# Scheme of work

## Introduction

This SOW offers a route through theGCSE Geography (8035)course.

It covers the specification in a logical order and suggests possible teaching and learning activities for each section of the specification.

Timings have been suggested but are approximate. You should select activities appropriate to your students and the curriculum time available.

The order is by no means prescriptive and there are many alternative ways in which the content could be organised.

We have also highlighted opportunities to engage in practice for the issue of evaluation and fieldwork throughout.

This scheme of work also contains teaching and learning suggestions that allow for opportunities to diversify the curriculum. It contains suggested links to information about different case studies and examples that could be used by teachers to create resources, or be used with students in the classroom.

The suggested pedagogical approaches are focused around critical enquiry to allow for an anti-racist approach to teaching geography. To read further around this approach, please utilise the following resources:

* Read an article about [Why Do We Need to Decolonise Geography?](https://decolonisegeography.com/blog/2021/02/why-do-we-need-to-decolonise-geography/) Decolonising Geography (6 minutes)
* Read and watch[Decolonising Geography 101](https://geogramblings.com/2020/08/01/decolonising-geography/)Geogrambles (25 minutes)
* Read an article about [working towards anti-racism in school geography in Britain](https://medium.com/oxford-university/working-towards-anti-racist-school-geography-in-britain-8b16a94e25ba) Oxford University.
* Read the [All Parliamentary Group Report for Africa](https://royalafricansociety.org/whatwedo/policy/appga/) (5 minutes for section on geography)

The next two resources assume membership to the Geographical Association.

* Read an article on [Classroom Strategies for Tackling the Whiteness of Geography](https://www.geography.org.uk/Journal-Issue/fbcc315c-e3d2-4b85-b2f4-b2ec6d16a1df)Geographical Association
* Read an article about [How to Start a Conversation About Diversity in Education Geographical Association](https://www.geography.org.uk/Journal-Issue/4773d9ca-7d07-4722-add8-f3bebd5b7fd7)

## Assumed coverage

The scheme of work is based on a 67 week course over two years with Key Stage 4 contact time of 2 x 1 hour per week:

* 38 weeks in Year 1
* 29 weeks in Year 2.

This can be broken down by topic as below:

|  |  |
| --- | --- |
| Topic | Time |
| 3.1.1 The challenge of natural hazards | 20 hours |
| 3.1.2 The living world | 18 hours |
| 3.1.3 Physical landscapes in the UK | 26 hours 30 minutes |
| 3.2.1 Urban issues and challenges | 18 hours |
| 3.2.2 The changing economic world | 20 hours |
| 3.2.3 The challenge of resource management | 15 hours |
| 3.3.1 Issue evaluation | 5-7 hours |
| 3.3.2 Fieldwork | 12 hours |

This gives a total teaching time of 134 hours and 30 minutes. The Department for Education Guided Learning Hours for GCSE are 120 to 140 hours.

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Version 1.2

March 2024

3.1.1 The challenge of natural hazards

**3.1.1.1 Natural hazards**

Key idea

Natural hazards pose major risks to people and property.

Specification content

* Definition of a natural hazard.
* Types of natural hazard.
* Factors affecting hazard risk.

Suggested timing

30 minutes

Possible teaching and learning activities

* Use of newspaper headlines to express the idea of a hazard (where people and property are affected).
* Visual images to identify a range of hazards.
* Spider diagram.
* Activity to classify (geophysical/earth, weather climate).
* Discussion groups: Identity factors that affect risk (magnitude, location, vulnerability) and report back or make brief notes.

**3.1.1.2 Tectonic hazards**

**Key idea**

Earthquakes and volcanic eruptions are the result of physical processes.

**Specification content**

* Plate tectonics theory.
* Global distribution of earthquakes and volcanic eruptions and their relationship to plate margins.
* The physical processes taking place at different types of plate margins (constructive, destructive and conservative) that lead to earthquakes and volcanic activity.

Suggested timing   
2 hours 30 minutes

Possible teaching and learning activities

* Basic exercise to illustrate continental drift (shape of continents/geology/fossils etc).
* Use an atlas to identity plates (label on blank map).
* Use latitude/longitude to locate particular events on the map to illustrate the relationship between plate margins and earthquakes/volcanic activity (data from USGS website).
* Confirm the idea by using world map (USGS website).
* Potential to use a visual (YouTube) clip to show plate movement.
* Animations to illustrate each type of plate movement.
* Annotated diagrams of each type of plate movement.
* Refer back to original map and put on arrows to identity direction of movement (link to earthquake/volcanic activity).

**3.1.1.2 Tectonic hazards**

**Key idea**

The effects of and responses to a tectonic hazard vary between areas of contrasting levels of wealth.

**Specification content**

* Primary and secondary effects of a tectonic hazard.
* Immediate and long-term responses to a tectonic hazard.
* Use named examples to show how the effects and responses to a tectonic hazard vary between two areas of contrasting levels of wealth.

Suggested timing  
3 hours

Possible teaching and learning activities

* Identify two appropriate examples in order to make comparative points. Use news/visual images to introduce the key idea.
* Contextualise chosen case studies with students:
* Level of development and brief overview of the historical, economic and social reasons for this.
* How this level of development created vulnerability to tectonic hazards.
* Create factsheets for each case study.
* Table of impacts of the events. Include voices of those impacted by the hazard and information on how the impacts varied across different social groups. Students can:
* Categorise impacts into primary and secondary, and social, economic and environmental.
* Assess the significance of different impacts.
* For higher attainers: explain the impacts making links back to vulnerability and context of the country.
* Same activity can be done for responses, including an evaluation on the effectiveness.
* If you are a GA member, continue to use the Teaching Geography article [‘Racial Capitalism and School Geography’](https://www.geography.org.uk/Journal-Issue/a4e5cf41-6e86-4029-b37a-05c074922b66) to inform teaching/planning, so that students can make critical observations about the impacts/responses and make links to the context of the case study.
* For a free alternative please read [‘Rethinking Racial Capitalism’](https://decolonisegeography.com/blog/2022/04/everyday-geographies-of-racial-capitalism-an-interview-with-gargi-bhattacharyya/) on the decolonising geography website.
* Compare the risk and vulnerability of two case studies through:
* written tasks
* sorting and organising of information
* debates.

Opportunities for issue evaluation

Investigate questions based on the idea the LIC/NEE may be more vulnerable

* research two examples
* present information
* offer analysis based on original questions
* evaluate findings/conclusion.

**3.1.1.2 Tectonic hazards**

Key idea

Management can reduce the effects of a tectonic hazard.

**Specification content**

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

**Suggested timing**

1 hour

**Possible teaching and learning activities**

* Discussion/group work: report back, identifying a range of reasons (spider diagram/mind map). Could use visual prompts.
* Introduce and define each term. Relate the ideas back to examples previously used and link back to the idea of vulnerability.

**Opportunities for issue evaluation**

* Identify different methods of risk reduction and consider how appropriate they might be in relation to levels of development.

**3.1.1.3 Weather hazards**

**Key idea**

Global atmospheric circulation helps determine patterns of weather and climate.

**Specification content**

General atmospheric circulation model: pressure belts and surface winds.

**Suggested timing**

30 minutes

**Possible teaching and learning activities**

* Basic diagram showing the general circulation model/major cells/rising and sinking air masses.
* Read [How I teach…Global Atmospheric Circulation Model](https://teamgeography.wordpress.com/2019/11/10/how-i-teach-global-atmospheric-circulation-model/) by Team Geography.
* Basic link to pressures (high/low) and winds.

**3.1.1.3 Weather hazards**

Tropical storms (hurricanes, cyclones, typhoons) develop as a result of particular physical conditions.

**Key idea**

Global atmospheric circulation helps determine patterns of weather and climate.

**Specification content**

* Global distribution of tropical storms (hurricanes, cyclones, typhoons).
* An understanding of the relationship between tropical storms and general atmospheric circulation.
* Cause of tropical storms and the sequence of their formation and development.
* The structure and features of a tropical storm.
* How climate change might affect the distribution, frequency and intensity of tropical storms.
* How climate change might affect the distribution, frequency and intensity of tropical storms.

**Suggested timing**

4 hours

**Possible teaching and learning activities**

* Atlas/textbook to identify the distribution of tropical storms.
* Use locational understanding to suggest why tropical storms develop (conditions).
* [NOAA website](https://www.noaa.gov/) is a useful resource for this.
* Visual (YouTube) aircraft flying through a tropical storm.
* Annotated diagram to identify the key characteristics.
* Revisit the idea of Ocean temperatures. Relate the idea of highs ocean temperatures to:
* larger area with required temperature for storm formation
* higher ocean temperature, greater energy
* longer storm season.

**3.1.1.3 Weather Hazards**

**Key idea**

Tropical storms have significant effects on people and the environment.

**Specification content**

* Primary and secondary effects of tropical storms.
* Immediate and long-term responses to tropical storms.
* Use a **named example** of a tropical storm to show its effects and responses.
* How monitoring, prediction, protection and planning can reduce the effects of tropical storms.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

* Contextualise chosen case study with students:
* Development level of country/region and a brief overview of the historical, economic and social reasons for this.
* How this level of development created vulnerability to weather hazards.
* Evaluate the extent to which this vulnerability led to impacts seen after weather event.
* Create factsheets for each case study.
* Table of impacts of the events. Include voices of those impacted by the hazard and information on how the impacts varied across different social groups. Students can:
* Categorise impacts into primary and secondary, and social, economic and environmental.
* Assess the significance of different impacts.
* For higher attainers: explain the impacts making links back to vulnerability and context of the country.
* Same activity can be done for responses, including an evaluation on the effectiveness.

**3.1.1.3 Weather hazards**

**Key idea**

The UK is affected by a number of weather hazards.

**Specification content**

Overview of types of weather hazard experienced in the UK.

**Suggested timing**

30 minutes

**Possible teaching and learning activities**

* Identify causes and specific data (Met Office).
* Research by looking at newspaper reports/visual images.
* Write a report describing the impacts.
* Describe what has been done/could be done to reduce future risks.

**3.1.1.3 Weather hazards**

**Key idea**

Extreme weather events in the UK have impacts on human activity.

**Specification content**

* One example of a recent extreme weather event in the UK to illustrate:
* causes
* social, economic and environmental impacts
* how management strategies can reduce risk.
* evidence that weather is becoming more extreme in the UK.

**Suggested timing**

1 hour

**Possible teaching and learning activities**

* Define what is meant by ‘extreme’ (newspaper headlines/personal experiences).
* Build up an inventory of extreme weather events (could look at one year) Met Office Data.
* Evidence of UK weather becoming more extreme (Met Office Data).
* Explore how the impacts of extreme weather affect people differently, particularly socially vulnerable groups.

**Useful resources**

Read an article on [socially vulnerable groups sensitive to climate impacts](https://www.climatejust.org.uk/socially-vulnerable-groups-sensitive-climate-impacts) by Climate Just (4 minutes).

