Edexcel GCSE Geography B

Practical support to help you deliver this Edexcel specification

Edexcel GCSE Geography B offers an issues-based approach to the content and assessment, with the content split by Global and UK scale. As with all GCSEs, the guided learning hours is 120 hours over two years. This document provides a topic guide for teaching Component 1, Topic 3, and can be adapted by centres to fit their own contexts and teaching styles. It has been produced as an example approach and is not intended to be prescriptive. The topic guides indicate resources that you can use to support your teaching. These are only suggestions and you are encouraged to use a wide range of resources to suit the needs of your own students.

The advised teaching time for Topic 3: Challenges of an Urbanising World, is 15 guided learning hours; i.e. roughly five hours per enquiry question (EQ). This requires some blending together of the detailed content. In the guidance below, suggestions are made about contextualisation or stretch challenges that may be suitable for more able students, as well as expected lesson outcomes for those less able. Please note that these are suggestions only and not specific syllabus requirements.

Each enquiry question is broken down into roughly five one-hour sections, each beginning with a quick overview of the breadth of the enquiry question followed by a more detailed explanation of the key concepts and processes, examples of teaching strategies, guidance on integrating geographical skills, and a summary of the key terminology required. The structure is suggestive, not prescriptive.

Synoptic linkages and case study nesting

This section of the syllabus is similar to 'Challenges of an Urban World' from the old Edexcel Specification B, although probably in more depth than would have been taught in the Specification B lessons, particularly in 3.1–3.3 when describing trends. There is slightly more emphasis on understanding the difference between 'emerging' world and 'developing' world cities.

There may be opportunities for cross-over case studies with Topic 2: Development Dynamics, Topic 5: The UK's Evolving Landscape, Topic 7.2c: People and the Biosphere and Topic 9: Consuming Energy Resources.

Topic Guide for Component 1, Topic 3: Challenges of an Urbanising World

Introduction

> **Quick overview**
>
> An understanding of urbanisation trends since 1980 in the developed, emerging and developing world, and also by global regions. An understanding of the causes of urbanisation (economic activity and migration) and the creation of varying quality of life in an in-depth study of one megacity in either a developing or emerging world case study.
>
> Urban solutions will also be studied and evaluated; both government-led and NGO-led bottom-up solutions. This pack will focus on Rio de Janeiro. This is a well-used case study in previous specifications, but students may have some familiarity due to the 2016 Summer Olympics. Another option to investigate may be Mumbai (see Edexcel OUP textbook and Edexcel published SOW):
>
> - EQ1: What are the causes and challenges of rapid urban change?
> - EQ2: Why does quality of life vary so much within ONE megacity* in a developing country* OR emerging country*?

The aim of this topic pack is to get a big-picture overview of key urbanisation processes that are shaping the world's cities. There are some global context links for other topics: Topic 2: Development Dynamics; Component 2, Topic 5: The UK's Evolving Landscape; Component 3, Topic 7.2c: People and the Biosphere and Topic 9: Consuming Energy Resources.

Enquiry Question 1: What are the causes and challenges of rapid urban change?

Teaching approach over six hours

Lesson 1 (1hr)	Global urbanisation trends
Lesson 2 (1hr)	The global pattern of megacities
Lesson 3 (1hr)	The growth and decline of cities
Lesson 4 (1hr)	Urban economics
Lesson 5 (1hr)	The urbanisation cycle
Lesson 6 (1hr)	Urban land use

Lesson 1: Global urbanisation trends

Overview

The first lesson could introduce students to the terms urbanisation and move on to graph analysis on urbanisation trends since 1980.

- More able students might like to have a more detailed understanding of smaller regions, perhaps at the continental scale.
- Less able students could be guided to describe graphs with a writing frame.

Key concepts and processes

These are familiar themes to the old specification although they require an updated understanding of trends and drawing out more regional differences.

Here are some key global trends that students could study:

- In 2007 the world's urban population crossed a threshold, with 50 per cent living in an urban area. This increased to 54 per cent in 2014.
- While megacities are predicted to grow, many people on the planet will be living in smaller cities of 500,000 or fewer.

There are also some challenge ideas; by region there are interesting patterns.
- The established **developed world** regions of the twentieth century have the highest proportion of their populations living in cities. Urban growth however has been stabilising for many decades as fertility rates and rural to urban migration declines.
- **Emerging economic** regions where urban areas have seen growth are slowly still growing, although there is also a predicted stabilisation by 2050 (parts of Asia and Latin America and the Caribbean).
- **Africa** still has 40 per cent of its population living in rural areas. However, it currently has a fast urban growth rate and this is predicted to further increase this century.

- Some cities in the world are declining, mainly in **Europe and Asia**. De-industrialisation and global economic recession are thought to be part of the reasons.

Guidance on teaching

Introduction to the concepts of urbanisation and hyper-urbanisation (rapidly growing cities) might be introduced visually by a reading images task or clips from Andrew Marr's *Megacities* series. A baseline assessment to establish prior knowledge from Key Stage 3 on urbanisation and differences between the developed and developing world, e.g. a true or false quiz, might also be a good starter. There is often a misconception that developed world cities have rapidly growing populations (often linked to ideas of EU to UK migration). Unpicking and establishing accurate understanding of key trends should come out of a true/false quiz starter.

This section of the syllabus also lends itself well to graph analysis. The United Nations report 'World Urbanization Prospects', 2014 (https://esa.un.org/unpd/wup/) has some excellent graphs showing regional trends, which will be accessible to students if key graphs are extracted, modelled and they are given structure to describe patterns. The 'integrated skills' syllabus content suggests line graphs and calculating rates of change (annual or by decade) percentage growth. So some data analysis could be done to establish differences between the developed, emerging and developing world.

A plenary could bridge to real-life megacity examples – maybe using a series of images on the IWB, e.g. Rio de Janeiro, Mumbai, London and Kinshasa. Students could be asked which city is 'most likely to…' to establish understanding of urbanisation trends that are most likely to have occurred in particular locations at different development levels.

Lesson 2: The global pattern of megacities

Overview

The second lesson could tackle 3.2 by focusing on the **global pattern of megacities** (size, location, growth rates). Students should be able to describe the global pattern of megacities from different world maps showing such data, e.g. a proportional circle map. Students should practise describing distribution from such maps.

In the second part of this lesson students should understand the disproportionate **influence** of some megacities and explain several economic and political influences megacities can have. A key term here is 'urban primacy'.

- More able students might like to investigate the role of smaller cities (as opposed to megacities) to the world's growing urban areas. For the second part of the lesson, they could investigate which factor of influence of megacities (economic or political) is greater.
- Less able students could have a clearer map, maybe with continent names labelled on and writing frames or multiple-choice tasks for describing distribution.

Key concepts and processes

These ideas about megacities are new compared to the old Edexcel B GCSE specification, although they build on the AS (2009 spec) ideas on megacities.

