

Slide one: Floating Garden challenge

Briefly explain that this is a challenge put together by an organisation called Practical Action; a charity who work with poor people all over the world, using technology to help them lift themselves out of poverty.

Slide two: What problems are caused by climate change?

Divide pupils into groups, give each group a set of pictures and encourage them to discuss. Climate change is making both flooding and drought more of a problem throughout the world.

Slide three: Flooding and drought

Some of the pupils will have divided pictures into groups – drought and flooding. Discuss how these extremes are both being made worse as a result of climate change.

Slide four: Impacts of climate change

Explain the challenge: you may like to look at the geography of Bangladesh and get pupils to think about why Bangladesh is more prone to flooding than other countries. It is important that they understand flooding has always been a problem but climate change is making it worse.

Slide five: Your challenge

Introduces the main problem of flooding for farmers in Bangladesh and the pupils challenge to develop a model of a structure to grow crops on even when it floods. There are teacher's notes to support you to prepare and run the challenge, available on the website.

Slide six: What should you consider?

Introduces a few practical points for pupils to consider before starting their designing and modeling.

Slide seven and eight: A solution and How are Floating Gardens made?

Provide information about how floating gardens have been developed to help communities grow crops during the rainy season. For further information on the technical construction of a floating garden and its use in Bangladesh a technical brief is available at practicalaction.org/floating-gardens.

Slide nine: Making a difference?

Shows how during harvesting, the rafts can be accessed by foot or by raft or boat if the water is very deep. A more detailed case study of Rahima and how her family has benefited from their floating garden (also provides a video clip of a floating garden in use) is available at practicalaction.org/floating-gardens

Slide ten: What can you do next?

Provides extension ideas for the challenge, including developing a floating garden for a school pond!

Slide eleven: Taking your ideas further

There are a number of other activities your pupils can get involved in following the challenge. They are freely available at practicalaction.org/STEM