

## Lesson plan 2 title: Solutions to the global food challenge

### Lesson aim:

To be able to critically evaluate the options available to meet the challenge of food security.

### Lesson objectives:

- To know the sustainable options available for future food security by examining a number of small scale case studies.
- To be able to critically evaluate the methods available to ensure food security in a growing population.

### Learning activities/tasks:

### Time

#### Starter:

#### What options are available?

Read the Executive Summary from the FAO, United Nations report 'How to feed the world in 2050'. Highlight key information.

Alternatively they might review the UN's aim of reducing global hunger by 50% as one of the Millennium Development Goals <http://www.un.org/millenniumgoals/poverty.shtml>

Ask students to write down what they believe is the main issue facing the world in feeding a population of 9 billion people.

Share these as a class.

10 mins

#### Main activity:

#### Is technology the answer?

A group based enquiry. Divide the class into small groups (2-3 per group) and hand out the information pack for each small case study listed below. Students will have 15 minutes to research their case study and complete their section of the handout.

15 mins

After 15 minutes each group will be asked to present their case study to the rest of the class. Each presentation should be 2-3 minutes in length and meet the success criteria on the handout. Everyone in the class should take notes on the case studies as they listen to the presentations.

20 mins

#### Case studies: These case studies provide a range of different approaches for addressing food production and hunger.

- Scuba rice
- Vaccination programme for cattle
- Apple ring acacia trees
- Orange flesh sweet potato
- Insect protein
- Animals feeding on food waste

10 mins

#### Plenary: Evaluation of the options available

Students should complete the advantages and disadvantages section of the handout following a class review.

5 mins

#### Optional discussion question: Should we be optimistic?

Once students have evaluated the options, pose the question 'Should we be optimistic about feeding the 9 billion? And ask each student in turn for their opinion.

#### Resources:

Lesson 2 resource sheet

Lesson 2 A3 student worksheet

Case studies printed out into information packs (or the lesson could be taught in a computer room providing students with the links)