

| Syllabus ref. | Learning objectives | Suggested teaching activities |
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| | | <p>discussion of how tourism can cause noise, air, water and visual pollution – learners mind map ideas for each and then write up to develop/explain. Suggest solutions for each.</p> |
| 3.5 Case study | Know a case study of energy supply in a country or area | <p>Learners should know a case study of energy supply in a country or area.</p> <p>Learners locate a country or area with annotated sketch map and describe the location.</p> <p>Produce data tables and graph to show the percentage of energy from each source – describe and explain (link to level of development to recap).</p> <p>Provide named examples and details of schemes – one for each energy source to show how energy is produced in case study country or area – to provide place-specific reference. Could add to sketch map or show in a table.</p> <p>Recap benefits and disadvantages of each specific to the scheme and the country as appropriate – learners highlight the information and show in a table. Focus on each individual scheme to develop viewpoints.</p> <p>Learners write up as a case study.</p> |
| 3.6 Water | Describe methods of water supply and the proportions of water used for agriculture, domestic and industrial purposes in countries at different levels of development | <p>Learners recap ‘global water supply’ and show as a pie chart or divided bar. (I) Reinforce the small amount of available fresh water. Discuss the difference between ‘surface water’ and ‘ground water’. Mind map all the different uses of water.</p> <p>Learners graph data to show how water is used globally for different uses and describe the results. (I)</p> <p>Discuss the key users of water – for example, domestic, industrial, agricultural, tourism – learners work in pairs to give examples of how water is used in each and confirm in whole class discussion.</p> <p>Water usage: www.bbc.co.uk/schools/gcsebitesize/geography/water_rivers/water_usage_rev1.shtml</p> <p>Provide data for water use in LEDCs and MEDCs (include how it is used in different sectors) or compare two countries to illustrate – one of these countries could be developed as a case study. Graph the results and compare/contrast the two sets of data/graphs. Learners could keep a diary of water usage and research another country to compare. (I)</p> <p>Show learners photographs of different water supply schemes, e.g. dams/reservoirs, wells, boreholes and desalination. Whole class discussion of how each works and a brief description.</p> <p>Discuss the appropriateness of each scheme for different geographical areas/levels of development – for example, in relation to siting factors, climate and level of technological development. Learners present ideas as a table. (I) Discuss the results as a whole class – learners add additional ideas in a new colour to show additional learning.</p> |

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| | <p>Explain why there are water shortages in some areas and demonstrate that careful management is required to ensure future supplies</p> | <p>Learners analyse world map to show areas where there are water shortages and water surplus. Define the key word 'drought'. Describe the distribution and identify areas of shortage, surplus and what they have in common – are there any anomalies? Look for trends and name areas – use world point of reference such as continent names and lines of latitude/longitude.</p> <p>www.bbc.co.uk/schools/gcsebitesize/geography/water_rivers/water_usage_rev1.shtml</p> <p>www.wateraid.org/uk</p> <p>www.dropinthebucket.org/?_k=water%20saving%20facts%20for%20kids&_kt=2f6a2ff7-dc40-483d-8f70-1c3dd6dd7c51</p> <p>Learners independently research some examples of drought and their impact. (I)</p> <p>Whole class discussion of the factors that affect water shortages: supply (e.g. precipitation, temperature, evaporation rates, rivers, pollution and infrastructure, etc.) and demand (e.g. economic activities, population distribution and country's level of development, etc.) and illustrate with examples. Show as a mind map.</p> <p>Extension activity: Why do water shortages occur in some parts of the world and not others? or Explain why access to safe water is better in some countries than others. (I)</p> <p>Learners then extend this discussion to why some areas may have water but it is not clean, and how water can become contaminated in both urban and rural areas (link to 3.7). Learners can research key facts about water shortages and water-related diseases in different parts of the world using websites – add to notes on drought to build up some revision ideas. (I)</p> <p>Show learners photographs of areas suffering from a water shortage – work in pairs to discuss the impacts this is having and show ideas as a mind map.</p> <p>Learners discuss and create their own flow diagrams to show the impacts – add annotations and extra notes as required. (I) Link the impacts on people to ideas such as health, disease, hygiene/sanitation, travelling to collect water, conflicts and the inability to work, etc. Link impact of water shortages on economic development to agriculture, industry and the development of tourism.</p> <p>Role-play activity: Learners use their diagram to teach the concept to a peer or small group of learners. (see Appendix: Learner as a teacher (role-play))</p> <p>Extension activity: Explain the impact of water shortages on people and economic development.</p> |

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| | | <p>Learners use website research to write diary entries for different people around the world (in countries at different stages of development) to show how water shortages have impacted upon their lives and/or how a supply of clean water has been provided and how this has changed their lives. (I) Share entries with whole class. Discuss some solutions and use this to introduce the next section.</p> <p>Review methods of water supply in a MEDC and discuss how each of these can be used to provide clean water supply with named examples. Show photographs of each scheme. Discuss the advantages of each and also limitations. Include water transfer schemes from area of surplus to shortage – learners write up as a table. (I)</p> <p>Introduce the term ‘appropriate technology’ and add to key word glossary. Learners make notes about different water supply schemes and also ways in which the demand for water can be reduced using website reference. (I)</p> <p>Whole class discussion on the advice that can be given to make water safer to drink and also other methods of ensuring a clean water supply – write up ideas. (I)</p> <p>Whole class discussion of how water can be managed – learners recap the term ‘conservation’ and update their key word glossary. The class may take the opportunity to talk about the importance of using water in a sustainable way and recap concepts.</p> <p>Learners research the ways in which people living in a MEDC can conserve water and produce a leaflet to provide advice to people about how to save water. Discuss steps that water companies, industry and agriculture can also take to reduce water use, e.g. repairing leaks, methods of irrigation, recycling, etc. (I)</p> <p>Link to 3.7 – understand the importance of resource conservation – water conservation.</p> |
| 3.6 Case study | Know a case study of water supply in a country or area | <p>Learners should know a case study of water supply in a country or area.</p> <p>Introduce the country or area – learners produce an annotated sketch map and describe the location. Produce a choropleth map to show the distribution of water shortages (and surplus if appropriate) within the country or area – describe the distribution including named places.</p> <p>Learners graph data to show sources of water and how water is used within the country/area. Learners produce a newspaper article to show the impact of the water shortages on people and economic development.</p> <p>Provide examples of schemes that provide water within the country – named and located – and a description of how they work – photographs may also be used.</p> |

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| | | Discuss issues of water management in the future, e.g. conservation of supplies, sustainable development and future projects. Learners write up as a water management plan and present ideas to the class. |
| Past and specimen papers | | |
| Past/specimen papers and mark schemes are available to download at https://teachers.cie.org.uk (F) | | |
| 3.5 Energy | | |
| Jun 2012 Paper 12 Q6c | | |
| 3.6 Water | | |
| Nov 2012 Paper 12 Q6a | | |
| Jun 2012 Paper 12 Q6a and 6b | | |