**Opportunities for issue evaluation**

Basic research question: Is the UK weather becoming more extreme?

* Collect and present data.
* Offer analysis and conclusion linked to the question.
* Evaluate the process (reliability, accuracy of data etc).

**3.1.1.4 Climate change**

**Key idea**

Climate change is the result of natural and human factors and has a range of effects.

**Specification content**

* Evidence for climate change from the beginning of the Quaternary period to the present day.
* Possible causes of climate change.
* Natural factors: orbital changes, volcanic activity and solar output.
* Human factors: use of fossil fuels, agriculture and deforestation.
* Overview of the effects of climate change on people and the environment.

**Suggested timing**

3 hours

**Possible teaching and learning activities**

* Evidence of climate change: Graphs to show temperature change; Evidence of geological climate change (eg ice ages) and recent change (glacial retreat/climate patterns etc).
* Natural causes of climate change: examine evidence of these theories, eg the Little Ice Age, evidence of temperature changes and correlation with sunspot cycles.
* Human causes of climate change: reading and comprehension tasks using the resources from the lists below. Students could complete guided reading activities using amended copies of these resources; or they could do dual coding by drawing diagrams and symbols next to areas of text to summarise the meaning. Maps can be described and analysed.
* Students annotate diagram of enhanced greenhouse effect and/or place statements describing this process into correct order.
* Spatial distribution of carbon emissions and links to wealth (to tackle misconceptions around ‘overpopulation’).
* Use article ‘[Carbon Capitalism’](https://decolonisegeography.com/blog/2021/11/carbon-colonialism/) which shows how the UK hides its carbon emissions and environmental impacts in the global south. Also use carbon emissions and GNI maps.
* Students describe distribution of carbon emissions and make connections to GNI, explaining the link.

**Useful resources**

* Little Ice Age: explore as both human AND natural cause of climate change. This article on BBC news [America colonisation ‘cooled Earth's climate’](https://www.bbc.co.uk/news/science-environment-47063973?scrlybrkr=006b9220) highlights evidence of volcanic activity, but also how genocide of indigenous people affected the climate at the time.
* Explore human causes prior to period of industrialization. In 2022, the IPCC named colonialism as a driver of climate change and an ongoing issue affecting communities’ vulnerability to it:
* Further information on the inclusion of this in the [IPCC report](https://atmos.earth/ipcc-report-colonialism-climate-change/#:~:text=The%20Intergovernmental%20Panel%20on%20Climate,driver%20of%20the%20climate%20crisis.).
* Read an article about [How did colonialism create climate change from Open Democracy UK](https://www.opendemocracy.net/en/opendemocracyuk/to-fix-climate-crisis-we-must-acknowledge-our-imperial-past/).
* Read: [Eradicating 'extreme poverty' would raise global emissions by less than 1%](https://www.carbonbrief.org/eradicating-extreme-poverty-would-raise-global-emissions-by-less-than-1/) on Carbon Brief website. It includes some useful maps and bar charts.
* Read: [The most important number you’ve never heard](https://www.bbc.com/future/article/20211103-the-most-important-number-youve-never-heard-of) of on BBC Future.
* Pupils can explore the concept of environmental racism using [environmental racism; explained in terms simple enough for a child](https://www.parents.com/kids/education/environmental-racism-definition-in-terms-simple-enough-for-a-child/) Provide pupils with a definition.
* The following resources can be used to create resources demonstrating the disproportionate impacts of climate change:
* Read: [Climate change is an increasing threat to Africa](https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa) on United Nations Climate Change website.
* Read this article on BBC news, [Impacts of Hurricane Ida on New York immigrants](https://www.bbc.co.uk/news/world-us-canada-58565627) (7 minutes).
* Read this article on BBC news [‘Climate change is inherently racist’](https://www.bbc.com/future/article/20220125-why-climate-change-is-inherently-racist) (11 minutes).
* Read an article by Yale School of the environment, [‘Unequal impact: The deep links between racism and climate change’](https://e360.yale.edu/features/unequal-impact-the-deep-links-between-inequality-and-climate-change) (12 minutes).
* Greenpeace and Runnymede Trust: [Confronting Injustice: racism and the global emergency](https://www.greenpeace.org.uk/challenges/environmental-justice/race-environmental-emergency-report/) (1 hour).
* With this information, students could:
* Identify where environmental racism has occurred, allowing the teacher to assess their understanding of the concept (eg get pupils to explain how these case studies are examples of environmental racism), or;
* Complete comprehension tasks on articles, or;
* Write connective chains to explain the links between racism and climate change. This can be scaffolded for lower attaining students by providing sentence starters for connective chains, which they complete using key words. Or pupils place pre-written statements in order to accurately explain the link between racism and climate change
* For lower attainers, articles can be amended to include dual coding to help pupils understand concepts. The [Flat Icon](https://www.flaticon.com/) website is useful for finding useful icons.

**Opportunities for fieldwork**

* Investigate local planning strategies which reduce the risks from climate change (adaptation).

**Opportunities for issue evaluation**

* Could be flood plan management/coastal management etc.

**3.1.1.4 Climate change**

**Key idea**

Managing climate change involves both mitigation (reducing causes) and adaptation (responding to change).

**Specification content**

Managing climate change:

* Mitigation: alternative energy production, carbon capture, planting trees, international agreements.
* Adaptation: change in agricultural systems, managing water supply, reducing risk from rising sea levels.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

* Definition of mitigation and adaptation
* Provide pupils with examples of mitigation and adaptation. Use dual coding where pupils draw diagrams of each example and add labels to explain how they work.
* Individual group work identifying examples of each.
* Report back and build up a spider diagram showing each.
* Students should consider a range of solutions to climate change. The following resources provide useful information:
* [Indigenous solutions to climate change](https://ifnotusthenwho.me/films/indigenous-climate-change-solutions/?gclid=Cj0KCQjw37iTBhCWARIsACBt1Ixm-kx9EghPNANZ79lsmYejqyKMragXsq8kAZJpUIKtGiJ5xaQdmEAaAlcGEALw_wcB)
* [Indigenous activists in Glasgow 2021](https://www.theguardian.com/environment/2021/nov/02/cop26-indigenous-activists-climate-crisis): these images could be used as a starter activity/discussion point
* [5 Indigenous activists and movements you should know about](https://www.globalcitizen.org/en/content/cop26-indigenous-activists-organizations-movements/).

**Opportunities for issue evaluation**

‘Is mitigation or adaptation more important when managing the risks of climate change?’

* Evidence (effects)
* Examples of mitigation/adaptation
* Analysis/conclusion
* Evaluation (limitations of evidence).

**Opportunities for extension**

Provide definition of natural hazard, and highlight its distinction from natural disaster.

Look at the concept of a natural disaster and how this is socially constructed, using resources from [No Natural Disasters](https://www.nonaturaldisasters.com/about-us).

Discuss with pupils that some hazards might be natural and unavoidable. However, the resulting disasters almost always have been made by human actions and decisions.

Teachers should familiarise themselves with this notion using these resources prior to teaching students.

* Student debate on the human causes of ‘natural disasters’ using their knowledge of the case studies taught throughout this unit (this would also be a good revision exercise).
* Examine the causes of vulnerability to hazards, which highlights the role of racial capitalism in creating vulnerability:
* Provide students with a definition of racial capitalism.
* Continue to explore this concept when introducing and exploring case studies within this unit.
* Task to aid lower attainers: provide profiles of different people and pupils have to identify who is more at risk and explain why. Information that could be provided include (you could select 2 or 3): location; proximity to hazard; financial status; access to vehicle and evacuation route; context of country and its management strategies. This could be followed by a discussion about the human causes of natural disasters, so that students can make this connection.

**3.1.2 The living world**

**3.1.2.1 Ecosystems**

**Key idea**

Ecosystems exist at a range of scales and involve the interaction between biotic and abiotic components.

**Specification content**

* One example of a small-scale UK ecosystem, to illustrate the concept of inter-relationships within a natural system, an understanding of producers, consumers, decomposers, food chain, food web and nutrient cycle.
* The balance between components. The impact on the ecosystem of changing one component.
* An overview of the distribution and characteristics of large scale, natural, global ecosystems.

**Suggested timing**

3 hours

**Possible teaching and learning activities**

* Introduce the major components of an ecosystem (Flora/Fauna/Climate/Rock/Soil). Photographs – Visual biomass (compare – why?).
* Discussion to consider the inter-relationships within the natural system and impact of changing components.
* Relate the idea to a small ecosystem (UK).
* Use an atlas to identify the major biomes.
* Visual images to identify specific characteristics (highlight tropical rainforest and second choice of ecosystem).
* Basic link to climate as a significant driving factor.

**Opportunities for fieldwork**

Investigation of a small scale ecosystem and the pressures of human use.

**3.1.2.2 Tropical rainforests**

**Key idea**

Tropical rainforest ecosystems have a range of distinctive characteristics.

**Specification content**

* The physical characteristics of a tropical rainforest.
* The interdependence of climate, water, soils, plants, animals and people.
* How plants and animals adapt to the physical environment.
* Issues related to biodiversity.

**Suggested timing**

3 hours

**Possible teaching and learning activities**

* Location and climate (complete climate graph/identity key points).
* Identify the main characteristics (visual) and plant/animal adaptation. Annotated diagram of five-layer selva, describing and explaining each layer.

**3.1.2.2 Tropical rainforests**

**Key idea**

Deforestation has economic and environmental impacts.

**Specification content**

* Changing rates of deforestation.
* A case study of a tropical rainforest to illustrate:
* causes of deforestation – subsistence and commercial farming, logging, road building, mineral extraction, energy development, settlement, population growth.
* impacts of deforestation - economic development, soil erosion, loss of biodiversity, contribution to climate change.

**Suggested timing**

3 hours 30 minutes

**Possible teaching and learning activities**

* Case study of an area of tropical rainforest to illustrate: Discussion about the importance of this tropical rainforest (WWF/conservation international website). Idea of physical/social/environmental value (local and global scale):
* Describe and explain causes of deforestation: link to value of the rainforest.
* This can include looking at the links between deforestation and development using this guided reading activity called [Deforestation and development: a decolonial perspective from Indonesia](https://docs.google.com/document/d/1h4xm22hlSjph1o_Tix4jI_3w-OabRc73/edit) by Tania Murray Li from Decolonising Geography. Provide definitions of key terms: colonial; anti-colonial; concessions; plantations; racialised; imperial. NB the document could be amended to make it more readable for students with different needs.
* Students can carry out guided reading of this document and make notes/complete tasks in the spaces provided. Additional space/instruction could be included for pupils to summarise the text using dual coding.
* Describe, explain and evaluate impacts of deforestation: include the voices of Indigenous people who depend on rainforests and have ancestral knowledge of managing rainforests.

**Opportunities for issue evaluation**

Consider the issues relating to economic/environmental conflict in terms of an area under pressure (Coal-mining: Kalimavition).

**3.1.2.2 Tropical rainforests**

**Key idea**

Tropical rainforests need to be managed to be sustainable.

