

You are what you eat



	Key ideas	Key facts
<p>Lesson 1: Where does food come from?</p>	<ul style="list-style-type: none"> a) A lot of food that we eat is processed and bears little relation to the products produced by farmers. b) There are many different kinds of farms but they can be broadly divided into those that concentrate on crops (arable) and those that concentrate on animals (pastoral). c) In the UK, we eat food that is produced by farmers from across the world. 	<p>In the past, people mainly grew or bought food in its raw, unprocessed state – everyone knew what a potato looked like! Today, a very high percentage of food eaten in western countries is processed into ‘convenience food’ or ‘ready meals’. Leading supermarkets such as Tesco and Sainsburys have aisles dedicated to different types of ready-made meals – from beef stroganoff to chicken korma.</p> <p>In many cases, the food is already cooked for us. Increasingly, young people in the UK and similar countries have become disconnected with food production and have little understanding of how or where our food is produced.</p> <p>Farmers in general will concentrate on specializing in crops or animals that are best suited to their physical environment and the local/national (or even global) economic conditions. Arable farms concentrate on growing fruit, vegetables and salad crops. In the UK, these are concentrated in the east and south of the country. Pastoral farmers concentrate on rearing animals or birds for their meat, milk, eggs or skins. In the UK, these farms are more numerous in the north and west.</p> <p>The UK has never been 100% self-sufficient in food production simply because of our desire to eat foods that cannot physically be grown in our climatic conditions. In the last 50 years, the amount of food imported into the UK has grown – currently about 40% of our food is imported (Department for Environment, Food and Rural Affairs). An additional factor has been the desire to have all kinds of food available throughout the seasons, for example strawberries in winter, which are frequently imported from Spain. See the lesson La Producción de Fresa en España (Strawberry production in Spain) in the Geography the Language of Europe unit, for more information on this.</p>
<p>Lesson 2: Hunger and malnutrition</p>	<ul style="list-style-type: none"> a) There are millions of people that have a poor diet which leads to malnutrition and then to poor growth in children and an increased risk of illness in all age groups. b) In many countries, the risk of famine and starvation remains very high. c) Food security is a basic human right but few governments are willing 	<p>Although it is argued that the world as a whole is currently capable of feeding the 6-7 billion people that inhabit the planet, there are huge inequalities in terms of both the quantity and quality of food available to individuals in different countries. Students need to understand the difference between starvation and malnutrition and the implications of these two different but sometimes related issues. The relatively difficult concept of ‘food security’ underpins much of the debate that goes on at both national and global levels.</p> <p>It is difficult to separate out the problems associated with food shortages and poor diet from the many other issues facing countries in mainly the developing world e.g. conflict, trade, natural hazards, etc. In many countries where starvation and malnutrition are most common, there is a history of similar problems and in spite of the efforts made by both individual countries and the international aid community, the problems remain – countries in the Horn of Africa exemplify this situation (Ethiopia - Nov. 2009: more than six million people were facing starvation). In the UK, fruit is left to rot on trees, crops are harvested then dumped and meat is used as a source of fuel in power stations. At the same</p>

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	<p>to guarantee that people have a good diet with sufficient food to stay healthy.</p>	<p>time, people in developing countries continue to die of starvation and suffer from preventable diseases that cause ill health and an inability to work.</p>
<p>Lesson 3: Importing and exporting food (case study Kenya)</p>	<p>a) An increasingly large percentage of the food that we eat in the UK is grown in poorer, developing countries.</p> <p>b) An increasing number of people in poorer, developing countries struggle to find enough food to eat.</p>	<p>Many less economically developed countries face an increasingly difficult moral dilemma – whether to use productive farmland to feed their own people or whether to use this land to boost their economies by growing commercial crops for trade with richer, Western nations.</p> <p>In 2009, at the same time as the Kenyan government was reporting food shortages in some areas, large quantities of food were being loaded on to planes and sent by air from Kenya to fill the supermarket shelves in the UK.</p> <p>Kenya has strong particularly strong trade links with the Britain. As a former British colony, the UK has traditionally been Kenya’s most important trading partner since it’s independence in 1963 and English is the language of business and commerce. (Please refer to this powerpoint for more information about the British Empire). In 2008, UK imports of goods from Kenya were worth £316m and imports of services were 142m. The UK is also the largest foreign investor in Kenya (UK Trade and Investment website).</p> <p>Farms based in Kenya that have contracts with UK companies are high-tech, commercial businesses that have to produce food to very high standards. They employ large numbers of labourers. However they sometimes pay relatively low wages and they have been accused of environmental damage through water pollution and overuse of irrigation. Those farmers producing for the local Kenyan market, rather than for overseas, struggle to produce sufficient food as a result of their small farms, a lack of technology and unreliable rainfall.</p> <p>Kenya sends out about 350 tonnes of vegetables and cut flowers each night ready to be sold next day in UK supermarkets. Leguminous vegetables (peas, beans, mange tout) constitute the largest proportion of Kenyan imports to the UK and this sector has shown strong growth. In 1988, the UK imported around 3,800 tonnes of legumes from Kenya. By 2005, this had increased to around 25,000 tonnes. Due to their high perishability and value, leguminous vegetables tend to be imported by air freight. Some people are concerned about the high carbon footprint of these vegetables. However, whilst green beans from Kenya are transported by air, over 90% of the fruit and vegetables imported from African countries is not air-freighted. Bananas are by far the single largest export to the UK from Cameroon and the Ivory Coast, while oranges make up the largest proportion of produce from Morocco and Egypt. Since they are storable and not so easily damaged, such fruits tend to be transported by sea.</p> <p>In 2005, the UK also imported 18,650 tonnes of cut flowers from Kenya. These had a declared value of around £52m. Due to the high unit value and highly perishable nature of the products, virtually all of the African trade in cut flowers are imported by air freight – they need to be in UK supermarkets within</p>

