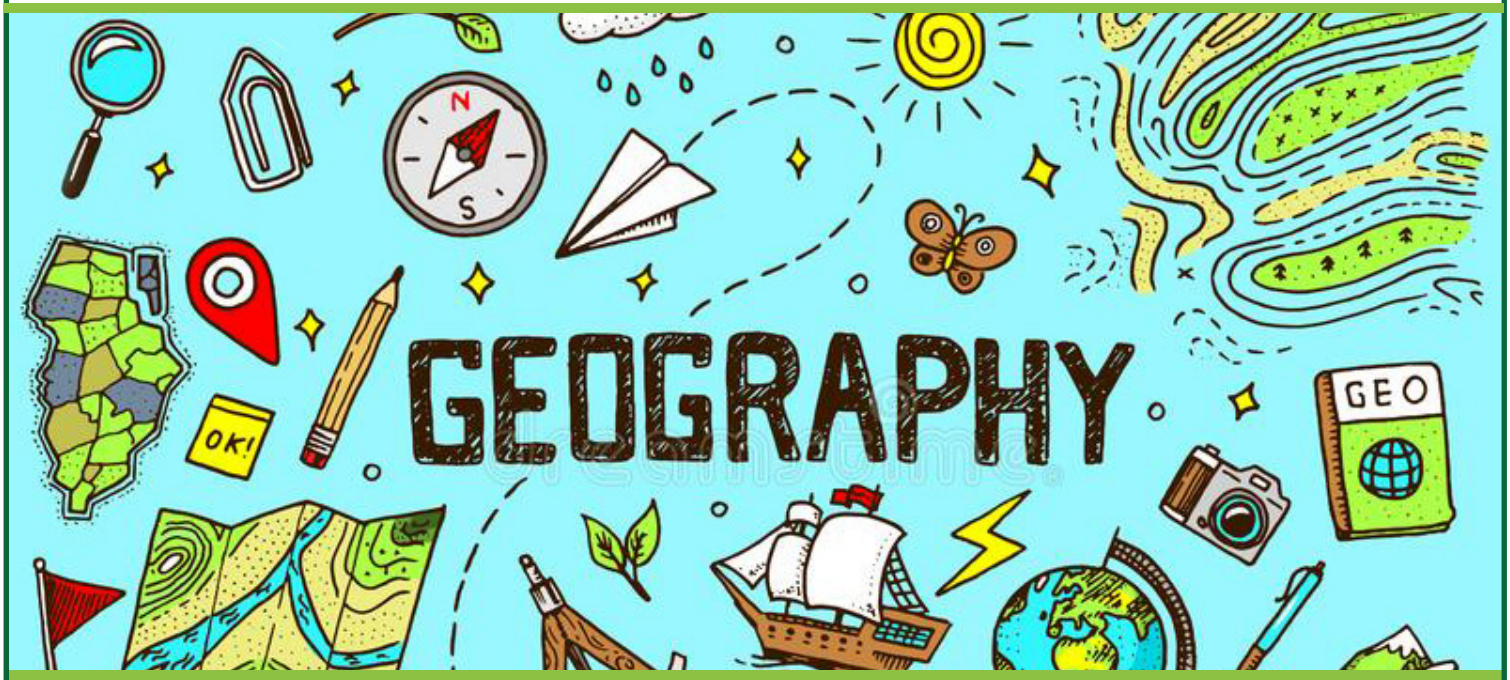
Bentley Wood
High School for Girls

Geography
GCSE to A-level

Bridging Work

Year 11 into 12 for 2024/25



Name: _____

Tutor Group: _____

Teacher: _____

A Level Edexcel Content Overview

This overview of the full content covered in the A Level can be used to self-diagnose your current level of knowledge and understanding of each topic area:

R = Red – I'm not confident in this topic and I need to focus on this area
A = Amber – I'm more confident in this topic area, but there are still areas I need to focus on for improvement
G = Green – I'm really confident that I know lots about this topic

Depending on whether you complete this self-diagnosis at the beginning of your A Level studies or towards the end, will impact your ratings. Bear in mind, you may feel very confident in some topic areas at the start of your A Level if you have studied them at GCSE, but you will be learning new material in these topics and to a greater depth. It is important to complete this self-diagnosis at the end of the A Level before the revision period to make sure you are concentrating your efforts in the areas you feel least prepared.