Figure 1 is an example of a world map showing megacity distribution and example annotations.
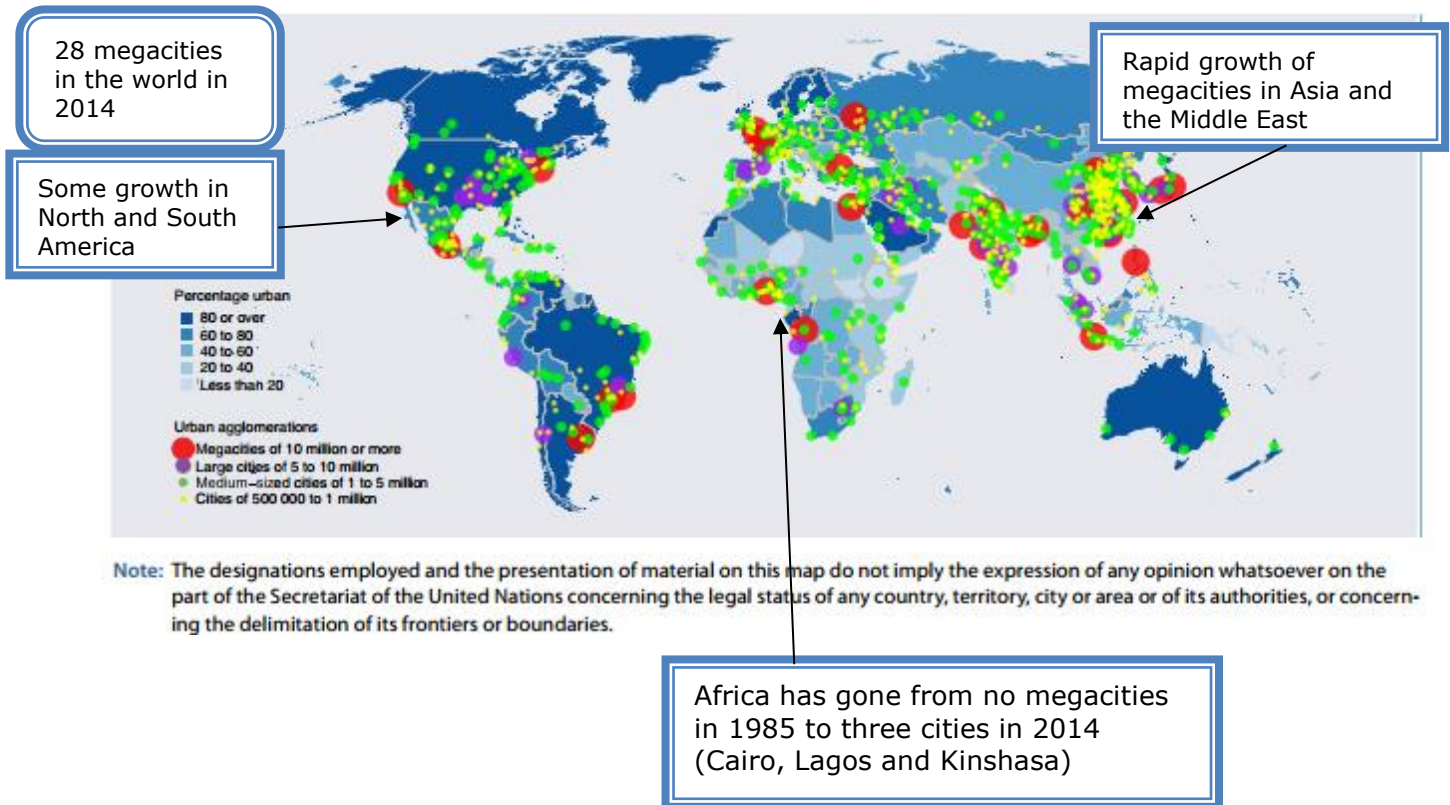
28 megacities in the world in 2014

Some growth in North and South America

Rapid growth of megacities in Asia and the Middle East

Percentage urban
- 80 or over
- 60 to 80
- 40 to 60
- 20 to 40
- Less than 20

Urban agglomerations
- Megacities of 10 million or more
- Large cities of 5 to 10 million
- Medium-sized cities of 1 to 5 million
- Cities of 500 000 to 1 million

Note: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Africa has gone from no megacities in 1985 to three cities in 2014 (Cairo, Lagos and Kinshasa)

Figure 1: Percentage urban and location of urban agglomerations with at least 500,000 inhabitants, 2014 (Source: United Nations, 2014)

The second part of this section of the syllabus asks students to look at megacities having a disproportionate influence, which is a newer section of the new spec.

This is often termed a 'primate city' and is defined as a large city in relation to others in a country. It has traditionally been defined as an urban area with more than twice the

Figure 2: Lima, Peru – a primate city with a population of 8.5 milllion. The second largest city in Peru has a population less than a million.

population of the next biggest city in a country. It tends to have higher rates of economic development and high service functions, e.g. schools, hospitals, ports and airports, and as a result is economically and politically very influential. A large megacity may have been important historically, so a range of infrastructure services may have built up – ports, air ports and seats of power. In developing/emerging countries a large megacity may have links to a colonial past and may have therefore had a disproportionate amount of investment in

infrastructure, e.g. Mumbai, India. This leads to a lack of investment in other urban areas; in this case, in both Maharashtra state and also the rest of India. India has been criticised for their lack of investment in more peripheral rural areas such as Bihar in eastern India, which has led to food insecurity for subsistence farmers.

Students should ensure they can explain a range of economic and political influences. There are some example ideas below that students could explore.

Economic influences:

* Economic dominance – a large megacity has more services so is more likely to attract **private investment** nationally and from abroad, maybe away from other smaller cities. This could lead to an **economic multiplier effect** in the city's region or the whole country, having a positive influence.

* Migration – a large functioning urban economy with a good choice of jobs is more likely to lead to rural migrants in a country being attracted to the city (see Figure 3), therefore creating a pool of workers (maybe further attracting investment and maybe international migration, especially from abroad). Again, this may pull skilled workers away from other parts of a country.

* Transport hubs – megacities often contain several national and international transport points: ports, airports and major railway stations. This can be a positive economic influence on the rest of the country, providing a well-connected point of international access.

Political influences:

* Concentration of power and decisions – large megacities might see a concentration of political and cultural participation. Regional or national seats of power and headquarters for major transnational corporations (TNCs) are located in large megacities. This can sometimes mean investment decisions are favoured to a large megacity, leading to lack of investment elsewhere in the country.

* Improved inclusion – positively, as with any large internationally connected city, there may be (certainly not always) more rights for groups such as women and therefore the start of political change for improved inclusion. This might influence movements in the rest of the country. Non-governmental organisations (NGOs) are likely to have headquarters in these influential megacities, which can also contribute to political influence and local change and perhaps a multiplier effect politically to the rest of the region/country.

Guidance on teaching

Students should have opportunities to be familiar with maps showing the world's megacities. There are several accessible maps from Edexcel past exam questions from the old spec (GCSE and A-level) that might be a good starting point. More complicated maps are also shown in The United Nations report 'World Urbanization Prospects', 2014 (mentioned in Lesson 1). Students should be guided to make analysis on the patterns of size, location and growth rates.