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		<p>24-48 hours of picking in Kenya.</p> <p>Horticulture (growing fruit, flowers and vegetables) employs about 70,000 Kenyans directly, and another 20,000 in ancillary industries e.g. transport. Add in their dependents and it may support as many as 500,000 people. Horticulture is Kenya's second biggest earner of foreign exchange after tea, having leapt up from fourth place since 2001.</p>
<p>Lesson 4: Organic food vs intensive farming methods</p>	<p>a) After a slow start, more and more farmers are growing organic food and more and more people are choosing to eat it.</p> <p>b) Although organic food may not contain more nutrients, many people believe that growing organic food without the use of chemicals is healthier and better for the environment.</p>	<p>The debate between those who believe in the benefits of organic food, and those who champion food produced by modern, high-technology commercial farming has continued for many years and remains to be resolved. The government has given little in the way of incentives to UK farmers to encourage them to adopt less intensive methods of farming. It takes 2-3 years before farmers can get their food accredited as 'organic', by which we mean food produced naturally <i>without</i> the use of chemical pesticides, herbicides or fertilisers. This is because the residue of such chemical products can remain in the soil for several years. See this link for a fuller definition of organic food.</p> <p>A recent government report announced that organic food provides no additional nutritional benefits when compared to intensively farmed food – it chose to ignore, however, the other arguments such as organic food containing no chemical residue and organic farming being more sustainable in terms of the environmental impact.</p> <p>Organic farms which produce both crops and animal products are spread across the UK and the USA but produce only a small proportion of the food that we eat.</p> <p>In this unit it is important to think about the fact that not everyone has a real choice in what they eat (including perhaps some of them) as the cost of food is a key factor. We also cannot for practical reasons of food quantity, make all farms organic – there simply wouldn't be enough food to feed our growing population without importing larger quantities.</p>
<p>Lesson 5: Plenty more fish in the sea?</p>	<p>a) We continue to be encouraged to eat fish as part of a healthy, balanced diet.</p> <p>b) Large scale commercial fishing is wiping out the fish stocks leading to shortages of fish and the threat of extinction for</p>	<p>Fish is an important component of a healthy diet. In countries such as the UK this has meant a long tradition of commercial fishing. The UK once had one of the largest fishing fleets in the world and many urban areas owe their growth and wealth to the fishing fleets and associated industries e.g. Hull, Grimsby, Southampton, Plymouth.</p> <p>Today, the seas around our extensive coastline are almost completely devoid of fish stocks as modern fishing fleets have continued to over fish the seas to the point where there are insufficient fish to continue breeding. As an example, annual catches of cod have fallen from 350,000 tonnes to just 20,000 tonnes over the last 40 years. The problem, however, is not confined to the UK. One recent</p>

