



## Lesson: Sustainable food production



### ACTIVITY OUTLINE



Using the environmental impacts worksheet and ppt study evidence of environmental impact of different food groups.

Make recommendations for a sustainable diet.

You could draw out discussion of the bars before they have the sheet, these represent the range due to different agricultural practices.

They could deduce that they are not indicators of uncertainty in the data by the asymmetric spread around the average.

Compare with the EAT lancet planetary diet.

Use data on current consumption across the world to summarise changes needed in 3 regions, North America, Sub-Saharan Africa, South Asia.

Make the connection between nuts as trees providing a carbon sink for the duration of a tree's life.

More able students could do further research on the practical points listed in changes needed to achieve this global food security and produce an advisory leaflet.

Make the link between more environmentally sustainable diet, food security and human health.

Students can make a justified argument that the proposed changes are a win-win situation.

Complete the lesson by returning to the mock paper, students work with the worksheet "our school presents" to write an article on the headline of their choice.



### CURRICULUM OUTCOMES



Students describe how photosynthesis is the key process for food production

Students can explain that photosynthesis is the process which produces biomass for life

Students make decisions based on the evidence and arguments, work with data which shows distribution of results, identify patterns and trends in data, making inferences and drawing conclusions.

Students describe some of the biological factors affecting levels of food security and know that food security is having enough food to feed a population.

Students describe biological factors which threaten food security including:

increasing birth rate; changing diets in developed countries results in scarce food resources being transported around the world; new pests and pathogens that affect farming; environmental changes that affect food production, such as widespread famine occurring in some countries if rains fail; the cost of agricultural inputs; conflicts that have arisen in some parts of the world which affect the availability of water or food.

Students understand that sustainable methods must be found to feed all people on Earth.



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### GLOBAL LEARNING OUTCOMES



ZERO HUNGER



Students know that the world produces enough food to feed everyone, but that many are underfed  
Students can identify some top causes of global hunger

RESPONSIBLE CONSUMPTION AND PRODUCTION



Students can describe how consumer's decisions can have an impact on global issues

CLIMATE ACTION



Students can explain why the protection & renewal of carbon sinks is an essential strategy to slow Climate Change, and name some different types  
Students know that there are a number of different possible futures, and give their own opinions on them  
Students know that what individuals and the global community as a whole do now, will determine the probable future in terms of life on Earth

SMSC / British Values - Understanding of the consequences of their behaviour and actions

## Action

### Re-think Food



Why not ask your school to invest in a Tower Garden and grow food all year round? This alternative method of food production increases yields by as much as 30% and triples the speed of growth, while using only 10% of the water and space. It can also be wheeled straight from the classroom to the kitchen!

<https://www.rethinkfood.co.uk/futures/>



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