FLOATING GARDEN CHALLENGE

PowerPoint notes

1.		**Floating garden challenge** Introduce the challenge. Briefly explain that their STEM challenge has been developed by an organisation called Practical Action. It is based on a real life problem.
2.		**Starter activity: What do you see?** Encourage pupils to look carefully and discuss what they see in the photos.
3.		**Flooding and drought** Get feedback from the groups as to how they have sorted their photographs. Some may have divided them into groups of drought and flooding. Ask pupils where in the world they think or have heard or seen that flooding and drought are happening. Explain that many people believe that the increase in flooding and drought in different parts of the world is as a result of climate change.
4-5.		**Guess where?** The pupils have four clues to help them guess the country where the challenge is based.
6.		**Flooding in Bangladesh** Introduce the impact that flooding is having for families in Bangladesh. This includes families who were previously able to feed themselves and are no longer able to do so. This is leading to hunger and people living in poverty.
7.		**Map of Bangladesh** The flooding map of Bangladesh shows the extent of severe flooding in large areas of the country. It is important to explain that with its large rivers the country is prone to flooding. However, climate change is making it worse.
8.		**Tara's story** You might want to share a fuller case study with your pupils. Tara's story can be found within the pupil activity sheets.
9.		**The Sustainable Development Goals** The Sustainable Development Goals (SDGs) also known as the Global Goals are introduced to give pupils information about a set of seventeen targets to address global problems.
10.		**The 17 global goals** This set of goals with a little explanation is available as one of the pupil activity sheets. You might choose to ask the pupils which of the goals are linked to the problem that Tara and other farmers are facing.
11.		**Practical Action** Practical Action is an international development organisation that works in many countries to develop solutions to help people who are living in poverty. The staff who work for Practical Action in Bangladesh have a range of STEM skills. Asfari Begum is a senior Disaster Risk Reduction specialist. She helps people to develop long term sustainable solutions to address problems faced by farmers.

12.		**Your new role** Encourage the pupils to put themselves into the role of a team member from Practical Action. They have spent time with farmers in the community in Gaibanda, Bangladesh and understand the problems they are facing.
13.		**The challenge** Present the main challenge activity to develop a model of a solution to help farmers grow crops all year around (even during the floods). Also mention that they will be doing a short presentation to explain their ideas for solutions.
14.		**What should you consider?** This will help introduce pupils to a few practical points for them to consider before starting their research, designing and modelling.
15.		**Present your work** Remind pupils of what you would like them to include in their group's presentation.
16.		**An ingenious solution** Now explain and show the pupils (via a video clip) a floating garden that the community has developed in Bangladesh to help them grow crops during the rainy season.
17.		**A garden that floats** Explain how the raft gardens are made and some of their benefits. You might want to ask the pupils whether they think floating gardens might be useful in the UK.
18.		**Making a difference** Explain how the garden has made such a big difference to Tara and other farmers lives.
19.		**Which global goals?** Remind pupils of their earlier learning about the SDGs/Global Goals. Use the Global Goal sheet and/or this PPT slide to help pupils to consider how the floating gardens could help towards the delivery of many of the global goals.
20.		**Making the most of the challenge** If you and/or the pupils have enjoyed the challenge, this slide suggests some ideas for possible extension activities. This includes developing a floating garden for a school pond!
21.		**Celebrating success**
22-23.		There are a number of ways in which pupils can gain acknowledgement for their work on the challenge. They include CREST Awards, The Big Bang Competition, the Great Science Share and British Science Week. Further information can be found in the teacher's guide.
24.		**Thank you** If you have examples of pupils' work that you would like to share then please: - email schools@practicalaction.org.uk - Facebook/Practical Action Schools - Twitter@PA_Schools.