For a more in-depth source, there are several online active maps that show changes of megacities over time. There is a good example on the BBC website: http://news.bbc.co.uk/1/shared/spl/hi/world/06/urbanisation/html/urbanisation.stm

The second part of the lesson should focus on the disproportionate influence of megacities economically and/or politically. Students could have a series of statements (as a table or card sort) and have to sort them into political and economic, then write this up. A challenge idea could consider which factor is more important, e.g. *To what extent are economic factors the most important influence of megacities on the rest of their country?* Students could be asked to draw a priority pyramid to support writing here.

Plenary – the lesson could end with a series of answers that students have to guess the questions to, allowing assessment of global megacities' patterns and influences.

Lesson 3: The growth and decline of cities

Overview

Students should understand a range of reasons (economic and migration) as to why cities have grown and/or declined. All students should understand reasons in the developing, emerging and developed countries.

- More able students might like to assess which are the most important reasons for growth and/or decline.
- The main task could be a paired reading task of city decline/growth. This reading would be simplified for students with weaker literacy and/or there could be a 'Must do' reading section and 'Challenge' on the resource sheet. There could also be a writing frame for note taking. The odd one out plenary task could increase in difficulty.

Key concepts and processes

The separation of 'developing' and 'emerging' is a new idea that students may find challenging if they have not studied this distinction at Key Stage 3. Developing world cities may be growing due to the start of investment in the secondary sector and challenges in rural farming. The emerging world cities will have established secondary sectors and may be growing in low and high skilled tertiary sectors.

It might be helpful to start with countries students are familiar with from Key Stage 3 to exemplify this distinction. Using China as an example of an 'emerging nation' may support students to build their understanding. They should have studied this at Key Stage 3 and will typically have a baseline understanding that 'our stuff' is made in China.
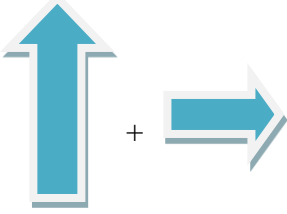
	Economic change and migration (national and international)	Growth or decline of cities?
Developing country cities	➢ **Transport hubs** – '**switched on**' to global trade and act as a focal point for export of raw materials and maybe importing of international goods and job creation. ➢ **Poverty in rural areas –** food insecurity, land reform (and environmental factors) contributes to rural to urban migration. Also pull factors of better health and education. ➢ The start of **Global Shift** and **FDI**, industrial growth. ➢ Jobs in newly built infrastructure and construction projects, e.g. water/transport. ➢ Large growing **informal economy**. ➢ **Examples** – Bamako in Mali, Chittagong in Bangladesh or Lagos in Nigeria.	Growth since 1970/80s and continued growth predicted.
Emerging country cities	➢ **Industrial zones**, '**SEZs'** have maintained TNC investment in some places, e.g. China's east coast. **Economic recession of 2007+** causing stabilisation. ➢ **Slums** may be started to be **invested** in, e.g. Rio de Janeiro. ➢ **Investment due to major world sporting events**, e.g. Beijing 2008 Olympics, South Africa FIFA World Cup 2010, Rio de Janeiro FIFA World Cup 2014 and Olympics 2016. Migratory workers for construction. ➢ Rapid modern building growth, for example the **oil-rich Middle Eastern cities**, international migration for construction workers. ➢ **Tertiary growth** – sometimes FDI, e.g. outsourcing of low skilled tertiary from the developed world, such as Bangalore, India.	Growth has been fast and will continue to be so for the next decade, although predicted to stabilise.
Developed country cities	➢ The effects of **deindustrialisation** and **global shift** – a **de-multiplier effect** on city economies and **out migration** of people 1960s+. This has led to persistent decline in some developed world cities, e.g. Detroit. ➢ **Counter urbanisation**, **regional migration** away from industrial cities, e.g. the decline of Detroit in USA or north to south migration in the UK. **Planned new cities** to attract workers away from overcrowded industrial declining cities, e.g. the growth of Milton Keynes. ➢ **Re**-**urbanisation** – regeneration schemes promoting the **tertiary sector** through office development (e.g. the new financial district of London Docklands), art and tourism (e.g. Glasgow docks), media (e.g. Salford) or IT (e.g. Kings Cross and St Pancras, London). ➢ **International migration** at varying skills levels promotes some developed world city growth. **Highly skilled** migrants, **visas**, **world cities**, e.g. finance in Singapore, New York or London. **Low skilled tertiary workers** from abroad, e.g. EU migration to UK.	The proportion of people living in urban areas is high, although have stabilised. Some city populations are declining and some are increasing.

Figure 3: Key words and ideas that students could explore when explaining a range of reasons for city growth and/or decline

Guidance on teaching

Starting with real-life accounts may help introduce these concepts to students; for example, three contrasting stories of why a migrant moved to the three city types (developing, emerging and developed). Students could write down similarities and differences between the three migrant stories.

For the main task, students will need to process the three main 'stories' of economic change and migration and its contribution to growth/decline. There could be a table marketplace activity where students research the reasons for growth or decline in pairs within groups of six, and present back to the rest of their table. Three resource packs – developed, emerging and developing – would be made up that could include the information above, together with city population line graphs and some place knowledge examples. The new OUP Edexcel book has some good place knowledge on Kampala, New York and Detroit.

Plenary – this could be an odd one out task to assess students' understanding of the different patterns in growth/decline of developed/emerging/developing cities. For example:

Which is the odd one out of the following terms?
(i) Deindustrialisation (ii) Counter urbanisation (iii) Re-urbanisation
(iv) Rural poverty leading to rural to urban migration

Answer: (iv) is the odd one out because this term applies to a reason for change in a developing world city, whilst (i)–(iii) apply to changes in a developed world city.

Lesson 4: Urban economics

Overview

Students should understand a range of features of the formal and informal economies, the different economic sectors (secondary, tertiary and quaternary and their relative importance) and working conditions for each of the three types of development level – developing, emerging and developed countries.

- More able students might like to consider the future of different urban economies and the relative importance of particular sectors in the future (see below).
- Less able students might benefit from simplified reading about differences in economic sectors and maybe a gap-fill as a way of recording ideas. The place knowledge examples could be familiar cities from Key Stage 3.

Key concepts and processes

Similar to section 3.2a, this builds on familiar themes from the old spec but with an understanding of the distinction between the developing and emerging countries in particular when exploring the different economic sectors.

Urban economies can be categorised as **formal or informal**:

- The formal employment sector is governed by a country's laws and regulations, e.g. on safety, age and wage, and also income earned in this sector will be taxed.
- In contrast, informal employment is out of reach of the formal employment law, although their final product may end up in the formal economy. It is employment that is distinct from criminal employment, e.g. drug trafficking/smuggling of illegal goods (which will never be within formal legal frameworks). The informal sector is incredibly important in the developing world and emerging economy cities where it is estimated to contribute to over half, sometimes up to 80 per cent, of all employment in a city. Examples of informal jobs might include street side selling goods, foods or service (distinct from a formal goods/service provider in a rented/owned shop).