Edexcel	R	A	G
Paper 1: Physical Geography			
• Tectonic processes and hazards			
• Landscape systems – either (i) or (ii): (i) Glaciated landscapes (ii) Coastal landscapes			
• Water cycle and insecurity AND carbon cycle and energy security			
Paper 2: Human Geography			
• Globalisation			
• Superpowers			
• Shaping places – either (i) or (ii): (i) Regenerating places (ii) Diverse places			
• Global development – either (i) or (ii): (i) Health, human rights and intervention (ii) Migration, identity and sovereignty			
Paper 3: Synoptic Investigation			
Based on a resource booklet, which is focused on one place and at least two of the compulsory content areas from across the previous two papers.			
Independent Investigation			

Landscape Systems – Drylands/Coasts/Glacial

This section contains three topics, and schools choose one to teach. It would be useful to find out what your school has chosen to study so that you don't spend time on the other two topics (unless you just want to extend your general geographical knowledge and understanding.)

Coastal landscapes

With today's changing climate, coastal recession is the main problem for people living near the coast. It is effected by three main physical factors:

1. Geology of the coastline – the rock type, structure and stratigraphy
2. Subaerial processes – weathering and mass movement
3. Marine processes – erosion, transportation and deposition

However, it's important to also look at the role of humans in influencing recession rates.
In order to assess whether you have any gaps in your basic knowledge of coastal landscapes, complete the RAG rating below. Once you have completed the activities that follow this and marked them, return to the RAG rating and rerate your understanding.

Content	R	A	G
Rock types: igneous, sedimentary, metamorphic			
Rock structure and lithology: faults, folds, joints, bedding planes			
Rock stratigraphy: the arrangement of rock; layering of rock; concordant/discordant coastlines			
Weathering: chemical, mechanical, biological			
Mass movement: slumping, sliding, rockfalls			
Marine processes: constructive and destructive waves, fetch, tides, weather systems			
Marine erosion: hydraulic action, abrasion, solution, attrition			
Marine transportation: suspension, solution, saltation, traction and longshore drift			
Deposition			
Sediment / littoral cells: source, transfers and sinks			
Landforms of erosion: cave, arch, stack, stump, wave-cut platform			
Landforms of deposition: spit, bar, tombolo, cuspate foreland, barrier beach			
Coastal ecosystems: salt marshes and sand dunes			
Isostatic and eustatic sea level change			
Emergent coasts: raised beaches, fossil cliffs			
Submergent coasts: Dalmatian coasts, fjords, rias			
Hard engineering: groynes, sea walls, gabions, riprap / rock armour, revetments			
Soft engineering: beach nourishment, dune stabilisation, managed retreat, cliff drainage and regrading			
Shoreline management plans (SMP) and integrated coastal zone management (ICZM)			

Coastal landscapes activities

The geology of the coast has a major impact on the rate of coastal recession. An understanding of rock types, their structure and the stratigraphy of the coastline will help develop a good awareness of why coastal processes are operating in an area. If you haven't studied rock types before, this is a good introductory video: *https://www.youtube.com/watch?v=EGK1KkLjdQY*
or check out BBC Bitesize: *https://www.bbc.co.uk/bitesize/guides/z8jcfrd/revision/2*

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1. Complete the table below.

Rock type	Formation	Description of structure / characteristics (porosity)	Examples
Sedimentary			
Igneous			
Metamorphic			

2. Study the table below, which shows rock erosion rates.

Rock type	Average erosion rates
Granite	0.1–0.1 cm/year
Marble and slate	0.45–1 cm/year
Limestone	1–2 cm/year
Chalk	1–100 cm/year
Sandstone	10–100 cm/year
Boulder clay	100–1,000 cm/year

a. What does this tell you about how the speed of erosion varies around the country?

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b. What do you think a stretch of coastline would look like if it had an area of limestone next to an area of clay?

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3. How are rocks structured? Fill in the gaps below (words at the bottom).

Rocks can be massive (_____ with no _____), stratified (_____), folded or _____.

