

FLOATING GARDEN CHALLENGE



STEM ACTIVITY

INTRODUCTION:

1

A floating garden is built using aquatic weeds as a base on which vegetables can be grown. This approach can extend the growing capabilities of rural communities where land would otherwise be unavailable. It is cheap and sustainable.

YOUR CHALLENGE!

2

Your challenge is to design and build a model of a structure that people can grow their crops on, even when their land becomes flooded. Test your model to see how well it floats!

REFLECTION QUESTIONS:

3

What surprised you about the challenge?
What was frustrating about the challenge?
How does this challenge apply to real life?
What are the similarities between the designs that worked well?
If you were to do this challenge again what would you do differently?

THINGS TO THINK ABOUT IT!

4

Where is Bangladesh? What is the farmers problem? How would this affect their day-to-day life? How does this make life hard for them as a farmer who needs to sell their crops at the market? Whether you want your model to float and if so, how you can make it do so. How to make the top of your model suitable to grow crops on. Does it need to be flat? Layered? Which of the Global Goals think the float gardens are helping to deliver?

REAL LIFE PROBLEM

5

Bangladesh is one of the world's poorest countries, criss-crossed by more than 230 of the world's most unstable rivers. For poor families living in rural Bangladesh land is a scarce commodity and people have to make use of whatever space is available. Each year the situation is exacerbated by flooding which restricts the time that crops can be grown. Floods affect over one million people in the country and more than 100,000 women, men and children are forced to move as villages and livelihoods are literally washed away. In recent years flooding has intensified and lasted longer and now the fields can be submerged for far longer than the traditional two months. During the monsoon season, much of the farm land in the Gaibandha district is covered by water, making it impossible to grow crops. Even when the floods recede the land remains waterlogged restricting people's ability to cultivate vegetables to feed themselves and to generate an income, particularly when land is flooded and other cultivation options are unavailable.