Students will have studied basic definitions of **secondary**, **tertiary** and **quaternary sectors** (and their relative importance in countries of different development levels) at Key Stage 3 but could build on these and define **low** and **high skills tertiary services**, **local craft and home industries** and **industrial factory work**.

Stretch and challenge might include exploring some of the future ideas of the informal economy in cities in the developing and emerging economies:

- **Top-down solutions** – the informal economy has traditionally grown when the formal city and national economy is unable to provide enough employment opportunities for its citizens. This is combined with a lack of **governance** to enforce employment laws. In the 1960s developing countries were given large loans to invest by the **World Bank** in big economic projects and it was hoped this would trickle down to both the rural and urban poor. This did not always happen and many link the growth of the informal economy with this. If big projects continue to be the answer to urban problems in megacities, is the informal economy likely to continue to thrive?
- **Rural to urban migration –** jobs of the informal economy tend to have an **ease of entry** with low requirements of education, skills or technology, so for new migrants to a city who have lacked access to higher education this is an accessible way to earn money. As rural to urban migration continues at pace, especially in the developing cities, what is likely to happen to the informal economy?
- **Rights of the world's poorest and growing protest –** the informal economy undoubtedly provides **vital income** of many urban dwellers and vital services for the formal economy. For some it provides a permanent and reliable income. However, too many are paid poorly, work in unsafe conditions and are discriminated against, and it is therefore arguably not socio-economically sustainable. The 'Arab Spring' emphasised the want for fair socio-economic justice for all in emerging and developing countries, emphasised by and for young people. Will an increase in protest be successful in persuading governments to put into place measures to protect those in the informal economy?

Below is a summary of the relative importance of the economic sectors in the three types of city (developing, emerging and developed).

Developing cities:
- The city is likely to be an important point of trade, regionally, nationally and maybe internationally. There are likely to be large markets and maybe transport hubs such as ports, e.g. Bamako, Mali or Dar es Salaam (in Tanzania). Main employment here will therefore be low-paid service work.
- The industrial sector is likely to be growing. Local small industries for trade locally or maybe nationally. There may be some FDI into industry as TNCs move from emerging nations to find cheaper wages, e.g. Karachi (in Pakistan).
- High skilled tertiary may be small – concentrated in government offices, headquarters of national companies – but may be growing, particularly in ICT.

Emerging cities:
- Industry will be an important economic sector and there will be established industrial infrastructure and good national and international transport connections; maybe special economic zones (SEZs).
- A growing middle class, which is likely to create a larger tertiary sector across a range of skills.
- Some emerging world cities will have large specialised tertiary sectors, e.g. ICT and call centres in Bangalore, India.

Developed cities:
- Tertiary sectors dominate in developed world cities and skill and pay vary.
- Some cities, particularly 'world cities', have a concentration of specialist quaternary jobs, e.g. ICT and design in 'Silicon Valley' outside San Francisco, USA.
- Smaller, more regional urban areas can have lower-paid service office jobs with local and also large financial companies, e.g. JP Morgan Chase in Bournemouth, UK.

Guidance on teaching

Students' baseline understanding of the informal sector can show misunderstanding, sometimes presuming it is simply 'criminal activity', e.g. drugs trading, and not fully understanding that it can be a productive part of many urban economies. Taking time to first assess prior knowledge of formal and informal with a starter reading image task, followed by clear definitions and examples of formal and informal, might be a good introduction.

The second part of the lesson could examine the differences in economic sectors (primary, secondary, tertiary employment) between three contrasting cities. This could start with some statistical analysis (e.g. researching and contrasting three pie charts) followed by a reading /card sort that tells the story of why each city is different. The new OUP Edexcel B book uses Kampala, New Delhi and New York.

Plenary – this could be a key word sort and photo sort on the IWB to assess whether students have understood the differences between the three different cities.

Lesson 5: The urbanisation cycle

Overview

Students should understand the reasons for urban population change, distribution and spatial changes in the different stages of the urbanisation cycle (urbanisation, suburbanisation, de-industrialisation, counter urbanisation and regeneration/re-urbanisation), giving a clear step-by-step explanation for change in each period.

- More able students might like to assess whether all cities move through these traditional stages of urbanisation. Are there cities that differ from these trends?
- Less able students might benefit from a differentiated statement sheet of different trends at each stage of the urbanisation cycle, which they can categorise or colour code. There could be a differentiated reading sheet, together with imagery of each stage of the urbanisation cycle to support understanding. Satellite images may have key prompts on.

Key concepts and processes

This section of the syllabus looks at familiar ideas of the urbanisation cycle.

	Change in population numbers, distribution and spatial growth/decline
Urbanisation	- Developed country cities urbanised in the Industrial Revolution of the 1800s. - Population grew and people lived in high density in tenement housing blocks. Housing areas were concentrated near factory areas. - Emerging country cities saw a similar period of growth during 'global shift' as TNCs moved factories to where wages were cheaper, mainly 1970/80s+. - Housing was also concentrated near factory zones – sometimes in planned densely packed apartment blocks and sometimes slums.
Suburbanisation	- As city **transport networks** develop, e.g. the Underground in London, then large housing areas can develop that allow people to live with more open space, larger housing and commute to the city centre. - In the UK this started in the 1930s with large suburban development, including the extension of transport networks such as London's Underground, and then again in the post-war period, 1950s+.
De-industrialisation	- As **global shift** moves industry from the developed to the emerging and developing country cities, then areas of economic decline develop. - Sometimes this is whole cities or regions, e.g. West Midlands in the UK and the closure of the Rover factories at Longbridge, OR Detroit and the collapse of the automobile industry, USA. - These tended to mean the decline and outmigration from industrial areas which were either in the 'inner city' zone or industrial zones at the edge of the city.

Counter-urbanisation	• In the developed world in the 1970s and 1980s, due to a combination of factors including industrial decline and high crime rates, many people moved away from large cities entirely to smaller towns and even the countryside. • Improved transport and connectivity allowed this.
Re-urbanisation and regeneration	• Since the mid-1990s onwards, in some developed world cities there has been regeneration. Government and private investment have improved the built-up environment through spending on offices, retail, cultural or sports projects. • This has attracted businesses and people back into areas which had previously declined. • However, such housing projects, which are typically apartments, tend to attract younger people who tend to move back out after a period of time to either the suburbs or to smaller towns – 'escalator communities'.

Figure 4: Key ideas for each stage of urban change

Guidance on teaching

Students can struggle with understanding historical changes that they are less familiar with, especially if this includes large cities with evidence of an industrial past and de-industrialisation areas (many UK cities have now regenerated past industrial zones). The use of photos and movie clips to build understanding (see BBC classroom clips, for example www.bbc.co.uk/education/clips/zsyxn39) might be a good start to this section.