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	<p>some species.</p> <p>c) Although some people see quotas or fishing bans as the solution, others believe that we need to change over to farming fish and shellfish.</p>	<p>report in the journal Science predicted that if fishing carries on as it is now, 90% of the world's fisheries will be exhausted within the next 40 years.</p> <p>With wild fish stocks so vulnerable there has been a growing interest in aquaculture (fish farming) as an alternative to commercial fishing. Aquaculture is the farming of freshwater and saltwater organisms including fish and aquatic plants under controlled conditions, seems the ideal solution. The UN Food and Agriculture Organisation (UNFAO) considers it a way to meet the demand for seafood, and predicts that soon, half of the fish the world eats will be farmed. Already much of the fish Britons buy from supermarkets is farmed. Farmed sea bass, tropical prawns, bream, barramundi, tilapia, mussels, crayfish, Vietnamese catfish, cod and halibut are all available in the chiller cabinet or freezer. The most common farmed fish is currently salmon. There are, however, serious concerns about welfare issues (overcrowding, stress, disease), pollution from waste products and farmed fish escaping then breeding with wild fish. Click here for further discussion on aquaculture.</p>
<p>Lesson 6: Biofuels – a green option?</p>	<p>a) Demand for certain crops varies over time and increasingly farmers are growing 'new' crops which have become fashionable.</p> <p>b) Changes in demand means farmland may change from growing food crops to industrial crops.</p> <p>c) Changing crop demands means that there is a real threat to the natural environment as governments sanction destruction of rainforest, etc. to create new farmland.</p>	<p>Across the world, farmers produce a variety of staple crops such as rice, wheat, maize and potatoes. These staples form the bulk of the food that we eat. Demand for these crops continues to increase but world prices fluctuate as farmers have good years and bad years. Some farmers have turned to new crops in order to seek out new markets or better prices for the crops that they grow.</p> <p>In recent years, there has been a strong trend towards growing crops for industrial use rather than for feeding people. A good example of this has been the growing of crops for the production of 'biofuels'. Biofuels are liquid fuels derived from plant materials. Take, for example, biodiesel which can be made from vegetable oils such as palm oil, soy or rapeseed oil.</p> <p>There have been two consequences of this change in land use. Firstly, worldwide, less land is being used to produce food at a time when the world population continues to grow. Secondly, as demand and prices have risen for crops such as palm oil, new land has been cleared to start plantations. The land that is being cleared in countries such as Indonesia and Malaysia is often rainforest or other precious environments where plant and animal diversity is high and indigenous people live traditional lives in harmony with the delicate ecosystems. The demand for palm oil has been linked to the impending extinction of the orang-utan. A recent (2005) report, supported by Friends of the Earth, states that without intervention the palm oil trade will probably cause the extinction of the orang-utan within 12 years.</p> <p>Countries like the UK cause the demand for palm oil and other biofuels. As a country and as individuals, we have a responsibility to ensure that the products we use are produced sustainably wherever possible. In 2001 the Roundtable on Sustainable Palm Oil (RSPO) was set up to bring this deforestation under control and to establish clear ethical and ecological standards for producing palm</p>

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		<p>oil, however forest destruction has continued.</p> <p>Governments in less economically developed countries face a dilemma when trying to choose between protecting the environment and boosting the economy, as strengthened economies can act as a catalyst for rural development and political stability. Profits from biofuel plantations can also be used for social initiatives to alleviate poverty and the palm oil industry provides jobs for people who have few other opportunities. Large, western multinationals with a vested interest in producing more of these industrial products are often involved in investing and supporting these large scale developments.</p>
<p>Lesson 7: Rising food prices</p>	<ul style="list-style-type: none"> a) World food prices for many staple crops showed a steep increase in 2008 – 2009. b) The steep increase in prices caused more hunger and malnutrition in developing countries. c) In the developed countries such as the UK, many consumers have been changing their food shopping habits. 	<p>During the last decade world food prices has risen considerably. A recent BBC news report highlights that the Food and Agriculture Organisation (FAO) food price index is nearly 50% higher than it was in 2003 and the price of cereals is up eighty per cent in the same period. Cereals include wheat, corn and rice, which are staple foods for many people.</p> <p>When food prices are high, the poor eat less or switch to lower quality foods, which can increase malnutrition. Between 130 million and 150 million people fell into poverty in the last 2 years due to high prices (Department for International Development). Over 1 billion people were living on less than \$1 a day and over 900 million people were undernourished, even before the crises hit (data taken from the Millenium Project website).</p> <p>Four plant species - wheat, maize, rice and potato - provide over half of the plant-based calories in the human diet and it has been the sudden and dramatic increase in the price of these products that has caused distress and in some cases, food riots, around the world. This interactive article offers a more detailed discussion of global protests at food price inflation.</p> <p>Global food prices have been rising over the last three years; but in 2008 they spiralled considerably. Between 2007 and 2008 the average price of food rose by 56%, with wheat rising by 92% and rice, the staple of half the world, by 96% (article by economist Kaushik Basu BBC News).</p> <p>The main losers have been poor people who live in cities in developing countries, who have faced higher prices for imported food on low incomes. The World Bank also warned that the high price of food could lead to developing countries missing international poverty targets. The recent dip in prices has provided some relief, but the FAO says 36 countries are still in need of external assistance because of continuing local high prices, crop failures or conflict. The main gainers have been farmers in rich and emerging market nations like the US, Brazil, Argentina, Canada and Australia, who are getting record prices for their harvests.</p>

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In the UK, where families spend about 20% of their income on food, compared to 60-80% in many poorer, less economically developed countries, there has been a noticeable change in many people's shopping habits. Changes have included less 'impulse buying', more shopping around for food bargains, and greater efforts to avoid food waste. The recent 'credit crunch' has also led to a notable decrease in sales of organic and fairtrade foods, which are often more expensive than non-organic and non-fairtrade products. These online articles in the [Telegraph](#) and the [Times](#) discuss this downturn, whilst [this report](#) suggests that sales of organic foods have been more negatively affected by the credit crunch than sales of fairtrade products.