

7: Food production and industry

Syllabus ref.	Learning objectives	Suggested teaching activities
3.2 Food production	Describe and explain the main features of an agricultural system: inputs, processes and outputs	<p>Define 'agriculture' and 'farming' and add to the key word glossary. Recap agriculture as a type of primary industry. Introduce how we classify agriculture and define the different farming types – 'commercial', 'subsistence', 'arable', 'pastoral', 'intensive' and 'extensive'. (I)</p> <p>Agriculture: www.s-cool.co.uk/gcse/geography/agriculture</p> <p>Farming in rural areas: www.bbc.co.uk/schools/gcsebitesize/geography/rural_environments/farming_rural_areas_rev1.shtml</p> <p>Characteristics of farming (video): www.bbc.co.uk/schools/gcsebitesize/geography/video/agriculture/characteristics_farming_video.shtml</p> <p>Types of farming (video): www.bbc.co.uk/schools/gcsebitesize/geography/video/agriculture/types_farming_video.shtml</p> <p>Learners update glossary with appropriate key words. Provide headlines or photographs about different farming systems for learners to analyse and classify into the different farming types. Learners add an example of each farming type to their definitions. Complete an 'odd one out' activity to consolidate understanding of the key characteristics of each type of farming.</p> <p>Discuss the factors affecting farming and show as a mind map. Sort into natural and human. Learners can then further divide the human factors into economic and social. Learners show results in a table and then explain in detail how each one will influence farming – including the scale of production, methods and products of agricultural systems. Illustrate with reference of examples. (I)</p> <p>Introduce farming as a system and define key words 'system'; 'inputs', 'processes' and 'outputs'. Provide a systems diagram for the type of farming that you plan to use for your case study later in the unit – learners colour code and annotate to understand the concept of 'a system'. (I)</p> <p>In pairs learners answer questions to analyse and understand the diagram. Learners sort cards to produce another systems diagram for a contrasting type of farming and compare the inputs and how this has influenced the scale of production, methods and products of the agricultural systems. Write up ideas. (I) (Alternatively two case studies can be done later in the unit.)</p>

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		<p>Map work opportunity: describing the agricultural patterns in an area shown on a map extract and using map evidence to identify the factors that have influenced its location.</p> <p>Fieldwork opportunity: examining the land use/agricultural patterns in an area and giving explanations for the patterns.</p> <p>Link to 3.7 – describe how economic activities may pose threats to the natural environment locally and globally – discussion of how agriculture 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> <p>The following link provides ideas for the whole unit: www.sln.org.uk/geography/Economic%20activity.htm</p>
3.2 Case study	Know a case study of a farm or agricultural system	<p>Learners should know a case study of a farm or agricultural system.</p> <p>Learners produce sketch map to show the location of the farm or system and describe it.</p> <p>Classify the farming type.</p> <p>Produce a systems diagram for the farm or system.</p> <p>Write a short report to explain all of the factors that have influenced the location of the farm or system. Include place-specific information and diagrams as appropriate – for example, climate data and a climate graph.</p> <p>Describe the methods used in production and the scale of the operation. Present as a case study booklet.</p> <p>Please ensure appropriate place-specific information through the case study.</p>
3.7 Environmental risks of economic development	Describe how economic activities may pose threats to the natural environment, locally and globally	Suggested opportunity to deliver the content for soil erosion and desertification from 3.7 here. See later scheme for content.
3.2 Food production	Recognise causes of food shortages and	Learners define the key word 'food shortage' and add to key word glossary. World map of countries that suffer from food shortage (choropleth map of kcal/per person per day or % population suffering from malnutrition or alternative) – learners