Marketplace activity with a resource sheet that includes information similar to the above, together with satellite images, could support students to understand the differences between the different urban processes. Students could start this activity by playing 'i-Spy' with the satellite images in pairs, then move on to a note taking or DARTs task to access the reading on each urbanisation stage. If you subscribe to Digimap, there may also be scope for integrating an OS map skills activity showing examples of different UK areas with evidence of different stages of the urbanisation cycle (together with the historic function on Digimap). Or teachers could use Digimap to prepare resources, maybe contrasting a UK satellite image with a Digimap image in resource sheet preparation.

Plenary – could include a one-minute 'no hesitation/repetition' from selected students on each stage of the urbanisation cycle.

Lesson 6: Urban land use

Overview

Students should understand a range of characteristics of commercial, industrial and residential urban land use. They should understand how accessibility, availability, cost and planning regulations influence each land use type.

• More able students could assess the most important factor in determining each land use's characteristic.

Key concepts and processes

The depth of land use description is a new addition from the old spec. Below is an example of the detail for commercial landscapes – both characteristics and factors that influence land use type. Although it is important to cover the 'traditional' ideas of the Burgess model, newer trends such as commercial redevelopment of edge of town/suburban brownfield sites should also be considered. As per the syllabus, industrial land use and residential land use also need to be covered.

Characteristics of **commercial** land use in cities and factors that affect this land use:

- **Where?** Commercial areas of retail or offices have typically been located in the centre of a city. Land is most expensive here as it is so accessible and only commercial land uses can afford it. However increasingly, due to a need for cheaper land and improved accessibility away from busy city centres, commercial projects are built within suburbs or at the edge of cities. They can also act as a way of regenerating previously declined areas and planning regulations encourage this (see last point below). They will typically still be near a large market – housing.
- **What?** Buildings are typically tall and high density, maybe large purpose-built developments.
- **Cost –** costs for large commercial projects will be high, for the project itself and the surrounding infrastructure. Both government money and private investment is typically used.
- **Transport hubs** – road, city transit, rail and car parking. These areas are accessible.
- **Large flagship buildings**, e.g. shopping centre or a stadium.
- **Planning regulations** – commercial projects are typically built on brownfield sites with an aim of regenerating an area through a large flagship project. Land will also be cheaper. On such sites developers are more likely to be granted planning permission as the local government will want brownfield sites to be improved.

Guidance on teaching

There is a good opportunity to start this lesson using Google Earth and/or printed satellite images to help students think about describing the characteristics of different land uses. Ideas on planning regulations might be one area that students are unfamiliar with. Some clear definitions and readings, maybe a located local example that is familiar, should support students to access this.

Satellite image analysis can be a challenge to practise with students – either ICT resources may not be available in schools and/or students struggle to meaningfully read geography ideas from a satellite image. Satellite images could be used in conjunction with real photos and if the opportunity is available, students could also go to Google Earth with a guided worksheet to investigate

each area further using the 'Street View' facility. The students could be asked to describe characteristics such as layout, building size, density, physical features and open space, having had an example modelled first. Students could then be guided to understand and record the 'factors that influence the land use type' with some clear readings. Annotations around the satellite images could form the reading from which students take guided notes.

Enquiry Question 2: Why does quality of life vary so much within ONE megacity in a developing country OR emerging country?

Teaching approach over six hours

Lesson 1 (1hr)	Introducing Rio de Janeiro, Brazil
Lesson 2 (1hr)	Rio de Janeiro's land use structure
Lesson 3 (1hr)	Rio de Janeiro's population growth (scope for lessons 3 and 4 to be combined if essay tasks are removed)
Lesson 4 (1hr)	Rio de Janeiro: opportunities and challenges
Lesson 5 (1hr)	Rio de Janeiro: differences in quality of life
Lessons 6 & 7 (1hr)	Rio de Janeiro: top-down and bottom-up strategies

The syllabus 3.4–3.7 must focus on an **in-depth case study** of a megacity – the example below focuses on the greater metropolitan area/city of Rio de Janeiro, Brazil. Students must show good place knowledge in their writing in this section of the syllabus. Other suitable examples for study of megacities in the developing world/emerging world include Sao Paulo, Brazil; Dhaka, Bangladesh; Mumbai, India and Mexico City.

Rio de Janeiro is an exciting and changing city with many recent urban changes; including the infrastructural improvements in some favela areas, e.g. cable cars improving connections between the slums and the cities. Some students may be familiar with changes in the city from the controversial regeneration due to the 2014 FIFA World Cup and the 2016 Olympics. It is a city that shows the story typical in emerging countries of historic rural to urban migration, slum growth and growth in the secondary and tertiary economic sectors. It also shows the positive story of slum improvement initiated at the local and national level. However, it is a city that still faces challenges in reducing a desperate gap between the rich and poor, and many of its urban solutions have proved to be controversial.

Key learning outcomes for students for this section of the syllabus are to understand economic growth and importance, urban structure, population growth, opportunities, challenges and solutions in the chosen megacity.

Lesson 1: Introducing Rio de Janeiro, Brazil

Overview

Students need to know how the city grew and they should understand a range of important local and wider human and physical geography factors. Connections between the city and other parts of the region and wider world through trade, environment and culture are also important. This should allow the most able students to conclude why the megacity is 'significant'.

Differentiation of place knowledge for less able students can be a challenge. In the old syllabus (Edexcel B), less place knowledge seemed to be expected of students for the foundation paper. Less able students will struggle to memorise facts and figures, especially of unfamiliar places. The choice of Rio may help as they might have familiarity due to sporting events. Any reading must be slimmed down with only a few well-chosen facts that can realistically be memorised. Lots of visual photos will support building a sense of place and help engage students of all abilities.

Key concepts and processes

There should be background place knowledge of the megacity's site and situation. Below is a summary for Rio de Janeiro.

Rio de Janeiro is Brazil's second largest city at 6.5 million and 11–13.5 million in the wider metropolitan area. Rio de Janeiro state is the country's third most populous state. The city is located on Brazil's Atlantic coast close to the Tropic of Capricorn and next to the large Guanabara Bay. It has a rainy season between December and March, a striking mountain and coastal landscape and is classified as a 'World Heritage Site'. The city was first founded during colonialisation in the 1500s by Portuguese settlers where its physical geography and Atlantic position would have made the city good for trade. Rio de Janeiro was a regional capital city during the colonial period and later Brazil's capital city until inland Brasilia became the capital in 1960.