**Specification content**

* Value of tropical rainforests to people and the environment.
* Strategies used to manage the rainforest sustainably:
* selective logging and replanting
* conservation and education
* ecotourism and international agreements about the use of tropical hardwoods
* debt reduction.

**Suggested timing**

2 hours 30 minutes

**Possible teaching and learning activities**

* Provide/recap definition and criteria for sustainability (social, economic and environmental).
* Provide students with different methods for managing the rainforest. Pupils could assess how sustainable each method is, using criteria for sustainability. This could involve ranking them from most to least sustainable. Within these methods, include a range of examples of sustainable ecosystem management. Possible resources to aid this include:
* Read an article and watch a video on the UN website: [Indigenous People and the Nature They Protect, UNEP](https://www.unep.org/news-and-stories/story/indigenous-peoples-and-nature-they-protect) (5 minutes).
* Read an article Amazon frontlines: [Indigenous-led conservation](https://www.amazonfrontlines.org/chronicles/indigenous-conservation-amazon/) (10 minutes).
* Read an article on Nature.com: [Mapping the irrecoverable carbon in Earth’s ecosystems](https://www.nature.com/articles/s41893-021-00803-6) (15 minutes).
* Read an article on EcoMena website: [Islamic principles on sustainable development](https://www.ecomena.org/islam-sustainable-development/) (5 minutes).
* Read an article on the UN website about: [How Islam can represent a model for environmental stewardship](https://www.unep.org/news-and-stories/story/how-islam-can-represent-model-environmental-stewardship) (5 minutes).
* Read an article on The Independent: [Ugandan people fighting against deforestation](https://www.independent.co.uk/climate-change/news/climate-change-leah-namugerwa-greta-thunburg-activism-protest-uganda-a9261326.html) (10 minutes).

**3.1.2.3 Hot deserts (Optional unit – choose one from EITHER Hot Deserts OR Cold Environments)**

**Key idea**

Hot desert ecosystems have a range of distinctive characteristics.

**Specification content**

* The physical characteristics of a hot desert.
* The interdependence of climate, water, soils, plants, animals and people.
* How plants and animals adapt to the physical conditions.
* Issues related to biodiversity.

**Suggested timing**

2 hours.

**Possible teaching and learning activities**

Could be project/presentation-based research with a choice of environment. Provide pupils with a set of research criteria, including:

* Identify the physical characteristics and how plants/animals adapt to the conditions.
* Information on indigenous people in hot desert environments, how they depend on the environment and how they have adapted to it. Try this resource from National Geographic Kids on the [Western Desert USA](https://kids.nationalgeographic.com/history/article/native-people-of-the-american-southwest).
* Pupils present findings to classmates, who make notes to collate key information.

**3.1.2.3 Hot deserts**

**Key idea**

Development of hot desert environments creates opportunities and challenges.

**Specification content**

* A case study of a hot desert to illustrate:
  + development opportunities in hot desert environments: mineral extraction, energy, farming, tourism
  + challenges of developing hot desert environments: extreme temperatures, water supply, inaccessibility

**Suggested timing**

2 hours

**Possible teaching and learning activities**

You could use a case study to identify:

* Development opportunities.
* The challenge of development. Include information on challenges/risks to indigenous people in hot deserts and how they are resisting this:
* [Western Desert USA – How legal and cultural barriers keep Indigenous people from protecting sacred spaces off tribal land](https://eu.usatoday.com/in-depth/news/nation/2021/08/17/indigenous-people-legal-barriers-protect-sacred-spaces/8152992002/).
* [Western Desert USA – A corporation wants to mine for gold near death valley – native tribes are fighting it](https://www.latimes.com/environment/story/2021-03-14/a-corporation-wants-to-mine-for-gold-near-death-valley-native-tribes-are-fighting-it).

**Opportunities for issue evaluation**

Opportunity to investigate, ‘the pressures on the environment/the conflict between development and conservation/effectiveness of different strategies to manage the environment.

**3.1.2.3 Hot deserts**

**Key idea**

Areas on the fringe of hot deserts are at risk of desertification.

**Specification content**

* Causes of desertification:
* climate change
* population growth
* removal of fuel wood
* overgrazing
* over-cultivation and soil erosion
* Strategies used to reduce the risk of desertification:
* water and soil management,
* tree planting and use of appropriate technology.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

Describe, explain and evaluate:

* The physical and human causes of desertification.
* How the risk of desertification can be reduced.
* Possible resource to use is from [Africa’s Great Green Wall](https://www.greatgreenwall.org/) website. It includes information and a video.
* Use this alongside information on the progress of the scheme:
* [Africa’s Great Green Wall just 4% complete halfway through schedule](https://www.theguardian.com/environment/2020/sep/07/africa-great-green-wall-just-4-complete-over-halfway-through-schedule)
* [How to make Africa’s Great Green Wall a success](https://www.nature.com/articles/d41586-022-01201-4).

**3.1.2.4 Cold environments (Optional unit – choose one from EITHER Hot Deserts OR Cold Environments)**

**Key idea**

Cold environments (polar and tundra) have a range of distinctive characteristics.

**Specification content**

* The physical characteristics of a cold environment.
* The interdependence of climate, permafrost, soils, plants, animals and people.
* How animals adapt to the physical conditions.
* Issues related to biodiversity.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

Could be project/presentation based research with a choice of environment.

* Identify the physical characteristics and how plants/animals adopt to the conditions.
* Read this article by National Geographic on [adaptation and survival](https://education.nationalgeographic.org/resource/adaptation-and-survival) (6 minutes).
* Read this article by Internet geography on [adaptation and survival](https://www.internetgeography.net/topics/how-have-animals-adapted-to-cold-environments/) (5 minutes).

**3.1.2.4 Cold environments**

**Key idea**

Development of cold environments creates opportunities and challenges.

**Specification content:**

A case study of a cold environment to illustrate:

* Development opportunities in cold environments: mineral extraction, energy, fishing and tourism.
* Challenges of developing cold environments: extreme temperature, inaccessibility, provision of buildings and infrastructure.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

* Provide pupils with information on each development opportunity. Pupils make links to characteristics of the cold environment. Pupils write connective chains to explain the opportunities and evaluate them by ranking them from most to least significant.
* Think, pair, share task to identify challenges of developing cold environments.
* Include information on the impacts development has on indigenous communities, and how they are resisting this:
* Read an article on Cultural Survival [Alaska Natives mount resistance to latest ANWR drilling legislation](https://www.culturalsurvival.org/news/alaska-natives-mount-resistance-latest-anwr-drilling-legislation) (5 minutes).
* Read an article on BBC news [Native Alaskans say oil drilling threatens way of life](https://www.bbc.co.uk/news/world-us-canada-10549107) (5 minutes).
* Task to evaluate the extent to which cold environments provide opportunities, weighing up positives and negatives. This can be scaffolded for lower attaining students by providing a writing frame, helping them to organise their ideas and practice written evaluations.

**Opportunities for issue evaluation**

Opportunity to investigate, ‘the pressures on the environment/the conflict between development and conservation/effectiveness of different strategies to manage the environment.

**3.1.2.4 Cold environments**

**Key idea**

Cold environments are at risk from economic development.

**Specification content**

* The value of cold environments as wilderness areas and why these fragile environments should be protected.
* Strategies used to balance the needs of economic development and conservation in cold environments:
* use of technology
* role of governments
* international agreements
* conservation groups.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

Describe and explain:

* The value of cold environments and why they should be protected.
* The different strategies used to balance the needs of economic development and conversation.
* Include Indigenous conservation of cold environments using this resource on [Arctic conservation by indigenous people](https://www.wilsonquarterly.com/quarterly/the-new-north/arctic-conservation-in-the-hands-of-indigenous-peoples).

3.1.3 Physical landscapes in the UK

**3.1.3.1 UK physical landscapes**

**Key idea**

The UK has a range of diverse landscapes.

**Specification content**

Overview of the location of major upland/lowland areas and river systems.

**Suggested timing**

30 minutes

**Possible teaching and learning activities**

Use of atlas. Outline map exercise (with images). Identify and locate the major uplands/lowlands and river systems.

**3.1.3.2 Coastal landscapes in the UK (Optional unit – choose two from Coastal Landscapes in the UK, OR River Landscapes in the UK, OR Glacial Landscapes in the UK)**

**Key idea**

The coast is shaped by a number of physical processes.

**Specification content**

* Wave types and characteristics.
* Coastal processes:
* weathering processes: mechanical, chemical
* mass movement: sliding, slumping and rock falls
* erosion: hydraulic power, abrasion and attrition
* transportation: longshore drift deposition. Why sediment is deposited in coastal areas.

**Suggested timing**

3 hours 30 minutes

**Possible teaching and learning activities**

* Match up key words with their correct definition.
* Examine the factors affecting wave formation and type. Use maps to examine fetch and consider areas of the UK coastline with larger fetch. Link this to erosional processes to consider how fetch and erosion are linked.
* AFL tasks to assess understanding of wave types/characteristics: true/false quizzes; identify types of waves from photographs; complete low-tariff exam questions on wave characteristics.
* Dual coding activities for students to demonstrate understanding of processes by drawing them eg drawing labelled and annotated diagrams of erosional processes.
* Label longshore drift diagrams; enquiry-based activity to explore why/how a pebble has moved along the coast.
* Task for higher attainers: consider/explain the factors affecting the rate of processes.

**Useful resources**

* [Types of Waves](https://timeforgeography.co.uk/videos_list/coasts/types-waves/) – Time for Geography.
* [Marine Erosion Processes](https://timeforgeography.co.uk/videos_list/coasts/marine-erosion-processes/) – Time for Geography.
* [Weathering and Mass Movement](https://timeforgeography.co.uk/videos_list/coasts/subaerial-erosion-processes/) – Time for Geography.

**3.1.3.2 Coastal landscapes in the UK**

**Key idea**

Distinctive coastal landforms are the result of rock type, structure and physical processes.

**Specification content**

* How geological structure and rock type influence coastal forms.
* Characteristics and formation of landforms resulting from erosion: headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.
* Characteristics and formation of landforms resulting from deposition: beaches, sand dunes, spits and bars.
* An example of a section of coastline in the UK to identify its major landforms of erosion and deposition.

**Suggested timing**

5 hours

**Possible teaching and learning activities**

* Match up key words with their correct definition.
* Dual coding activity where students demonstrate their understanding by drawing diagrams of key words/processes/landforms.
* Examine maps of UK geology and discuss possible effects on rate of erosion
* Annotate photographs of landforms to explain their formation.
* Place statements into the correct order to explain the formation of landforms, followed by a dual-coding or written activity to consolidate knowledge.
* Use OS maps to identify coastal landforms and perhaps link this to maps of UK geology to make connections to rock type.

