



## Lesson: Sustainable food production



### ACTIVITY OUTLINE



The mocked up paper identifies the big issues to be explored in this lesson.

Students will be asked to write reports for the paper later in the lesson.

Students explore their initial ideas about where food comes from.

Students can work in small groups and identify any differences of opinion which come up in discussion. This activity allows deeper exploration of students' understanding of where the mass of living things comes from rather than falling back on vague ideas of "photosynthesis". It strengthens the understanding that photosynthesis is the plant equivalent of eating, not an alternative to respiration.

Students rearrange the equation for photosynthesis, probe for understanding of role of light / soil and CO<sub>2</sub> as main source of mass.

Students distinguish biological and non-biological factors affecting food security using the card sort.

In groups students I share their ideas and identify the key environmental challenges of feeding the world.

Drawing on their learning about sustainable food productions students identify one change they could make to their own diet.



### 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.



## Lesson: Sustainable Food Production



### 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.

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/>



The project has been funded with support from the European Commission. The contents of this publication are the sole responsibility of Leeds DEC and do not necessarily reflect the opinion of the European Union.