- **National and global economic connections –** the city is important regionally, nationally and globally and has the second largest GDP of any city in Brazil. Its economic structure is typical of an emerging country city with a significant industrial sector (earning around 10% of GDP) and with a sharply growing tertiary sector (around 60%). Students need to know the important secondary and tertiary industries of Rio de Janeiro, ideally with a link to national /global growth, for example looking at Rio's role in the state and the country's growing petroleum industries. Opportunities for stretch and challenge may include researching the names of specific Brazilian TNCs who are based in Rio and have fuelled such growth.
- **Cultural importance** – Rio de Janeiro has always been important to Brazil culturally and more widely regionally within South America. During the 1930s it became famous nationally and internationally as a beach and entertainment town and was at the centre of colonial South America. Students could look into the importance of Rio's annual carnival culturally and for the city and the

country's booming tourist industry. Sport is also important and students may be familiar with the FIFA World Cup in 2014 and the 2016 Summer Olympics. Opportunities for stretch and challenge may include knowing which areas of the city are culturally important, for example the central area of Lapa remaining a bohemian entertainment heart of the city.

Guidance on teaching

Prior understanding of Rio could be assessed through a class discussion, 'What do we know about Rio?', maybe using images as prompts. You could use a video clip to establish a sense of place, e.g. www.channel4.com/news/articles/world/americas/rio+de+janeiro+to+host+2016+olympic+games/3369497.html.

Satellite images and an atlas could allow students to locate Rio de Janeiro and establish its physical and human geography site and situation. A reading detailing its national, global and cultural connections could be used to help students create an annotated world map where Rio's links with the rest of Brazil and the world is made clear. Different links could be colour coded national, international, economic, cultural.

Lesson 2: Rio de Janeiro's land use structure

Overview

Students need to understand how the megacity's land use is structured, probably through GIS/mapping work and comparing the city to traditional land use models.

All students should be able to describe the urban function and building age of the distinct urban areas of the Central Business District (CBD), inner city, suburbs and urban-rural fringe. Some students will have rich place knowledge and be able to name specific areas and give good detail of urban functions and age.

Key concepts and processes

Students should be able to describe the function and building age of 5–6 areas of their chosen megacity. In addition to the five zones outlined in more traditional land use models, Rio also has a distinct rural-urban fringe with a mixture of land uses, from the wealthier suburb of Barra da Tijuca to planned industrial zones around Guanabara Bay. See the land use diagram at http://www.bbc.co.uk/schools/gcsebitesize/geography/urban_environments/urban_models_ledcs_rev1.shtml for a generic model of this.

Previous GCSE readings and resources have detailed accounts of life in the favelas. However, to show good geographical current knowledge, students must also understand that many favelas in Rio de Janeiro have and are being improved. Brazil, as an emerging country (rather than a developing one), is a few decades on from some other megacities in developing countries and improvements in their favelas started back in the 1990s/2000s, for example 'site and service' schemes. Misconceptions from students when studying megacities can be that 'everybody is poor and lives in favelas' or that all favelas have a 'low quality of life'. Students must show an understanding that in many emerging countries and some developing cities there are distinct favela/slum areas

typically home to newer migrants and then distinct slum/favela areas of improvement – either instigated by locals, NGOs or by city authorities (in Brazil these improved areas have been called 'periferias' and are different to the poorer favelas). Another urban trend in emerging megacities is when local/national governments bulldoze favelas to make way for new regeneration projects, especially where favelas are located in valuable city centre locations. Residents are promised new housing elsewhere; however this can cause local tensions.

All students should show some place knowledge in this section of the syllabus, e.g. *'older slum areas in Rio de Janeiro exist on many of the city's distinctive mountainsides and they exist here because…'*. Opportunities for stretch and challenge may be for students to have familiarity with place names of specific examples of each of the five 'zones' and why they are distinctive, e.g. that the wealthy suburbs of Leblon, Ipanema and Copacabana are located along the beach and have globalised high streets and HDI (Human Development Index) scores similar to wealthy developed world cities. More able students may also wish to include the importance of sport stadiums from the World Cup and Olympic regeneration as part of describing Rio's urban structure (although these often become too costly to be used by local clubs after the international events). Students could contrast to issues in Cape Town after the football World Cup.

Guidance on teaching

You may wish to start with some guided work on Google Earth to identify different areas within Rio de Janeiro and how it compares to a traditional urban model. There are some interesting maps to work with of favela location in Geoactive Online 458 'Squatter Redevelopment in Rio de Janeiro: An Update' and Geography Factsheet 297 'The Socio-Economic Dynamics of the Brazilian Favela'. Using Google Earth can be a challenge (either due to accessing effective ICT resources or students' ability to use the package efficiently).

As an alternative starting point, you could give students pre-printed examples of Google Earth images of the distinct 5–6 different land use zones, next to a 'normal' photo, and ask them to describe them.

A main task could be a worksheet that facilitates note taking as annotations around an urban land use model from a reading sheet. This should allow students to process understanding and place knowledge, and have a spatial understanding.

Lesson 3: Rio de Janeiro's population growth (3.5a&b)

> **Overview**
>
> Students should understand different trends in the population growth of Rio de Janeiro, typically centred around the story of rural to urban migration. All students should know the unique story of population trends in the past and the present and be able to give several reasons for growth, and should study the push and pull factors and how these have changed over time. Spatial growth in developing/emerging world megacities is mainly focused around the growth of an industrial sector, slums, low cost housing and maybe a growing tertiary sector. All students should be able to understand several different areas of spatial growth of Rio de Janeiro (their land use and function) and show some place knowledge of why it has grown.
>
> - More able students will give detailed place knowledge of stories of historic and current population growth – maybe even showing knowledge of several different 'time periods' of growth. Stretch and challenge opportunities would push this place knowledge depth, with specific place names and recalling of simple sketch maps showing land use/urban function that could be integrated into essay writing.
> - For less able students there could be a differentiated card sort (living graph exercise as described in Guidance on teaching section) with place knowledge simplified. The line graph could have key events marked on to support the matching activity.

Key concepts and processes

Some emerging country megacities have a colonial history and this may be part of the story that students understand in terms of 'past' population growth – especially explaining international migration. There are likely to be some links to section 3.4a as patterns in economic growth are likely to link to population growth and rural to urban migration.

In most emerging country megacities there is also likely to be two-staged rural to urban migration: migration that occurred in the 1970s as industrial and FDI started, and maybe a more recent wave, e.g. in Rio – the investment in sports regeneration and creation of jobs. Issues in rural areas – food insecurity, land reform and hazards – are also increasingly likely to explain population growth in many megacities. The older GCSE syllabus tended to group all rural to urban migrations together, whereas the new spec is distinctly asking for 'past and present trends'. The example for Rio de Janeiro on the next page gives a detailed account of three waves of immigration – the range and detail of place knowledge is probably suited for stretch and challenge.

An important part of the urban story of population growth and spatial growth in many cities in the emerging and developing world has been the creation of unplanned housing due to the speed of rural to urban migration and the inability of many cities to keep up with providing safe and affordable housing (hyper-urbanisation).

Example of place knowledge of past and present trends in population growth in Rio de Janeiro

Historic migration to Rio de Janeiro:
- Portuguese immigration during colonial rule.
- Black migration due to slavery mainly from Angola and Mozambique. After the end of slavery also immigration from rural areas in Brazil and the Caribbean.
- In the early twentieth century Portuguese immigration continued of poor rural farmers, many of whom became traders.
- Rio was an international city in the twentieth century and attracted migrants from Europe, Japan and the Middle East.