**Useful resources**

* [Erosional landforms](https://timeforgeography.co.uk/videos_list/coasts/coasts-intro/) – Time for Geography.
* [Formation of a wave-cut platform](https://timeforgeography.co.uk/videos_list/coasts/formation-of-a-wave-cut-platform/) – Time for Geography.
* [Formation of a sea stack](https://timeforgeography.co.uk/videos_list/coasts/formation-of-a-sea-stack/) – Time for Geography.
* [Sand dune formation](https://timeforgeography.co.uk/videos_list/coasts/formation-sand-dunes/) – Time for Geography.

**3.1.3.2 Coastal landscapes in the UK**

**Key idea**

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

**Specification content**

* The costs and benefits of the following management strategies:
* hard engineering: sea walls, rock armour, gabions and groynes
* soft engineering: beach nourishment and re-profiling, dune regeneration
* managed retreat: coastal realignment.
* One example of a coastal management scheme in the UK to show:
* the reasons for management
* the management strategy the resulting effects and conflicts.

**Suggested timing**

4 hours 30 minutes

**Possible teaching and learning activities**

* Definition of each term.
* Descriptions of different management strategies: students match these with photos to visually identify them.
* Categorise information about the strategies into positive and negative and assess their effectiveness.
* Consider the costs/benefits of each strategy.
* Assess opinions.
* Idea of ‘virtual’ fieldwork using google earth and related photographs/OS map
* The reasons for management (images/reports of erosion/ flood events/value of coastal area).

**Useful resources**

* [Soft engineering (beach management)](https://timeforgeography.co.uk/videos_list/coasts/soft-engineering-beach-management/) – Time for Geography.
* [Soft engineering (sand dune management)](https://timeforgeography.co.uk/videos_list/coasts/soft-engineering-sand-dune-management/) – Time for Geography.
* [Hard engineering approaches](https://timeforgeography.co.uk/videos_list/coasts/hard-engineering-approaches-coastal-management/) – Time for Geography.
* [The challenges of sea level rise and coastal management](https://timeforgeography.co.uk/videos_list/coasts/challenges-sea-level-rise-and-coastal-management/) – Time for Geography.

**Opportunities for issue evaluation**

* Consider an area under threat of marine processes and consider the alternative management strategies that might be used.
* Examine the challenges of coastal management and sea level rise, using the [Time for Geography resource](https://timeforgeography.co.uk/videos_list/coasts/challenges-sea-level-rise-and-coastal-management/).
* Examine the effectiveness of different strategies in protecting a specific area of UK coastline.

**3.1.3.3 River landscapes in the UK (Optional unit – choose two from Coastal Landscapes in the UK, OR River Landscapes in the UK, OR Glacial Landscapes in the UK)**

**Key idea**

The shape of river valleys changes as rivers flow downstream.

**Specification content**

* The long profile and changing cross profile of a river and its valley.
* Fluvial processes:
* erosion – hydraulic action, abrasion, attrition, solution, vertical and lateral erosion
* transportation – traction, saltation, suspension and solution
* deposition – why rivers deposit sediment.

**Suggested timing**

3 hours 30 minutes

**Possible teaching and learning activities**

* Visual/Animation – Create a definition box with appropriate terminology.
* Visual/Animation/Modelling/Use of OS maps to describe and explain. Use of annotated diagrams.
* Build up an annotated map (with photographs) to identify the key features within a UK setting.
* Dual coding to draw and label processes of erosion, transportation and deposition.
* Draw graphs to show long and cross profiles of a river and label this with different distinct features (eg changing gradient).
* Consider how processes operate in different upper, middle and lower course of the river and why eg how the rate of deposition/erosion changes from source to mouth.

**Useful resources**

* [River erosion processes](https://timeforgeography.co.uk/videos_list/rivers/river-erosion-processes/) – Time for Geography.
* [River transport processes](https://timeforgeography.co.uk/videos_list/rivers/river-transport-processes/) – Time for Geography.

**3.1.3.3 River landscapes in the UK**

**Key idea**

Distinctive fluvial landforms result from different physical processes.

**Specification content**

* Characteristics and formation of landforms resulting from erosion: interlocking spurs, waterfalls and gorges.
* Characteristics and formation of landforms resulting from erosion and deposition: meanders and ox-bow lakes.
* Characteristics and formation of landforms resulting from deposition: levées, flood plains and estuaries.
* An example of a river valley in the UK to identify its major landforms of erosion and deposition.

**Suggested timing**

5 hours

**Possible teaching and learning activities**

* Match up key words with their correct definition.
* Dual coding activity where students demonstrate their understanding by drawing diagrams of key words/processes/landforms.
* Annotate photographs of landforms to explain their formation.
* Place statements into the correct order to explain the formation of landforms, followed by a dual-coding or written activity to consolidate knowledge.
* Use photographs and OS maps for students to identify landforms.
* Build on graph-making task from previous section (on long profiles) and add landforms to the graph to show where they would be found on a river.
* Task for higher attainers: consider the factors which could affect the rate of landform formation.

**Useful resources**

* [Formation of waterfall and gorge](https://timeforgeography.co.uk/videos_list/rivers/formation-waterfall-gorge/) – Time for Geography.
* [Floodplains](https://timeforgeography.co.uk/videos_list/rivers/floodplains/) – Time for Geography.

**3.1.3.3 River landscapes in the UK**

**Key idea**

Different management strategies can be used to protect river landscapes from the effects of flooding.

**Specification content**

* How physical and human factors affect the flood risk – precipitation, geology, relief and land use.
* The use of hydrographs to show the relationship between precipitation and discharge.
* The costs and benefits of the following management strategies:
* hard engineering: dams and reservoirs, straightening, embankments, flood relief channels
* soft engineering: flood warnings and preparation, flood plain zoning, planting trees and river restoration.
* One example of a flood management scheme in the UK to show:
* why the scheme was required
* the management strategy
* the social, economic and environmental issues.

**Suggested timing**

4 hours 30 minutes

**Possible teaching and learning activities**

* Examine the human and physical factors affecting flood risk. Students could present on one factor in groups, and build knowledge from each presentation.
* Use an example of a hydrograph and annotate to illustrate the key features.
* Use visual images to describe the different techniques of hard and soft engineering.
* Discussion about the costs/benefits of each strategy.
* The reasons for management (link to a real event, visual images/reports).
* Description of techniques.
* Evaluation/issues relating to the scheme.

**Useful resources**

* [Hard engineering approaches to river management](https://timeforgeography.co.uk/videos_list/rivers/river-management-hard-engineering/) – Time for Geography.
* [Problems of hard engineering and softer alternatives](https://timeforgeography.co.uk/videos_list/rivers/problems-hard-engineering-and-softer-alternatives/) – Time for Geography.

**Opportunities for issue evaluation**

Consider an area that has recently been affected by flooding and consider the potential strategies that might be used to reduce the flood risk.

**3.1.3.4 Glacial landscapes in the UK (Optional unit – choose two from Coastal Landscapes in the UK, OR River Landscapes in the UK, OR Glacial Landscapes in the UK)**

**Key idea**

Ice was a powerful force in shaping the physical landscape of the UK.

**Specification content**

* Maximum extent of ice cover across the UK during the last ice age.
* Glacial processes:
* freeze thaw weathering
* erosion: abrasion and plucking
* movement and transportation: rotational slip and bulldozing
* deposition: why glaciers deposit sediment (till and outwash).

**Suggested timing**

3 hours 30 minutes

**Possible teaching and learning activities**

* Use maps to examine the maximum extent of ice cover.
* Match up key words with their correct definition.
* Dual-coding activities for students to demonstrate an understanding of the processes by drawing them eg drawing labelled and annotated diagrams of erosional processes.
* AFL tasks to assess understanding of glacial processes: true/false quizzes; identify types of erosion from photographs; complete low-tariff exam questions.
* Task for higher attainers: consider/explain the factors affecting the rate of processes.

**3.1.3.4 Glacial landscapes in the UK**

**Key idea**

Distinctive glacial landforms result from different physical processes.

**Specification content**

* Characteristics and formation of landforms resulting from erosion – corries, arêtes, pyramidal peaks, truncated spurs, glacial troughs, ribbon lakes and hanging valleys.
* Characteristics and formation of landforms resulting from transportation and deposition: erratics, drumlins, types of moraine.
* An example of an upland area in the UK affected by glaciation to identify its major landforms of erosion and deposition.

**Suggested timing**

5 hours

**Possible teaching and learning activities**

* Visual/Animation/Modelling/Use of OS maps to describe and explain. Use of annotated diagrams.
* Visual/Animation/Modelling/Use of O/S maps to describe and explain. Use of annotated diagrams.
* Build up an annotated map (with photographs) to identify the key features within a UK setting.
* Match up key words with their correct definition.
* Dual coding activity where students demonstrate their understanding by drawing diagrams of key words/processes/landforms.
* Annotate photographs of landforms to explain their formation.
* Place statements into the correct order to explain the formation of landforms, followed by a dual-coding or written activity to consolidate knowledge.

**Useful resources**

* E[vidence of UK glaciation and deglaciation](https://timeforgeography.co.uk/videos_list/glaciation/evidence-uk-glaciation-deglaciation/) – Time for Geography.
* [Formation of drumlins](https://timeforgeography.co.uk/videos_list/glaciation/formation-drumlins/) – Time for Geography.
* [Formation of U-shaped valleys](https://timeforgeography.co.uk/videos_list/glaciation/formation-of-U-shaped-valleys/) – Time for Geography.
* [Formation of pyramidal peaks](https://timeforgeography.co.uk/videos_list/glaciation/Pyramid-peaks/) – Time for Geography.
* [Formation of corries](https://timeforgeography.co.uk/videos_list/glaciation/corries/) – Time for Geography.
* [Formation of Aretes](https://timeforgeography.co.uk/videos_list/glaciation/Aretes/) – Time for Geography.
* [Glacial deposits (type of moraine)](https://timeforgeography.co.uk/videos_list/glaciation/glacial-deposits-types-moraine/) – Time for Geography.

**3.1.3.4 Glacial landscapes in the UK**

**Key idea**

Glaciated upland landscapes provide opportunities for different economic activities, and management strategies can be used to reduce land use conflicts.

**Specification content**

* Overview of economic activities in glaciated upland areas – tourism, farming, forestry, and quarrying.
* Conflicts between different land uses, and between development and conservation.
* One example of a glaciated upland area in the UK used for tourism to show:
* the attractions for tourists
* social, economic and environmental impacts of tourism
* strategies used to manage the impact of tourism.

**Suggested timing**

4 hours 30 minutes

**Possible teaching and learning activities**

* Discussion/group work to identify the range of uses.
* Develop this idea by considering how some of the uses might conflict with each other (land use conflict/economic development and conservation).
* An understanding of the physical/human attractions (textbook, photographs, OS map).
* Social, economic, environmental impacts (could use national park website).
* Identify the strategies used to reduce visitor pressure (could use National Park Website).
* Could you ‘virtual’ fieldwork an idea and present a report which identifies attractions, visitor number/profile, impacts, management strategies (described and evaluated).

**Opportunities for issue evaluation**

* Identify visitor pressures and considering alternative management strategies.
* Decision making/justification in relation to the original identified pressures.