Between each _____ particle, there are _____ spaces. Their size and _____ affect how much _____ is absorbed.

Faults are _____ in the rock caused by past _____ movements.

Folds are _____ in the rock formed by _____ movements that have not been _____ enough to cause the rock layers to _____.

Joints are _____, natural, _____ cracks found in many rocks.

Bedding plains are _____ cracks formed when layers of rock _____.

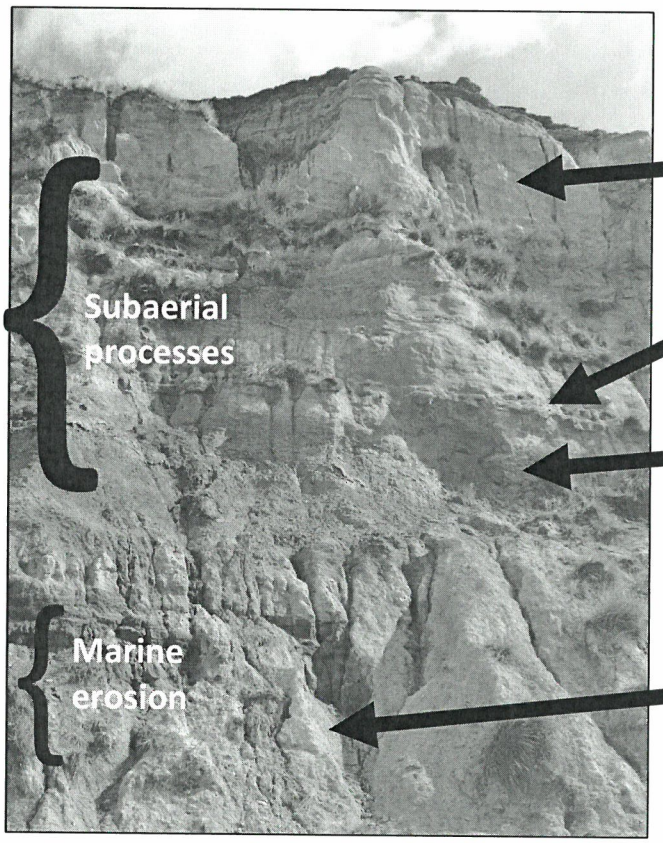
Faults, bedding planes and joints allow _____ to pass easily through the rock.

Some of these words can be used more than once in the passage above:

meet	tectonic	alignment	mineral	compact
bends	faulted	vertical	pore	small
break	horizontal	breaks	layers	strong
water				

4. On the diagram below, label a joint and a bedding plane.

5. Study the labelled image below of Hengistbury Head. Add annotations to show how these cliffs are likely to be affected by subaerial and marine processes (consider permeability and resistance to erosion).



Warren Hill Sands – bands of yellow and white sand

Upper Hengistbury Beds – greenish, sandy clays with large ironstone 'doggers'

Lower Hengistbury Beds – olive green, sandy clays

Boscombe Sands

6. Study the image below and answer the questions in the surrounding boxes.

How are these landforms linked?

How and why might this landscape change over time?

What landforms can you see in the picture? Annotate the picture too.

What evidence is there about the structure of the rock? Add arrows to go with your explanation.

How have these landforms been created? Include: weathering, erosion, transportation and deposition.

7. The table below shows average monthly wave height for the Shetland Islands, Scotland.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean wave height (m)	4.36	3.83	3.8	2.57	1.88	1.67	1.52	1.7	2.53	3.01	3.41	3.94

a. Calculate the mean annual wave height using the data above (don't forget to show your working out).

b. What is the median wave height for the Shetland Islands?

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c. What is the range of wave heights in the Shetland Islands?

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d. Calculate the standard deviation for the wave height data of the Shetland Islands (don't forget to show your working out, and give your answer to two decimal places). *Need some help? Watch this video: https://www.youtube.com/watch?v=WVx3MYd-Q9w*


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8. There are lots of features and processes you should be aware of from GCSE. Complete this key term mix and match to help refresh your memory of them.

