 2010 at a cost of £11.75 million.
TRAFFIC	Car use increased (45% of households have at least one car) High levels of pollution Congestion on narrow streets Cities not designed for cars.	£600 million redevelopment of New Street station including Grand Central shopping and leisure area. Midland Metro (electric light rail system) to be extended to New Street costing £127 million.
THE CBD	Donut effect as retail and businesses relocated to edge of town. Old buildings unsuited to modern use Polluted environment Poor accessibility Increasing crime rates	Main roads (New Street) pedestrianised to improve safety whilst reducing traffic congestion and pollution levels. Bullring shopping centre redeveloped at a cost of £500 million, one of largest urban shopping centres in the UK, home to flagship stores including Selfridges and Debenhams. 36.5 million visitors in 2004.
MULTICULTURAL MIX	Segregated areas of similar ethnicity and culture. Creates areas with specialist facilities (places of worship, supermarkets, restaurants). Familiarity and security for ethnic minority groups.	Education of communities to remove prejudices Increasing children's achievement by improving educational achievement in school's. Increasing community involvement and understanding (Eid and carnival celebrations). Providing facilities that encourage use by all people not just separate ethnic groups.

APPENDIX 5

Effects on rural areas		Effects on rural areas			
Commuter settlement Example- St. Ives, Cambridgeshire St. Ives is around 100km north of London and 8km east of Huntingdon. The town is close to the A1 and the main East Coast railway- making it easy to access London. The majority of the land outside the town centre is rural farmland. In the town centre there are blocks of new apartments designed for residents with highly paid jobs. Many people live in St Ives to commute to London, others live there as they have young families (and want a quieter life) or are retired. Commuting to London increased during the 1990s and now 25% of St. Ives population commute to work in London daily.					
Becoming a commuter settlement has had positive and negatives impacts on St. Ives and its residents.		● Use two different highlighters to categorise the table into positive and negative. ▲ Use S, E and ENV to categorise the table into social, economic and environmental. ■ Prioritise the top two positives and negatives & explain.			
		Many estate agents have opened in St. Ives to keep up with the demands of people wanting properties in the area.	Traffic has increased at peak times and there are often traffic jams on the A14.	There have been improvements in the local services e.g. fibre optic broadband.	There has been an increase in the number of furniture stores, restaurants and clothing stores.
		Secondary schools in the area have reported that intakes have risen which has led to a greater demand for teachers.	There are now more people under the age of 16 than over the age of 65. This puts pressure on schools.	There has been an increase in the number of cars in St. Ives, some of these are parked on the road side leading to blockages on narrower streets.	Some of the older residents in St. Ives cannot afford to buy from the new stores as they are aimed at the more affluent residents.
		A butcher and a baker have closed their business due to falling customer numbers.	Many new houses have been built on the flood plains of the River Ouse and these are at risk of flooding.	Many of the older residents in St Ives are resistant to the changes e.g. building modern homes.	The number of bus services has increased – these mostly go into Cambridge City Centre.
		A large Tesco Superstore has opened on the outskirts of St Ives.	House prices have risen from £130,000 in 2000 to £291,000 in 2010.	A high number of council homes have been built.	Many vacant farm properties have been restored as luxury homes.

Effects on rural areas

Make a revision card based on today's lesson.

Take 10 St Ives Case study knowledge is important. Learn these 10 facts and apply them to your 6 and 8 mark questions.	
St. Ives is around 100km north of London and 8km east of Huntingdon.	The majority of the land outside the town centre is rural farmland.
Many people live in St Ives to commute to London. It is much quieter.	Commuting to London increased during the 1990s, now 25% of St. Ives commute to work in London daily.
Traffic has increased at peak times and there are often traffic jams on the A14.	There are now more people under the age of 16 than over the age of 65.
House prices have risen from £130,000 in 2000 to £291,000 in 2010.	There have been improvements in the local services e.g. fibre optic broadband.
A high number of council homes have been built.	Many new houses have been built on the flood plains of the River Ouse.