**Opportunities for fieldwork**

* Opportunity for fieldwork related to measuring processes or consideration of the relative significance of different processes.
* Consider how pupils will experience fieldwork differently and address as appropriate:
  + [My experience of fieldwork as a trans kid – a call for reflection](https://www.diverseeducators.co.uk/my-experience-of-geography-fieldwork-as-a-trans-kid-a-call-for-reflection/)
  + [Classroom strategies for tackling the whiteness of geography](https://www.geography.org.uk/Journal-Issue/fbcc315c-e3d2-4b85-b2f4-b2ec6d16a1df) – (GA article)
  + [Black Girls Hike UK](https://www.bghuk.com/).

3.2 Challenges in the human environment

3.2.1 Urban issues and challenges

Key idea

A growing percentage of the world’s population lives in urban areas.

Specification content

* The global pattern of urban change.
* Urban trends in different parts of the world including HICs and LICs.
* Factors affecting the rate of urbanisation - migration (push - pull theory), natural increase
* The emergence of mega-cities.

Suggested timing

3 hours

Possible teaching and learning activities

* Use of [our world in data](https://ourworldindata.org/urbanization) website to identify urban/rural change (graph).
* Key definitions (urban/urbanisation).
* World-map identifying varying rates of urbanization (annotated map).
* Ideas of migration and natural increase.
* Examine push and pull factors, as well as ‘intervening obstacles’ which include political and physical barriers. Allows pupils to explore the challenges around migration and how it is experienced differently by different groups. Read a blog by Rashid Faridi about [migration theories](https://rashidfaridi.com/2018/04/05/migration-theories-lees-push-pull-theory/):
* Provide definitions of push factor, pull factor and intervening obstacles.
* Pupils can categorise statements into push factor, pull factor and intervening obstacles.
* Dual coding can be used with statements to aid lower attaining pupils.

3.2.1 Urban issues and challenges

Key idea

Urban growth creates opportunities and challenges for cities in LICs and NEEs.

Specification content

A case study of a major city in an LIC or NEE to illustrate:

* the location and importance of the city, regionally, nationally and internationally.
* causes of growth: natural increase and migration.
* how urban growth has created opportunities:
* social: access to services - health, education; access to resources - water supply, energy
* economic: how urban industrial areas can be a stimulus for economic development.
* How urban growth has created challenges:
* managing urban growth: ‘slums’, ‘squatter settlements’.
* providing clean water, sanitation systems and energy
* providing access to services: health and education,
* reducing unemployment, crime
* managing environmental issues: waste disposal, air and water pollution, traffic congestion
* an example of how urban planning is improving the quality of life for the urban poor.

Suggested timing

6 hours

Possible teaching and learning activities

* Class discussion on the use of the word ‘slum’ and issues around this term. [This article on the Decolonising Geography](https://decolonisegeography.com/blog/2021/08/why-the-word-slum-should-not-be-used-in-geography-classrooms/) website that can help with doing this Encourage alternative language.
* Describe the location of the case study using a range of maps.
* Contextualise the case study by looking at its history, economic development, social structures, etc.

**Option 1 Rio de Janeiro:** examine the legacy and impacts of the slave trade that continue to shape the city today. Ensure students understand the ethnic demographics of favelas as racism continues to influence the way people live here.

* [This resource provides information on the history of Rio’s favelas](http://www.ub.edu/geocrit/b3w-828.htm).

**Option 2 Dhaka:** use [this introductory lesson](https://decolonisegeography.com/resources) available from the Decolonising Geography website.

**Option 3 Mumbai:** Watch ‘[Why Mumbai Has ‘Slums’](https://www.youtube.com/watch?v=jPZp_ICmfhE). It explores the role of the government in neglecting its role in providing social housing and provides students with a fuller understanding of the existence of informal settlements in Mumbai Create a resource to accompany this video, containing questions for students to answer as they watch it.

**Ideas for teaching and learning, with a focus on Rio**

1. Categorise statements, key facts and statistics on the importance of the city, regionally, nationally and internationally, ensuring that its ‘global importance’ is not framed as a new phenomenon (eg Rio was globally important during the slave trade which must be recognised and explored).
2. The growth of the city (population and size) and the reasons for growth. Graph showing population/maps showing a real expansion of the city over time. Ensure that ‘migration’ is shown over time to include colonialism and slavery, for example.
3. Opportunities created by urban growth. Look at: relative urban/rural access to services; range of formal/informal business opportunities; social opportunities such as access to education; community/collective action in informal settlements.

**Suggested resources**

* Use Rio On Watch website for information on grassroots and activist movements in Rio, in response to challenges experienced by people there. Read an article on [the fight for Rio's future](https://rioonwatch.org/?p=42394) from Rio On Watch.
* Ensure favelas/informal settlements are shown in a balanced way. The following video [Inside Rio’s Favelas, the city’s neglected neighbourhoods](https://www.youtube.com/watch?v=c3BRTlHFpBU) can be used to demonstrate the challenges, but also the resourcefulness and strong community of the favelas.
* Use this article called [A Country called Favela](https://rioonwatch.org/?p=17824) to challenge the narrative of favelas, looking at entrepreneurship and success, and transformative processes.
* Rio de Janeiro – The video [Favela as a Sustainable Model](https://www.youtube.com/watch?v=2sT8rhhbCUA) (26 minutes) includes the voices of favela residents, further contextualises the case study and shows the extent of government neglect, and highlights the positive outcomes of sustainable collective action and resourcefulness of the residents. Students can identify sustainable practices shown in the video, and explain how they are sustainable.
* Challenges created by urban growth. Use of films/documentary or photographs/articles (UN Habitat website) to illustrate challenges around:
  + Water/sanitation systems
  + Unemployment
  + Energy access – possible resources:
* Rio de Janeiro – [Information on energy injustice](https://rioonwatch.org/?p=66756) and how it can be tackled
* Rio de Janeiro – [a survey with residents](https://rioonwatch.org/?p=66318) of Mare favela on their perceptions of energy service – an opportunity to embed the voices/opinions of marginalised people
* Rio de Janeiro – Statistical information on energy access, public lighting and security in Morro do Sereno favela
* Education access
* Managing demand for services
* Crime and justice
* Environmental issues.

The key is recognising the issues and showing a clear understanding of why managing them is a challenge.

* An example of how the life of the urban poor is being improved
* Build on the example(s) expressed in the challenges
* Residential improvement scheme
* Water supply and sanitation scheme
* Community-led projects and sustainable management
* Rio de Janeiro, Sustainable Favela Network: a group of 195 leaders from favelas, 70% of whom are Black/Indigenous and 66% are women. This article looks at a [new sustainable Favela map](https://rioonwatch.org/?p=69420) highlighting their new mapping of initiatives and looks at the importance of mapping. Students can use this to explore the complexities of mapping, as well as identify and explain the sustainable practices of the SFN and how they address challenges
* Rio de Janeiro: This article can be used to teach students about a [sewage treatment biosystem](https://rioonwatch.org/?p=70135) that residents of a favela have created to successfully and sustainably treat sewage
* Rio de Janeiro: ‘[Energy That Comes from Waste’](https://rioonwatch.org/?p=66297) video/article provides information on a new biodigester in the Vale Encantado favela which addresses challenges of waste disposal and provision of energy.

Compare ‘top-down’ and ‘bottom-up’ improvements and their effectiveness.

**Opportunities for issue evaluation**

* Investigate either different strategies used to improve the life of the urban poor or one strategy.
* Either decision making (choice between strategies) or evaluate one strategy in relation to the specific aims.

**3.2.1 Urban issues and challenges**

**Key idea**

Urban change in cities in the UK leads to a variety of social, economic and environmental opportunities and challenges.

**Specification content**

* Overview of the distribution of population and the major cities in the UK.
* A case study of a major city in the UK to illustrate:
* the location and importance of the city in the UK and the wider world
* impacts of national and international migration on the growth and character of the city
* how urban change has created opportunities:
* social and economic: cultural mix, recreation and entertainment, employment, integrated transport systems
* environmental: urban greening.
* How urban change has created challenges:
* social and economic: urban deprivation, inequalities in housing, education, health and employment
* environmental: dereliction, building on brownfield sites, waste disposal
* the impact of urban sprawl on the rural-urban fringe and the growth of commuter settlements.
* An example of an urban regeneration project to show:
* reasons why the area needed regeneration
* the main features of the project.

**Suggested timing**

7 hours

**Possible teaching and learning activities**

* Use of atlas to describe the pattern of population density in the United Kingdom.
* Base map: locating the major cities (could use a proportional symbol map).
* Introduce the idea of larger urban areas (conurbations) which may incorporate a number of cities.
* Use of atlas to locate the chosen city, including major transport links.
* Use census information to find information about:
* Major commutes areas (desire line mapping/sphere of influence)
* Ethnic makeup of the city (pie chart).
* Contextualise the case study by looking at its history, economic development, social structures. This could be made into a fact file for pupils to analyse/describe.
* National and international importance can be considered by: Trade links, international companies/business, transport hub date, visitor numbers (business and recreation?). Ensure to include information on how this city held global importance in the past and during colonial period (this will develop students’ understanding of how empire and migration are linked).
* Provide evidence and examples of how migration has shaped the city over a long period of time, which students can categorise into social, economic and environmental. Information on migration over time can be obtained from the [Our Migration Story website](https://www.ourmigrationstory.org.uk/).
* Provide examples and data on opportunities experienced in the city. Students can categorise into social, economic and environmental:
* London: Examine the opportunities that architecture has created for grime (as an important element of Black culture in London). Make links to regeneration and how it threatens the legacy of grime and the spaces that are considered significant and important. Students can use this article on Pin Up: [Grime and architecture: wot do you call it? Urban?](https://archive.pinupmagazine.org/articles/interview-author-dan-hancox-inner-city-pressure-grime-and-architecture-wot-do-u-call-it-urban) (10 minutes).
* Consider how opportunities are not equally accessed by all in the city. The Runnymede Trust has published [a report on ethnic inequalities across London](https://www.runnymedetrust.org/publications/ethnic-inequalities-in-london-capital-for-all). Resources, data and maps can be sought from this publication and used in the classroom with students. Ensure a critical lens is applied and you explore why these inequalities exist.
* Some good clips for class use can be found here [Time for Geography | Cities](https://timeforgeography.co.uk/videos_list/cities/).
* Provide examples and data on the challenges experienced in the city. Students can categorise into social, economic and environmental. Ensure that challenges around housing are not framed as a consequence of migration.
* Resource on access to green space and who is affected by Friends of the Earth [Access to Green Space in England – Are You Missing Out?](https://friendsoftheearth.uk/nature/access-green-space-england-are-you-missing-out) (many different resources included).
* Define what is meant by urban deprivation (consider the social/economic/environmental factors involved in creating an index of deprivation): group discussion share ideas.
* Use web based data (map) to show areas of deprivation in chosen city. Select one area and identify deprivation data/visual images to describe the characteristics of the area.
* An example of regeneration. Could be linked to previously identified area of deprivation in order to link together ideas of:
  + Decline (Social/economic/environmental evidence)
* What is regeneration?
* Need for regeneration.
* Describe the regeneration strategy.
* An evaluation of the regeneration strategy: explore the positive and negative impacts.
* The following resources could be used for resource creation;
* [The Runnymede Trust’s analysis](https://www.runnymedetrust.org/publications/pushed-to-the-margins) of regeneration and subsequent gentrification in London. There is a [breakdown of this report](https://mobile.twitter.com/ARGeogCurric/status/1404540957002014721) by Anti-racist Geography Curriculum.
* [The War to Live in London: Regeneration Game](https://www.youtube.com/watch?v=82tgwk1IWIE) Vice video explores regeneration and residents’ resistance to it.