Term	Definition
Constructive wave	This process works on loose sediment already eroded from a cliff. Sediment collides and breaks apart. Sediment gets smaller and more rounded.
Destructive wave	Flat, low-lying land adjacent to a coast. The land gradually slopes towards the sea across an area of deposited sediment, with sand dunes and mudflats being the most common examples. There is quite a blurred boundary between land and sea.
Biological weathering	Processes that occur on the cliff face rather than at the cliff foot.
Chemical weathering	Man-made structures built to stop or interrupt coastal processes and prevent flooding; for example, groynes and sea walls.
Mechanical/ physical weathering	Coasts where the geology alternates between strata of hard and soft rock at right angles to the sea. It has alternating headlands and bays.
Hydraulic action	A more sustainable/natural way of managing the coastline in order to reduce erosion, such as dune stabilisation.
Attrition	A coastline where bands of different types of rock run parallel to the sea.
Abrasion	A stronger backwash than swash occurs when waves are more powerful and leads to the removal of the beach.
Solution	Air trapped in cracks and fissures is compressed by the force of the waves crashing against the cliff face. When the wave retreats, pressure is released explosively (cavitation). This can widen cracks and dislodge blocks from the cliff face.
Longshore drift	The breakdown of rocks and landforms due to the actions of plants and animals.
Concordant coast	The movement of rocks/sediment downslope due to gravity. Weathering processes can help this happen.
Discordant coast	The breakdown of rocks due to changes in temperature (causing rocks to expand and contract) or changes in pressure.
Tides	Sediment is picked up by the waves and thrown at the cliff. This grinds/scrapes against the cliff like sandpaper, wearing it down. Perhaps the most effective wave erosion process.
Fetch	The breakdown of rocks due to chemical reactions, e.g. carbonation.
Coastal plain	Carbonate rocks react with weak acids in rainwater and seawater. This slowly dissolves them.
Mass movement	A stronger swash than backwash causes sediment to be deposited and the beach to build up.
Subaerial processes	The alternating rise and fall of the sea at the coastline due to the gravitational force of the moon and the rotational pull of the Earth.
Hard engineering	The downdrift movement of sediment along the coast in a zigzag pattern caused by the swash travelling up the beach in the direction of the prevailing wind, the backwash returning perpendicular to the sea due to gravity.
Soft engineering	The length of sea a wind blows over. The longer the distance, the larger the waves it can build.