More recent migration to Rio de Janeiro:
- Rural to urban migration from poor rural areas – poverty in farming and deforestation pressures. Perception of jobs in tourism and industry.
- The 1950s saw TNCs invest in Rio after the success of the football team in the World Cup and a new democratic government. They were keen to exploit the resource-rich country and access to new markets.
- State planned industrial growth on the edge of the city and around Guanabara Bay, which increased due to the discovery of off shore oil and gas fields in the north of the state.

Recent migration to Rio de Janeiro:
- Sports regeneration during the 2014 FIFA World Cup and the 2016 Olympics has seen a boost in the need for construction jobs. This has attracted new rural to urban migrants, many of whom live in newer favelas at the edge of the city.

Guidance on teaching

Students examine line graphs showing population trends, and rates of growth are calculated.

For the main activity a 'living graph' card sort could be created, where students match real-life stories of migration/population growth to points on the graph. The cards must cover push and pull factors and how these would change during different time periods. These are then colour coded (to push and pull factors) with differentiated options.

For the second main task you may wish to use geographical skills to investigate spatial growth. You could use photos together with a guided Google Earth task and reading, and comparisons with older maps can identify areas of growth.

Example exam question from the SAMS for this section of the syllabus:

Explain one reason why growth is concentrated at the rural-urban fringe. (2)

Lesson 4: Rio de Janeiro: opportunities and challenges

Overview

Students should be able to understand several opportunities and challenges of life in the fast growing chosen megacity. The opportunities and challenges listed in the syllabus (access to resources, employment, housing shortages, the development of squatter and slum settlements, inadequate water supply and waste disposal, poor employment conditions and limited service provision and traffic congestion) should all be covered, as questions may focus on any one of

them. All students should show good place knowledge of the unique examples of growing employment sectors and social benefits but also challenges.

Opportunities for stretch and challenge may involve a very good explanation of the knock-on effects of opportunities and challenges, i.e. the multiplier effect and de-multiplier effect, together with rich place knowledge.

Key concepts and processes

For many megacities, economic **opportunities** are likely to be based around the following:

- Industrial growth and jobs. *Examples in Rio de Janeiro include oil refineries, shipping, clothing and shoes, food processing and electronics.*
- Financial centres – the size and importance can vary according to the megacity but most will include a notable financial sector providing jobs in the tertiary economy. *Examples in Rio de Janeiro include many of Brazil's top company headquarters, e.g. Petrobras.*
- Informal sector – with rapid growth of a megacity, a productive informal sector will normally grow and a large proportion of new migrants will end up working in this sector. *Examples – some tourism jobs, local health/beauty, informal markets.*

Challenges in Rio de Janeiro include the well-publicised challenge of slum growth. Students can use sweeping statements such as that areas are 'poor' and have 'no water'. They should understand the unique story of their megacity and the specific challenges it faces.

Here are some challenges students may wish to explore if studying Rio:

- The continued growth of favelas that have no legal access to water, electricity and waste disposal. Sometimes water is illegally tapped at the bottom of the hill of the step side favelas and illegally sent across the favela. Steep hillsides are not stable, especially during the rainy tropical season – what hazards could students predict with the risk of landslides combined with rudimentary pipes and cables?
- Informal economies have long been major employers in slums in megacities in emerging economy cities and residents face challenges of poor and unreliable wages, unsafe conditions and exploitation. The challenges unique to Rio's favela economy are compounded by it being dominated by the illegal and violent economy of drugs trading. What socio-economic impacts does this have for communities in the favela if many people are working in the drugs trade?
- Government-led economic investment and ensuring safe and reliable employment conditions. When large-scale economic growth is state led, e.g. the promotion of industrial growth around Guanabara Bay in Rio or sports-led regeneration such as the redevelopment of the Maracanã Stadium for the FIFA 2014 World Cup*,* it is challenging to ensure that all jobs are safe, well paid and workers are not exploited. In an emerging economy sometimes the

state investment is not available to ensure employment laws are as they should be and workers lack access to unions who can act on their behalf.

However, Brazil is an emerging country and the last 20 years has seen investment by the government in favelas and basic services installed. Community groups and the role of music centres and churches have also been key in improving Rio's favelas. This will be explored in section 3.7.

Guidance on teaching

Students could start by watching a video clip and list opportunities and challenges they see, drawing on previous lesson content. For example, there are some excellent visual clips of sense of place in Rocinha at www.bbc.co.uk/news/science-environment-18552512, or you can search YouTube for 'Rocinha'.

It may be useful to use photos as a starting point, allowing students to understand some of the challenges. For Rio de Janeiro there are a range of well-publicised photos of the favelas. There is also a good range in Geoactive Online 458 'Squatter Redevelopment in Rio de Janeiro: An Update' and Geography Factsheet 297 'The Socio-Economic Dynamics of the Brazilian Favela'.

The main task could be creating a linked concept map after looking at a reading/photo resource so students can process the challenges and also see how they are linked together.

For less able students, a differentiated reading and maybe reading images task and gap-fill or scaffolding task might be suitable.

> **Example exam question from the SAMS for this section of the syllabus:**
>
> Explain two reasons why rapid population growth leads to problems with water supply. (4)

Lesson 5: Rio de Janeiro: differences in quality of life

> **Overview**
>
> Students should have a knowledgeable understanding of differences between slums and more wealthy areas in terms of quality of life, building on ideas from 3.4b. Quantitative and qualitative evidence should be studied (see integrated skills on spec) in investigating variations in quality of life.
>
> Students should understand several 'political and economic challenges' of managing a megacity. Stretch and challenge opportunities may be to assess how well these challenges have so far been met based on knowledge of topical solutions.

Key concepts and processes

The pattern of contrast between rich and poor is likely to be linked to previous sections of the syllabus, relating to types of economic growth (3.4a), high rural to urban migration (3.5b) which cities are struggling to cope with, and the growth of the informal economies (3.6b). This therefore builds on ideas covered

in the previous GCSE spec. Top-level students might compare economic and development/crime statistics to give evidence to contrasts.

The depth required in terms of the 'political and economic challenges' of managing the megacity is in contrast to the old GCSE spec and will require some careful research for your chosen megacity. For many megacities, the political and economic challenges of managing a growing megacity are based around the contrasting need to attract private investment from national and international companies to create jobs, but also to provide appropriate socio-economic well-being for the city's poorest, which is linked to challenges in rural areas in developing countries.

Another growing challenge is managing the sense of unfairness and inequality felt by the cities' poorest. They live in slums and often see government money being spent on large flagship projects, which leads to resentment and a feeling that their needs are not being considered or provided for. The so-called 'Arab Spring' and more recently violent protests against some of the sports-led regeneration in Brazil are two examples of the growing global voice of unhappiness felt by many of those left out of the wealth creation in megacities.