**Opportunities for issue evaluation**

Identify an area of decline/deprivation:

* data/visual images (annotations)
* describe a regeneration strategy
* offer some evaluation in relation to how regeneration might address the initial problems.

**3.2.1 Urban issues and challenges**

**Key idea**

Urban sustainability requires management of resources and transport.

**Specification content**

Features of sustainable urban living:

* water and energy conservation
* waste recycling
* creating green space
* how urban transport strategies are used to reduce traffic congestion.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

* Define what is meant by sustainability in relation to urban development
* Example of a sustainable city include:
* Curitiba, Brazil:
  + [Curitiba – Sustainable City](https://www.coolgeography.co.uk/A-level/AQA/Year%2013/World%20Cities/Sustainability/Curitiba.htm#:~:text=Curitiba%20is%20the%20capital%20of,manufacturing%20one%20through%20SUSTAINABLE%20PLANNING.) – Cool Geography
  + [Sustainability in Curitiba, Brazil](https://borgenproject.org/sustainability-in-curitiba/) – The Borgen Project
  + [How is Curitiba Sustainable?](https://www.greenmatters.com/p/curitiba-sustainable) – Green Matters.
* Spider diagram to identify the factors that would enable an urban area to be increasingly sustainable (group discussion and report back).
* Selection of images to back up identified points (urban greening, energy efficient buildings, cycle tracks, public transport etc).
* Example of a planned sustainable settlement. Sketch/diagram with annotations.
* Spider diagram to identify the different urban transport strategies used to reduce traffic congestion (could investigate one example for homework).
* Explore the sustainability of example, including an examination of who sustainable developments serve and who is excluded.

**Opportunities for issue evaluation**

Traffic congestion in a (small) town centre:

* traffic flows data (different times)
* questionnaire
* identify possible management strategies
* conclusion/decision
* evaluate.

**Useful resources**

* [Sustainable cities](https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/sustainable-cities): UN Environment Programme.
* [Sustainable cities and communities](https://www.un.org/sustainabledevelopment/cities/): UN SDGs.

**3.2.2 The changing economic world**

**3.2.2 The changing economic world**

**Key idea**

There are global variations in economic development and quality of life.

**Specification content**

* Different ways of classifying parts of the world according to their level of economic development and quality of life
* Different economic and social measures of development: gross national income (GNI) per head, birth and death rates, infant mortality, life expectancy, people per doctor, literacy rates, access to safe water, Human Development Index (HDI)
* Limitations of economic and social measures
* Links between stages of the Demographic Transition Model and the level of development
* Causes of uneven development: physical, economic and historical
* Consequences of uneven development: disparities in wealth and health, international migration.

**Suggested timing**

4 hours

**Possible teaching and learning activities**

Before teaching/planning, think critically about how to teach this unit of work. Two articles that might help with this are hosted on Decolonising Geography website. The first article is by Catherine Owen called [How I teach: The changing economic world](https://decolonisegeography.com/blog/2021/06/geogchatlive-how-i-teach-changing-economic-world/). The second article is by Hina Robinson called [How I teach: The development gap](https://teamgeography.wordpress.com/2020/06/07/guest-post-how-i-teach-the-development-gap-robbogeog/).

* Starter activity: display a range of perspectives of what development/equality/poverty means to different people. Pupils compare and contrast, and write their own perspective. Use the following to create this resource: ‘[Through Other Eyes’](https://developmenteducation.ie/media/documents/Learning_to_Read_the_World_Through_Other.pdf) which gives the perspectives of indigenous people.
* Group discussion: repeat back. What socio-economic indices, might be most/least helpful when comparing levels of development/quality of life? Explore a wider range of social measures of development (perhaps a homework task), including the type and [global spread of LGBT rights](https://decolonialatlas.wordpress.com/2015/06/26/lbgt-rights-by-country/) on The Decolonial Atlas website.
* Use photographs to identify different levels of development through layers of inference resource. This encourages pupils to think critically about representation and the effectiveness of photographs when determining levels of development.
* [Teaching resource: maps of global wealth inequalities.](https://decolonialatlas.wordpress.com/2021/01/14/global-wealth-inequality/)
* Critical analysis of the demographic transition model through explorations of limitations. It does not account for:
* demographic change resulting from migration or forced movement of people, eg slavery in the USA
* demographic change resulting from war and conflict, eg in Syria
* demographic shifts resulting from rapid economic growth and development, eg Singapore.
* Explore reasons why there is uneven development, ensuring a critical analysis can be made:
* Include ‘overdevelopment’ of the west. The consumption, ‘development’ and ‘modernisation’ seen in the Western world would arguably not be possible were it not for the wealth generated during colonialism. Through this, you challenge the notion of deficit for the ‘underdeveloped’ world
* When exploring physical causes of uneven development, introduce the concept of environmental determinism. Use examples of highly developed countries to challenge this notion (eg Switzerland is land locked, mountainous)
* Conflict teaching resource: [map of ongoing armed conflicts (2015)](https://decolonialatlas.wordpress.com/2015/11/03/ongoing-armed-conflicts/).
* Compare and assess the significance of different factors.
* When exploring uneven development, ensure a conscious approach is taken to representation of places and people. For example:
  + Use a range of countries outside Europe/West as examples of high income/development, eg Barbados
  + Explore migration as a ‘consequence’ of uneven development. Pupils match definitions of different types of migration with the correct keyword. AFL task showing different types of migration occurring across Africa which pupils have to identify (this also shows pupils that all types of migration occur across Africa, challenging misconceptions).

**3.2.2 The changing economic world**

**Key idea**

Various strategies exist for reducing the global development gap.

**Specification content**

* Overview of the strategies used to reduce the development gap:
* Investment
* industrial development
* tourism
* aid
* using intermediate technology
* fair trade
* debt relief
* microfinance loans.
* One example of how the growth of tourism in an LIC or NEE helps to reduce the development gap.

**Suggested timing**

3 hours

**Possible teaching and learning activities**

* Overview (spider diagram) identifying the different strategies that can be used to reduce the development gap (or improved socio-economic conditions).
* Pupils could work in groups to create and deliver speeches on a strategy for closing the development gap, collating notes on the other strategies from their classmates’ speeches.
* Categorise strategies into top down and bottom up.
* Could consider UN sustainable development goals as a way of identifying and helping to resolve development issues.
* When providing information on how different strategies can reduce the development gap, include both sides of the argument using the following information:
  + [Negative impacts of aid](https://www.theguardian.com/commentisfree/2018/sep/02/as-a-system-foreign-aid-is-a-fraud-and-does-nothing-for-inequality)
  + [Uneven trading practices](https://www.bbc.co.uk/bitesize/guides/z3666sg/revision/3)
  + [Issues of microfinance](https://www.bloomberg.com/graphics/2022-microfinance-banks-profit-off-developing-world/).
* An example of how tourism has been used to encourage development in an LIC or NEE. Examine the advantages and disadvantages of tourism for this case study and evaluate the effectiveness in relation to improving socio-economic conditions:
* Jamaica: include the example of ecotourism in Cockpit Country (a site of resistance and triumph with environmental significance, the local community of which is fighting challenges of bauxite mining through locally-ran eco-tourism). Resources:
* Watch a clip on YouTube [Faces2Hearts in JAMAICA: Eco-tourism in the Cockpit Country!](https://www.youtube.com/watch?v=uL5zvDkcOEo) (4 minutes)
* Read more about [Cockpit Country](https://www.cockpitcountryadventuretours.com/) on their website.

**Opportunities for issue evaluation**

Investigate an area of tourism growth. Consider the advantages and disadvantages and evaluate the effectiveness in relation to improving socio-economic conditions.

**3.2.2 The changing economic world**

**Key idea**

Some LICs or NEEs are experiencing rapid economic development which leads to significant social, environmental and cultural change.

**Specification content**

A case study of one LIC or NEE to illustrate:

* the location and importance of the country regionally and globally
* the wider political, social, cultural and environmental context within which the country is placed
* the changing industrial structure. The balance between different sectors of the economy. How manufacturing industry can stimulate economic development
* the role of transnational corporations (TNCs) in relation to industrial development. Advantages and disadvantages of TNC(s) to the host country
* the changing political and trading relationships with the wider world
* international aid: types of aid, impacts of aid on the receiving country
* the environmental impacts of economic development
* the effects of economic development on the quality of life for the population.

**Suggested timing**

6 hours

**Possible teaching and learning activities**

* Atlas work to identify the location of the country.
* Build up a fact file of the wider political, social, cultural and environmental context within which the country is placed:
* identify trading partners
* identify regional and global political ties and influence
* examine and explain development statistics
* examine cultural context of the country including the voices of local people
* map biomes/landscapes of the country.
* The following links can be used to build this resource:
* [Africa Decolonised map](https://decolonialatlas.wordpress.com/2015/12/08/endonyms-of-africa/)
* [Map to show indigenous groups and diversity in Africa](https://www.vox.com/2015/11/10/9698574/africa-diversity-map).
* Contextualise the case study and explore [‘the danger of a single story,'](https://www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_story?language=en) the Ted talk by Chimamanda Ngozi Adichie (18 minutes).
* There are resources available from the [Decolonising Geography website](https://drive.google.com/drive/folders/1z719zGDfiaPzJnwQekjfOuQlXWVQxUFo) on how to do this for Nigeria, which can be adapted for other case studies.
* Examine the location and importance of the country regionally and globally. Categorise factors into regional and global, and assess significance through ranking.
* Examine the changing industrial structure through pie charts showing primary, secondary, tertiary, quaternary sectors.
* Examine how manufacturing and TNCS can stimulate economic development and social change. Categorise into advantages and disadvantages and evaluate the effectiveness of both strategies.
* Analyse the changing political and trading relationships with the wider world by making connections to prior knowledge of political and trading relationships (when examining context of case study).
* Examine types of aid. Provide pupils with examples that they have to correctly identify as being each type of aid. Categorise positive and negative impacts of aid on the receiving country and weigh up to evaluate the effectiveness of aid for stimulating economic development.
* Use visual evidence/film/articles to illustrate the issues of water/air pollution.
* Discussion about the cost benefits of development and how managing pollution is a challenge during early phases of rapid economic development.
* include information on the effects of environmental damage on local communities and their responses to environmental damage. Nigeria case study:
* Read a Guardian article: [Nigerians could see justice over Shell oil spills after six decades](https://www.theguardian.com/world/2021/sep/29/nigerians-could-see-justice-over-shell-oil-spills-after-six-decades) (25 minutes)
* Read an article on Aljazeera: [Niger Delta residents protest over month-long oil spill](https://www.aljazeera.com/news/2021/12/7/niger-delta-youths-protest-against-month-long-oil-spill) (25 minutes)
* Read a Guardian article: [50 years of oil in the Niger Delta](https://www.theguardian.com/environment/gallery/2010/mar/05/curse-black-gold-nigeria) (30 minutes).
* Revisit the definition of quality of life. Examine the effects of economic development on quality of life for the population. Assess the extent to which socioeconomic conditions have improved.