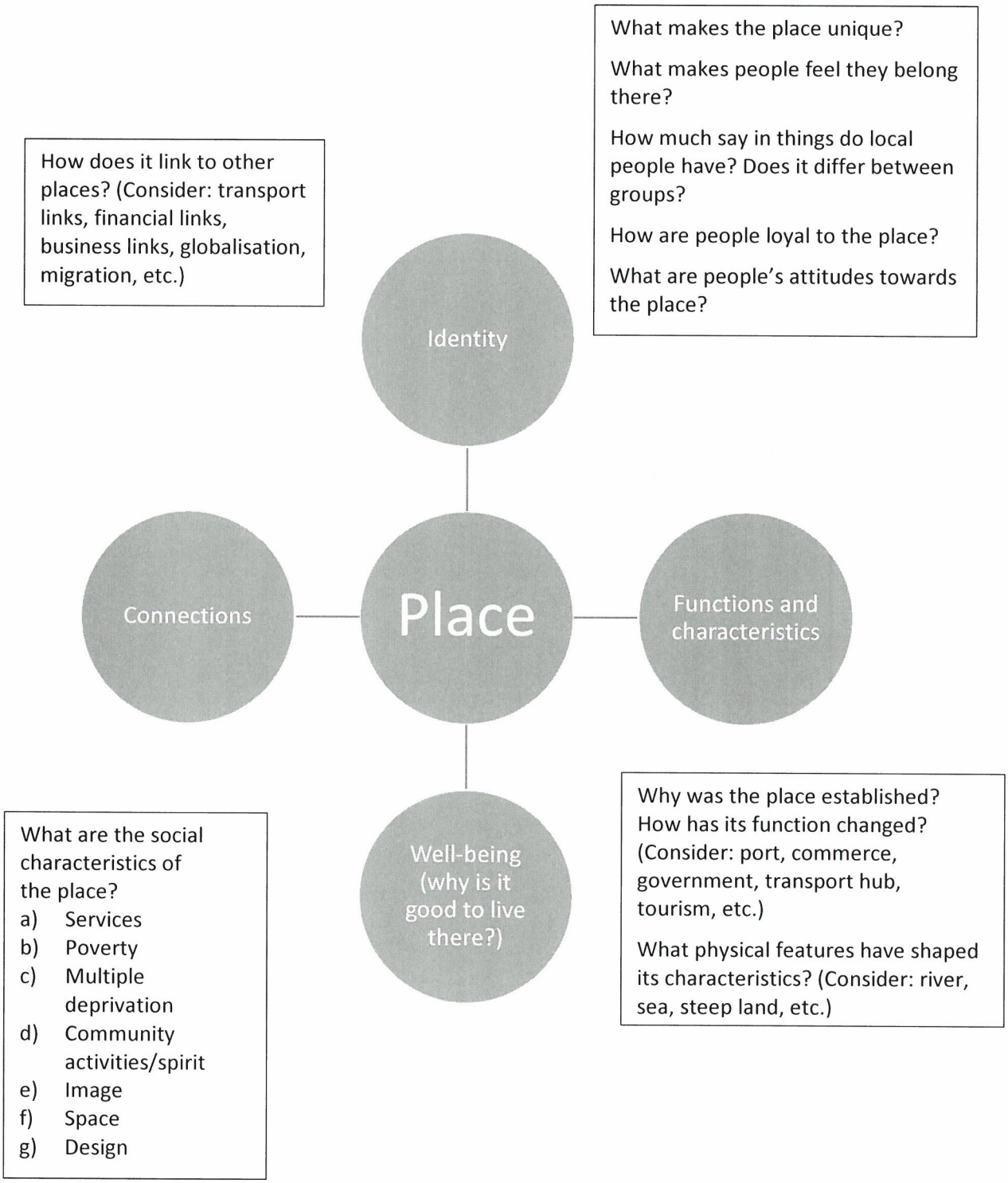
Changing Place; Changing Places

In today's global world, a sense of place, an identity, has become increasingly important for many people. Additionally, places have seen that to increase their appeal to people and businesses they often need to develop certain aspects to make them either unique or attractive to investment. This topic area is fully embedded in case studies, and so it is place-driven rather than process-driven.

In order to assess whether you have any gaps in your basic knowledge of changing places, complete the RAG rating below. Once you have completed the activities that follow this and marked them, return to the RAG rating and rerate your understanding.

Content	R	A	G
Characteristics of place: location, topography, water, vegetation, climate, infrastructure, demography, economy, land use, built environment, relationships with other places			
Scale of place: city, town, village, rural–urban fringe, remote rural areas			
Socio-economic variations within a country: quality of life, occupation, life expectancy, income, health, education level			
The importance of place: perception, government involvement, advertising, social media, TNCs, inward investment, centripetal forces (drawing people together), history			
Representation of place: census, art, adverts, film, books, songs, maps			
Population characteristics: structure, diversity, ethnicity, life expectancy, deprivation, connectivity			
Immigration: rural–urban, counter-urbanisation, international			
Reasons why places change: economic, social, cultural, government policies, globalisation, migration, physical factors (coastal erosion)			
Regeneration, re-imaging, rebranding			
Problems of change: loss of culture, locals priced out (gentrification)			
Benefits of change: improved infrastructure and services, better environment			
Successful places: inward migration, high employment rates, high-quality infrastructure and transport networks, cumulative causation			
Declining places: deindustrialisation, negative multiplier effect, rust belt, deprivation, high levels of multiple deprivation, antisocial behaviour, high levels of rented properties			
Tensions within places: economic disparity, ethnic tensions, social and educational diversity, age of population, segregation, social clustering			
Improving engagement with places: community action, community shop, local currency, proactive local politicians, affordable housing			
The role of national government: infrastructure investment – HS2, London airport expansion; planning – fracking, green belts, science parks; international deregulation; migration policy			
Sources of investment: private sector, public sector, public–private partnerships, local enterprise partnerships (LEPs)			
Changing economic activity: primary, secondary, tertiary, quaternary, quinary			
Challenges faced in rural areas: depopulation, agricultural decline, lack of accessibility, tourist honeypots			
Improving rural areas: bottom-up strategies, Defra involvement, LEADER European Union initiative, rural enterprise zones (REZs), lottery-funded projects, LEPs in rural areas			

1. Developing your sense of place is one of the most important things you can do with this topic.
   a. Think about the place where you live and, in **one** colour, answer the questions.
   b. Now think about a place you studied for GCSE and, using a **different colour**, answer the questions about this second place.