Here are some examples of ideas to research – political/economic challenges of managing Rio de Janeiro:
- **Managing the drugs trade** – the drugs trade and its associated violence, gangs and persistent attraction of young people to gang life; global connectivity to America, Europe, Bolivia and Columbia; supposed brutality of the city's police force; break down in trust between the authorities and favela dwellers.
- **Sports-led regeneration** – large flagship developments associated with international sporting events are supposed to have a trickle-down effect to all. However, ensuring this happens and that local people are aware of current and future benefits is a challenge. There have been numerous protests in the cities that could be researched.
- **Corruption** – sadly, political corruption in Brazilian cities is a reported pervasive force, set against the current national context of the impeachment of the current Brazilian president. The Olympics and associated regeneration has faced accusation of corruption. In Rio de Janeiro there are persistent accusations of corruption within the police force and its handling of crime in the slums, although there have also been reports of improvement here.

Guidance on teaching

Start with images of newspaper headlines and have students guess what these tell us about Rio, inequality and challenges of management. Introduce new terms such as sports-led regeneration, corruption, inequality.

A first main task could use spatial maps of Rio to describe inequalities. There are some interesting resources (that would need adapting) that could be used for this task, for example:
- www.ucl.ac.uk/dpu-projects/Global_Report/pdfs/Rio.pdf
- www.rioonwatch.org/?p=20153

A second main task could be a viewpoints task of different urban players – e.g. local managers, national officials, police, favela dwellers, periferia residents, wealthier residents. There could be a card sort where students match a 'character' with a photo of the area they live in and then with a viewpoint they may have.

A long written plenary with an essay question and a scaffold writing frame can then be set to draw these ideas together.

> **Example exam question from the SAMS for this section of the syllabus:**
>
> For a named megacity in a developing or emerging country, give two reasons why residential areas have a contrasting quality of life. (2)

Lessons 6 & 7: Rio de Janeiro: top-down and bottom-up strategies

Overview

Students should understand several well-explained advantages and disadvantages for top-down and bottom-up strategies that make their chosen megacity more sustainable. All students should show good place knowledge and an understanding of the unique story of improvement or otherwise. For top-down strategies the specification lists managing water supplies, waste disposal, transport and air quality. For bottom-up strategies the specification lists city housing, health and education services.

Stretch and challenge may be to fully explain impacts through the use of the multiplier/de-multiplier effects and the knock-on issues. Other opportunities for stretch and challenge may be to evaluate the solutions against the sustainability stool – economic/environmental/social. An opportunity for stretch and challenge that links 3.6a,b,c and 3.7 is for students to assess the relative success of solutions in overcoming the challenges of rapid population growth.

Key concepts and processes

Students should ensure that their place knowledge is topical. For example, a sole focus on the favela solution of 'site and service' schemes for Rio de Janeiro is probably outdated as this started back in the 1990s/early 2000s.

Below are some ideas for solutions to research for top-down and bottom-up solutions for Rio de Janeiro.

> **Top-down strategies for improving sustainability:**
> - **Infrastructure improvements.** In 2007 President Lula announced a country-wide improvement scheme for favelas in Brazil that would focus on improving **infrastructure** including building quality, water, waste, transport, electricity, broadband access and a new school building programme. Also, favelas were added to formal maps and residents were issued with 'zip codes'. *Example: cable cars in Complexo do Alemão favela. In July 2013, a network of 155 eight-seater cable cars was installed above the favelas, linking different areas and to the city's rail network, and therefore into the city centre itself. Each local resident gets a daily free ticket.*

- **Reducing drugs and gangs.** In 2008 there was a city-wide policy of 'pacification' in Rio, where armed police units with back-ups by soldiers and marines went into previously 'no go areas' to set up a permanent policing presence.
- **Sports-led regeneration** of Rio through the FIFA 2014 football World Cup and the 2016 Olympics.

Key ideas/words in evaluating schemes
Qualifications to enter the formal employment sector, improved access to employment, safety, multiplier effect, outmigration of problems/gangs to rural-urban fringe, poor quality of improvements to favelas, evictions and gentrification.

Community and NGO-led bottom-up strategies for improving sustainability:
- **UN Women's Safe Cities initiatives.** Launched in 2011, these seek to increase safety, and prevent and reduce violence, including sexual violence and harassment. They also aim to mobilise and empower women, youth and children's groups to improve their urban environment.
- **Local music.** Samba clubs are a focal point in the community, as outlined in the documentary 'Favela rising', which tells the story of the start of the Afro reggae movement in Rio's favelas.
- **The Catholic Church** also acts as focal point in the community and runs workshops on improving buildings.

Key ideas/words in evaluating schemes
Discussion with locals to investigate real needs, community and purpose, localised, lack of resources for ingrained/large-scale problems (e.g. land tenure).

Guidance on teaching

A good starter would be defining sustainability, e.g. the 1992 Rio Earth Summit definition. You could build on this with more updated ideas about sustainability from geographers, such as the sustainability stool or quadrant. In addition, a class discussion could explore in what ways the definition of sustainable urban living might differ for a developed world city dweller compared to different people living in Rio.

Key definitions to establish are also 'top-down' strategies and 'bottom-up' strategies. This is likely to have been investigated at Key Stage 3, so a baseline understanding of this through a reading images brainstorm could assess and build understanding – maybe similarities and differences or a Venn diagram.

This lesson could be taught as two discrete lessons on top-down and then bottom-up, using a visual/video clip starter with a reading and writing frame to process. In both lessons, extending thinking and understanding using a multiplier effect concept map would be purposeful. A plenary could be an opinion line to decide opinions on whether top-down or bottom-up (or both) should be the way forward.

Alternatively, a more thinking-based task could involve students role-playing the part of urban planners with a budget to spend and having to choose between top-down and bottom-up solutions. This may work for some classes; they could present their decisions in small groups. The choices could include different

options listed in the syllabus – water infrastructure, waste disposal, transport, improving air quality, city housing, health and education. Students would have to decide what would be best for a one-year, then five-year, then ten-year plan. This would have to be followed up with some sensible note taking/reading to ensure students had good notes from which to revise.

An extended writing task such as 'To what extent are top-down strategies a sustainable solution for improving Rio de Janeiro's quality of life?' could be set to draw these ideas together.

Further reading and resources

- Geoactive Online 458 'Squatter Redevelopment in Rio de Janeiro: An Update'
- Geography Factsheet 297 'The Socio-Economic Dynamics of the Brazilian Favela' (£3).
- www.bbc.co.uk/news/business-20582470
- www.unwomen.org/en/news/stories/2013/6/rio-de-janeiro-apps-to-end-violence-in-favelas#sthash.sbhiRzyi.dpuf
- Clips from 'Favela Rising' (certainly not the whole film, which has many unsuitable clips) – this is a documentary following the grass roots 'Afro Reggae' movement, a youth music movement in Rio's favelas. www.favelarising.com/

Example exam questions from the SAMS for this section of the syllabus:

- Explain one way in which bottom-up projects can improve city housing. (2)
- For a named megacity, assess how far rapid population growth has affected attempts to make it more sustainable. (8)