**3.2.2 The changing economic world**

**Key idea**

Major changes in the economy of the UK have affected and will continue to affect employment patterns and regional growth.

**Specification content**

* Economic futures in the UK.
* Causes of economic change: de-industrialisation and decline of traditional industrial base, globalisation and government policies.
* Moving towards a post-industrial economy: development of information technology, service industries, finance, research, science and business parks.
* Impacts of industry on the physical environment. An example of how modern industrial development can be more environmentally sustainable.
* Social and economic changes in the rural landscape in one area of population growth and one area of population decline.
* Improvements and new developments in road and rail infrastructure, port and airport capacity.
* The north–south divide. Strategies used in an attempt to resolve regional differences.
* The place of the UK in the wider world. Links through trade, culture, transport, and electronic communication. Economic and political links: the European Union (EU) and Commonwealth.

**Suggested timing**

7 hours

**Possible teaching and learning activities**

* Prior to teaching, consider use of language around ‘unskilled’ workers/labour. This could be explored with students as homework or a short comprehension activity
* Read an article called [Who are you calling unskilled?](https://blogs.lse.ac.uk/brexit/2020/03/06/long-read-who-are-you-calling-unskilled/) by London School of Economics
* Read this article called [There is no such thing as a low-skilled worker](https://qz.com/2046486/there-is-no-such-thing-as-a-low-skilled-worker/) by Quartz.
* Development of a time-line showing industrial change (link to changing industrial structure-primary, secondary etc).
* Reason for change (globalisation, technology, government politics, growing wealth (service growth): explain and rank reasons; class discussion on significance of each reason.
* Look at images of science/business parks. Use of OS map to consider locational factors.
* Use examples to describe and explain environmental sustainability (design, greening renewable resources, waste management etc).
* Use census data to identify differences in income and socio-economic opportunities.
* Identify and address perceptions and misconceptions around the north and south by getting pupils to write adjectives they associate with each.
* Discussion: why are there regional disparities?
* Overview of how regional differences can be reduced.
* Example of how the development of transparent networks can stimulate economic development (regional airports/HS2).
* Look at two rural areas. One expanding, one in decline. (Visual images/atlas, locational factors).
* evidence of growth/decline: identify and categorise
* reasons for growth/decline: explain using connective chains, or; dual coding could be used to illustrate reasons
* issues related to growth/decline: identify positives and negatives; evaluate to determine overall opinion.
* Provide a range of data (pie charts, bar graphs, maps) to demonstrate the UK’s position in the wider world. Include information on:
* trade links (EU and global)
* holidays/tourism (transport)
* electronic communications (call centres)
* a range of cultural exports (representing different social groups and showing the contributions of different ethnic minority groups in the UK).

3.2.3 The challenge of resource management

**3.2.3.1 Resource management (Compulsory section of Unit 3)**

**Key idea**

Food, water and energy are fundamental to human development.

**Specification content**

* The significance of food, water and energy to economic and social well-being
* An overview of global inequalities in the supply and consumption of resources.

**Suggested timing**

2 hours

**Possible teaching and learning activities**

* Discuss the importance of food, water and energy in relation to socio-economic development (reflect back to development unit) and wellbeing.
* Could include info on importance of food in different cultures (eg Iftar in Islam).
* Develop an understanding of how three resources are linked (Water to grow food; energy required for farming machinery). Group work to identify as many links and possible and report back.
* Identify areas of low consumption/resource security across the world and suggest why.

**3.2.3.1 Resource management (Compulsory section of Unit 3)**

**Key idea**

The changing demand and provision of resources in the UK creates opportunities and challenges.

**Specification content**

An overview of resources in relation to the UK.

* Food:
* the growing demand for high value food exports from low income countries and all year demand for seasonal food and organic produce
* larger carbon footprints due to the increasing number of ‘food miles’ travelled and moves towards local sourcing of food
* the trend towards agribusiness.
* Water:
* the changing demand for water
* water quality and pollution management
* matching supply and demand, areas of deficit and surplus
* the need for transfer to maintain supplies.
* Energy:
* the changing energy mix: reliance on fossil fuels, growing significance of renewables
* reduced domestic supplies of coal, gas and oil
* economic and environmental issues associated with exploitation of energy sources.

**Suggested timing**

6 hours

**Possible teaching and learning activities**

* The importance of food, water and energy in relation to socio-economic development. (Reflect back to development data unit).
* Develop an understanding of how three resources are linked:
* water to grow food
* energy required for farming machinery.
* Group work: identify as many links and possible and report back.
* Idea of global inequalities. Identify areas of low consumption/resource security and suggest why.

**Food**

* Agribusiness: define and suggest reasons for growth.
* Globalisation: shopping basket exercise. Identify the origin of food products and put on world map:
* link to idea of food miles
* discussion, ‘How could food miles be reduced’?

**Water**

* Group discussion: identify the uses of water using a spider diagram.
* Managing supply/demand. Atlas maps showing pattern of rainfall and major areas of demand. Link to the need for water transfer (visual).
* Annotated diagram to show water quality management works (sanitation systems) and how grey water can be re-used (link to sustainable urban areas).

**Energy**

* Introduce the idea of energy mix (pie charts to show change).
* ‘What about the future’? (film ‘Powering the future’/Bang goes the Theory, energy’).
* An appreciation that all types of energy generation may create issues/challenges (use of photographs/energy company websites).

**Opportunities for fieldwork**

* Globalisation of Agriculture. Identify the origin of fruit/vegetables in a supermarket (map)
* Questionnaire: shopping habits.
* Interview supermarket managers: ‘To what extent is food shopping an example of globalisation’?
* Use of renewable energy.
* Survey of local use (wind farms/solar farms/solar panels on housing).
* Questionnaire of residential use/extent of energy conservation measures.

**Opportunities for issue evaluation**

Investigation into a local issue (development of wind farms/fracking etc).

**3.2.3.2** **Food (Optional unit – choose one from Food, OR Water OR Energy)**

**Key ideas**

* Demand for food resources is rising globally but supply can be insecure, which may lead to conflict.
* Different strategies can be used to increase food supply.

**Specification content**

* Areas of surplus (security) and deficit (insecurity):
* global patterns of calorie intake and food supply
* reasons for increasing food consumption: economic development, rising population
* factors affecting food supply: climate, technology, pests and disease, water stress, conflict, poverty.
* Impacts of food insecurity: famine, under nutrition, soil erosion, rising prices, social unrest:
* Overview of strategies to increase food supply.
* Irrigation, aeroponics and hydroponics, the new Green Revolution and use of biotechnology, appropriate technology one example of a large-scale agricultural development to show how it has both advantages and disadvantages.
* Moving towards a sustainable resource future:
  + the potential for sustainable food supplies: organic farming, permaculture, urban farming initiatives, fish and meat from sustainable sources, seasonal food consumption, reduced waste and losses
  + an example of a local scheme in an LIC or NEE to increase sustainable supplies of food.

**Suggested timing**

7 hours

**Possible teaching and learning activities**

* Opening discussion: “Why is the global demand for food increasing?’ (Draw out from discussion the links to population growth, urbanization, increasing wealth).
* Use of atlas/gapminder to show:
* link between calorie intake/wealth
* global distribution of supply (identify areas of food insecurity).
* Take conscious approach to visual representations of food in/security. Ensure a range of images are used to prevent negative representations of the global south.
* Causes of food insecurity: group work/report back. (Identify key ideas from specification).
* Impacts of food insecurity (link back to development gap ideas).
* Read this article on [The State of Food Security and Nutrition in the World 2021](https://www.fao.org/3/cb4474en/online/cb4474en.html) by FAO.
* To help look at food insecurity on different scales read the Government report [UK food security report at household level 2021 report](https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2021/united-kingdom-food-security-report-2021-theme-4-food-security-at-household-level#:~:text=According%20to%20government%20data%20from,had%20very%20low%20food%20security.).
* Read this article by Oxfam [Impacts of food insecurity in Yemen](https://www.oxfam.org/en/yemen-brink-conflict-pushing-millions-towards-famine) (5 minutes).
* Watch a clip on YouTube about: [Impacts of food insecurity in Yemen during Ramadan](https://www.youtube.com/watch?v=fJHo2MMMTu4) (2 minutes).
* A link to the RS scheme here, read [Islamic Relief support for Yemen.](https://www.islamic-relief.org.uk/yemen-emergency-appeal/)
* Identify difficult methods that can be used to increase food supply. Overview: use of photographs to identify and briefly describe different methods (as listed in specification)
* Use this booklet [Nile Basin Initiative increasing supplies of food](https://www.nilebasin.org/index.php/information-hub/documents-publications/43-building-on-shared-benefits-transforming-lives-in-the-nile-basin/file) to explore efforts to increase food supply.
* Use this booklet [Changing Lives in the Nile Basin](https://www.nilebasin.org/index.php/information-hub/documents-publications/55-development-benefits-digital/file) to explore poverty and development in the Nile basin.
* An example of one large scale agricultural development scheme, considering advantages/disadvantages.
* Class work/group work (research and presentation) or individual research.
* Moving towards a sustainable resource future. Identify different methods (photographs and brief explanation) as listed in the specification.
* Identify one example from the list above (LIC/NEE) and develop it by describing it and suggesting why it might be considered sustainable.
* Read an article about [Urban farms in South Africa](https://www.vukuzenzele.gov.za/city-residents-grow-their-own-food-and-future) (5 minutes).
* Use this booklet [Changing Lives in the Nile Basin](https://www.nilebasin.org/index.php/information-hub/documents-publications/55-development-benefits-digital/file) to explore poverty and development in the Nile basin.

**Opportunities for issue evaluation**

* Investigate a large scale agricultural development scheme:
* describe the scheme
* consider the advantages/disadvantages.
* Evaluate the scheme in relation to the original objectives.

**3.2.3.3** **Water (Optional unit – choose one from Food, OR Water OR Energy)**

**Key ideas**

* Demand for water resources is rising globally but supply can be insecure, which may lead to conflict.
* Different strategies can be used to increase water supply.