2. Study the images below and answer the questions in the surrounding boxes.

What are the main characteristics of this place?

How do you think the removal of the power station changed this place?

How could you find out people's perceptions of this change?

What does the housing suggest about the socio-economic characteristics and quality of life of this location?

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2012

3. There are lots of features and processes you should be aware of from GCSE. Complete this key term mix and match to help refresh your memory of them.

Term
Place
Endogenous factors
Exogenous factors
Demography
Rebranding
Re-imaging
Regeneration
Megacity
Industrialisation
Urbanisation
Counter-urbanisation
Deindustrialisation
Suburbanisation
Decentralisation
World city
Gentrification
Multiple deprivation

Definition
External influences on the identity of a place.
Statistics linked to the changing characteristics of a population, such as births, deaths and infant mortality rate.
Aims to give a place a new, more positive identity.
An urban area with more than 10 million residents.
The human and physical characteristics of an area.
An important multinational city which is a major centre for trade, finance, business, culture and politics.
Internal influences on the identity of a place.
The movement of wealthier people into a less wealthy urban area. These people invest in the area and improve the accommodation and local businesses.
The outward movement of people and economic activities from centralised areas, often government-led.
The movement of people from the city centre to the margins, which are less congested and polluted.
The combination of a number of different types of deprivation (e.g. lack of education, poor health, high crime) into an overall measure of deprivation.
The process whereby an economy changes from one mainly dependent on primary activities (agriculture) to one based on manufacturing.
A public relations exercise involving marketing to promote a more modern and positive image of a place.
The removal or reduction of industrial activity in an area because of major economic or social change.
The movement of people from a town or city to a more rural settlement or commuter village.
The increasing proportion of the population living in towns and cities.
An attempt to reverse the decline of a place by improving the economy and physical structure using public money to trigger a multiplier effect.

4. Places change over time, and urban planners have learnt a lot from mistakes of past urban management. You might find the following BBC Bitesize section a useful refresher to study before considering the following questions (make sure you read through all the pages in this section of Bitesize):
https://www.bbc.co.uk/bitesize/guides/zqdkkqt/revision/1


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a. Where is urbanisation happening at the fastest rate, and why?

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b. Why have some urban areas seen a decline? (Give an example.)
(*https://www.bbc.co.uk/bitesize/guides/zqhvmnb/revision/5* might help)

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c. Why are some urban areas continuing to be successful both economically and socially? (Give an example.)

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5. Study the following resource: *http://www.placemakingchicago.com/about/qualities.asp*

a. When looking at the place diagram, see how many links you can make between the different factors that would lead to a positive spiral.


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b. Do you think that improving the quality of the place can reduce crime rates? Explain your choice.

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c. Explain how easy you think it is to change people's perception of a place.

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6. When a place starts to fail and enter a spiral of decline, regeneration is often the only solution for improving the area. For small parts of a place, this can happen organically, through gentrification. Wealthier people move into an area, invest in the properties and socialise locally, thereby encouraging new businesses to open, which all helps to increase the quality of the area. However, in some cases, intervention from a central source is needed to 'kick-start' the economy and deal with chronic social problems, often linked to poor housing. In this case, investment is needed from a number of sources. However, clearing substandard housing and encouraging businesses to set up in the area by offering lower rents, etc. will not totally solve the problem. Re-imaging and rebranding are also often needed to change people's perception of a place and encourage them to move into the area.

   Create a list of ways that people's perception about a place could be changed.

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7. Deprivation is also a problem in rural areas. What methods could be used to improve the economy of rural regions? (You may find the following video useful: *https://www.youtube.com/watch?v=t5D3HwHm76E*)

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