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	describe possible solutions to this problem	<p>describe the distribution. Research key facts about food shortages using websites. (I)</p> <p>Investigation – what is the cause of food shortages? Provide appropriate resources to each pair of learners such as climate data, photographs, extracts from newspaper reports, visual clips for them to analyse. Learners also conduct independent internet research. (I) Write a report to explain why food shortages occur around the world – make the link to natural factors as well as economic and political factors as shown in the syllabus.</p> <p>Discuss the impacts of food shortages – both positive and negative. Learners complete card sorting activity to classify effects in these two categories and record in a table.</p> <p>Show how food shortages can cause a cycle of poverty and learners display in an annotated diagram. Learners also research the impact of food shortages upon health (including malnutrition and diseases as a result of under-nutrition) and the knock on effects such as migration/refugees, loss of productivity etc. – write up their ideas as a letter to a president of a country expressing concern. (I)</p> <p>Introduce aid and different types of aid. Learners complete heads and tails activity to understand the different types of aid. Learners are split into two – half the class researches the benefits of giving aid whilst the others research the problems of giving aid. Present their views and conduct short whole class debate about the benefits and problems of giving aid – write up as two viewpoints and then give their own, justifying their decision. (I) Discuss ways in which food aid can address the problem of food shortages but also how other approaches may be more sustainable in the long term.</p> <p>Aid (video): www.bbc.co.uk/schools/gcsebitesize/geography/development/aid_video.shtml</p> <p>Aid: www.bbc.co.uk/schools/gcsebitesize/geography/development/aid_rev1.shtml</p> <p>Discuss how food shortages can lead to measures to increase output – learners write a description of measures such as irrigation, fertilisers, mechanisation, pesticides, GM crops, education farmers, etc. and explain how each increases output. Can illustrate with photographs and diagrams. (I)</p>
3.2 Case study	Know a case study of a country or region suffering from food shortages	<p>Learners should know a case study of a country or region suffering from food shortages.</p> <p>Learners produce annotated sketch map to locate the country or region and describe the distribution of areas suffering from a food shortage.</p> <p>Research background of the food shortage – dates/extent, etc. Discuss causes and categorise. Describe and explain the effects.</p>

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		<p>Positive response to the problem including aid and measures to increase output.</p> <p>Learners research using internet and teacher resources and write up as a webpage or article for a geographical journal. Please ensure appropriate place-specific information through the case study.</p>
3.3 Industry	<p>Demonstrate an understanding of an industrial system: inputs, processes and outputs (products and waste)</p>	<p>Define 'industry' and reinforce as a type of secondary activity. Revisit the key words of a 'system' – recap using a quick 'heads and tails' activity.</p> <p>An introduction to industry: www.s-cool.co.uk/gcse/geography/industry/revise-it/an-introduction-to-industry</p> <p>Characteristics of industry: www.bbc.co.uk/schools/gcsebitesize/geography/economic_change/characteristics_industry_video.shtml</p> <p>Industry: www.revisionworld.com/gcse-revision/geography/industry</p> <p>Learners understand that outputs can include both products and waste.</p> <p>Learners define the key industry types as shown in the syllabus and briefly write up to describe the characteristics of each following whole class discussion with an example to illustrate. (I)</p> <p>Learners to produce a systems diagram for a chosen industry – link to later case study – and answer questions to interpret the diagram. Could be drawn from information provided as text or a card sorting activity. (I)</p>
	<p>Describe and explain the factors influencing the distribution and location of factories and industrial zones</p>	<p>Show learners photographs of different types of factories and industrial zones and ask them to identify the factors that they think might have influenced the location of each. Build up a mind map of key factors following paired discussion as a whole class. These can then be further classified. For each one, learners explain how the factor might influence industrial location. For each, link to not only the location but also scale of production, methods of organisation and products of the system. Link to previous work on transnational companies (3.1) and advantages of rural/urban fringe locations (1.2). (I)</p> <p>Decision-making exercise: provide learners with a sketch map and factors marked on. Learners have to decide which is the best location for a particular type of industry, and then justify and explain their choice. Present ideas in a table – advantages and disadvantages of each site. (I)</p> <p>Map work opportunity: providing map extract with either a factory or industrial zone marked on – learners identify the factors that may have led to its location and support with map evidence.</p>