**Specification content**

* Areas of surplus (security) and deficit (insecurity):
* global patterns of water surplus and deficit
* reasons for increasing water consumption: economic development, rising population
* factors affecting water availability: climate, geology, pollution of supply, over-abstraction, limited infrastructure, poverty.
* Impacts of water insecurity: waterborne disease and water pollution, food production, industrial output, potential for conflict where demand exceeds supply.
* Overview of strategies to increase water supply:
* diverting supplies and increasing storage, dams and reservoirs, water transfers and desalination
* an example of a large-scale water transfer scheme to show how its development has both advantages and disadvantages.
* Moving towards a sustainable resource future:
* water conservation, groundwater management, recycling, ‘grey’ water
* an example of a local scheme in an LIC or NEE to increase sustainable supplies of water.

**Suggested timing**

7 hours

**Possible teaching and learning activities**

* Opening discussion: ‘Why is the global demand for water increasing?’ Draw out from discussion the links to population growth, industrialisation, agricultural development, increasing wealth.
* Use of atlas/gapminder/water aid to show:
* link between water consumption/wealth
* global distribution of supply (identify areas of water insecurity).
* Factors affecting water supply (quantity and quality):
* dual coding activity to illustrate causes of water insecurity
* evaluate significance of each factor
* explore where each factor has affect around the world.
* Resource: Flint water crisis (Michigan, USA). Opportunities to examine environmental racism further:
* Read an article on CNN politics [Flint water crisis and systemic racism](https://edition.cnn.com/2017/02/18/politics/flint-water-report-systemic-racism/index.html) (4 minutes)
* Read an article on the Guardian [Flint water crisis](https://www.theguardian.com/news/2018/jul/03/nothing-to-worry-about-the-water-is-fine-how-flint-michigan-poisoned-its-people) (15 minutes)
* Read an article on NBC news [when it comes to access to clean water, ‘race is still strongest determinant’](https://www.nbcnews.com/news/latino/when-it-comes-access-clean-water-race-still-strongest-determinant-n1089606) (5 minutes).
* Impacts of water insecurity (WHO/UN/Water Aid website). Link back to development gap ideas.
* Impacts of [Brazil’s drought on Rio’s favelas](https://rioonwatch.org/?p=68578) (opportunities to link to energy)
* Identify different methods that can be used to increase water supply. Overview: use of photographs to identify and briefly describe different methods (as listed in specification).
  + Read a PDF booklet: [Nile Basin Initiative increasing supplies of water](https://www.nilebasin.org/index.php/information-hub/documents-publications/43-building-on-shared-benefits-transforming-lives-in-the-nile-basin/file)
  + Read a PDF booklet: [Changing Lives in the Nile Basin](https://www.nilebasin.org/index.php/information-hub/documents-publications/55-development-benefits-digital/file).
* An example of a large water transfer scheme, considering advantages/disadvantages.
* Class work/group work (research and presentation) or individual research (International Rivers website).
* Moving towards a sustainable resource future. Identify different methods of supply/conservation (as listed in specification).
* Describe one example of a local scheme in an LIC/NEE being used to make water supplies more sustainable (Water Aid or UN Habitat). (Could be part of the improving life for the urban poor unit).
  + PlayPumps in South Africa: include information of disadvantages:
    - Read an article in the Guardian [Africa’s no-so-magic roundabout](https://www.theguardian.com/commentisfree/2009/nov/24/africa-charity-water-pumps-roundabouts) (5 minutes)
    - Read an article in the State of the Planet [The PlayPump: What Went Wrong?](https://news.climate.columbia.edu/2010/07/01/the-playpump-what-went-wrong/) (5 minutes).
  + Find a PDF about the [Changing Lives in the Nile Basin](https://www.nilebasin.org/index.php/information-hub/documents-publications/55-development-benefits-digital/file).

**3.2.3.4 Energy** **(Optional unit – choose one from Food, OR Water OR Energy)**

**Key ideas**

* Demand for energy resources is rising globally but supply can be insecure, which may lead to conflict.
* Different strategies can be used to increase energy supply.

**Specification content**

* Areas of surplus (security) and deficit (insecurity):
* global distribution of energy consumption and supply
* reasons for increasing energy consumption: economic development, rising population, technology
* factors affecting energy supply: physical factors, cost of exploitation and production, technology and political factors.
* Impacts of energy insecurity: exploration of difficult and environmentally sensitive areas, economic and environmental costs, food production, industrial output, potential for conflict where demand exceeds supply.
* Overview of strategies to increase energy supply:
* renewable (biomass, wind, hydro, tidal, geothermal, wave and solar) and non-renewable (fossil fuels and nuclear power) sources of energy
* an example to show how the extraction of a fossil fuel has both advantages and disadvantages.
* Moving towards a sustainable resource future:
* individual energy use and carbon footprints. Energy conservation: designing homes, workplaces and transport for sustainability, demand reduction, use of technology to increase efficiency in the use of fossil fuels
* an example of a local renewable energy scheme in an LIC or NEE to provide sustainable supplies of energy.

**Suggested timing**

7 hours

**Possible teaching and learning activities**

* Describe the changing global energy consumption patterns:
* Read an article on Our world in data: [Energy Production and Consumption, Our World Data](https://ourworldindata.org/energy-production-consumption) it contains examples of graphs and maps that could be used in the classroom,
* Read an article on Our world in data: [Annual change in primary energy consumption (2020)](https://ourworldindata.org/grapher/change-energy-consumption?tab=map) it contains examples of graphs and maps that could be used in the classroom,
* Read an article on Our world in data: [Per capita electricity from fossil fuels, nuclear and renewables](https://ourworldindata.org/grapher/per-capita-electricity-fossil-nuclear-renewables?country=OWID_WRL~CHN~IND~USA~GBR~FRA~AUS~SWE~ZAF~JPN~BRA) it contains examples of graphs and maps that could be used in the classroom.
* Discussion: ‘Why is global energy consumption increasing?’
* Assess the significance of the causes of increasing energy consumption, comparing wealth and population growth. Use the following links to create resources. Compare maps of energy consumption with GNI:
* Read an article on VOX: [Why rich people use so much more energy](https://www.vox.com/energy-and-environment/2020/3/20/21184814/climate-change-energy-income-inequality) (20 minutes),
* Read an article on Our World in Data: [Energy use per person (2020)](https://ourworldindata.org/grapher/per-capita-energy-use) it contains examples of graphs and maps that could be used in the classroom.
* Factors affecting energy supply:
* group work/discussion and report back (identify key ideas from specification),
* Identify different strategies that can be used to increase energy supply:
* expansion of fossil fuels
* nuclear energy
* renewables.
* An example to illustrate the advantages and disadvantages of fossil fuel extraction. Include information on the impacts of fossil fuel extraction on Indigenous lands and communities.
* Read an article on Reimagine: [Energy Exploitation on Sacred Native Lands](https://reimaginerpe.org/node/307#:~:text=For%20the%20Indigenous%20peoples%20historically,and%20the%20poisoning%20of%20our) (7 minutes).
* Read an article by Harvard Public health department: [Fossil fuel extraction is harming Indigenous communities](https://www.hsph.harvard.edu/news/features/fossil-fuel-extraction-harming-indigenous-communities/) (5 minutes).
* Moving towards a sustainable resource future. Identify different conservation methods that can be used to reduce supply/increase energy efficiency. Possible resources:
* Read or listen to an article by Africa Renewal: [How Africa is building a different energy pathway](https://www.un.org/africarenewal/magazine/january-2021/push-renewables-how-africa-building-different-energy-pathway) (8 minutes).
* Describe one example of a local renewable energy scheme in an LIC/NEE and explain how it will help to provide sustainable supplies of energy. Possible resources:
* Read or listen to an article by Africa Renewal: [Training in renewable energy technologies and green entrepreneurship in Nigeria](https://www.un.org/africarenewal/news/youths-nigeria-trained-renewable-energy-technologies-and-green-entrepreneurship)
* [Find a PDF booklet: Nile Basin Initiative increasing supplies of energy](https://www.nilebasin.org/index.php/information-hub/documents-publications/43-building-on-shared-benefits-transforming-lives-in-the-nile-basin/file)
* Find a PDF booklet: [Changing Lives in the Nile Basin](https://www.nilebasin.org/index.php/information-hub/documents-publications/55-development-benefits-digital/file).

**3.3.1 Issue Evaluation**

**Suggested timing**

5-7 hours

**Guidance**

* The theme of the pre-release is taken from the core subject content, often drawing from knowledge that can appear in several areas.
* Any context can be used, and can differ from the context of the subject content.
* Only the content of the booklet will be assessed – there is no requirement to complete additional research to bring into student responses.
* It is important to note that the vast majority of the marks in this section of the assessments are AO3, this means students are assessed on application of knowledge and understanding, reaching conclusions and evidencing opinions.
* There is no ‘one size fits all’ approach to planning how you will prepare students to engage with the pre-release. It’s important that you take the approach that is best for your school setting and your students.
* It isn’t necessary to give students copies of the materials the day they are released. It is best practise to familiarise yourself with the content first and scaffold any of the content for lower ability learners.
* Focussing on each figure in turn and building up that knowledge and understanding of the evidence that eventually leads to the decision in the final pages.
* Getting students to learn pre-prepared answers is a popular method of preparation, however it’s also important that students learn how to adapt these responses to the specific question that will appear in their exam.
* Whether the student agrees or disagrees, it’s important that the evidence they use supports the judgement being made.

**3.3.2 Fieldwork**

**Suggested timing**

12 hours

**Guidance**

* There is no ‘one size fits all’ approach to planning fieldwork. It’s important that you take the approach that is best for your school setting and your students.
* [Fieldwork guidance: opportunities and planning](https://www.aqa.org.uk/resources/geography/gcse/geography/teach/fieldwork-guidance-opportunities-and-planning) identifies some opportunities for fieldwork found across the specification and gives some examples of how these opportunities could be implemented as fieldwork investigations. This is not a prescribed or exhaustive list and centres are able to plan fieldwork investigations that are not included in these lists.
* [Fieldwork guidance: requirements, assessment and enquiry sequence](https://www.aqa.org.uk/resources/geography/gcse/geography/teach/fieldwork-guidance-requirements-assessment-and-enquiry-sequence) provides guidance on how to interpret the fieldwork requirements of the specification, the importance of understanding assessment objectives and a detailed breakdown of the strands of the enquiry including the information that teachers and students need to know in order to succeed.
* It is important that all students are provided with the same opportunity to access fieldwork as with all other students. The Geographical Association (GA) provides some useful guidance on [accessible fieldwork](https://geography.org.uk/ite/initial-teacher-education/geography-support-for-trainees-and-ects/learning-to-teach-secondary-geography/inclusion-and-adaptation/adaptive-fieldwork/#:~:text=%27Students%20with%20behavioural%20problems%20are,%2C%20analyse%20the%20results%2C%20etc.) as does the following guide [10 ways to make fieldwork more inclusive and accessible](https://research.bangor.ac.uk/portal/files/70783381/10_Ways_To_.pdf).