

# BEAT THE FLOOD CHALLENGE

## STEM ACTIVITY



### INTRODUCTION

1

Floating houses are permanently in the water, while amphibious houses are situated above the water and are designed to float when the water levels rise. ... If the water level rises, they can move upwards and float. The fastenings to the mooring posts limit the motion caused by the water.

2

### YOUR CHALLENGE!

Design a home for your community on a low lying Island able to withstand the effects of flooding, and make a model of your design so you can test it.



3

### REFLECTION QUESTIONS:

- What surprised you about the challenge?
- What was frustrating about the challenge?
- What about your design are you most proud of?
- 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?

4

### THINGS TO THINK ABOUT!

How will you make your house float? How will you cut down on the weight of the house? How are you going to provide your house with electricity? How are you going to make sure your house doesn't float off? How will you provide your house with clean water? What specifically about your design needs to be improved? Why?



5

In this challenge, students use their STEM skills to help them design and build a model of a flood-proof house. Activities to help them with their design include testing materials (for strength and absorbency) and structures. Set on a fictitious island coping with the devastating effects of flooding caused by climate change, this resource is provided by Practical Action.