The Squashed Tomato Challenge

Please read this before you start...

About Practical Action:

Fritz Schumacher (no relation to Michael!) was a man who believed that simple technology could change people's lives for the better.

To prove his ideas could work and help some of the World's poorest people he started the charity Practical Action in 1966. Since then Practical Action has been working in countries like Nepal, Sudan, Bangladesh, Peru and Zimbabwe, improving the lives of local people using Schumacher's vision that the right idea – however small – can change lives for the better.

The problem:

In Nepal many farmers living on the mountainside grow fruit and vegetables, including tomatoes. To earn a living they need to sell these at the local market. The problem is getting to market involves a long, dangerous walk down the mountainside and across a river, and tomatoes need to be transported carefully because they can easily get squashed.

Above: Tomatoes ready to be sold in the market

The challenge:

To design and build a model that can move tomatoes without squashing them.

Here are some things to think about:

- You can only use the materials provided by your teacher.
- Instead of moving full-size fruit and vegetables down a Nepalese mountain, we want you to transport cherry tomatoes from a height set by your teacher to the floor. Your teacher might also give you a rope or string to work with.
- If your tomatoes fall to the floor by themselves, don't count them. If they fell down a Nepalese mountainside, they'd be very, very squashed! Depending on the tomatoes your teacher chooses, and the height you're working from, they might squash for you too.

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Above: Nepalese mother with children

- Your solution can be as simple or as complicated as you like, but remember – think first, draw your ideas, check your materials, choose one design and make it.
- The bigger your container is the more tomatoes you will be able to carry. But, the heavier something is the greater the force of the impact when they hit the ground, so there is more chance the tomatoes will get squashed.

When you've made your models, test them and see who can carry the **most** cherry tomatoes down the mountain and across the river. You might use a table to record every team's result, so give your model a name.

Whether your model works or not, you will meet the challenge if you can tell your teacher why your model did or didn't work. You might use the sheets we've provided to draw your design, and then answer the questions about it to help your teacher see what you did.

Show us how many tomatoes you managed to transport by emailing photos or links to videos of your model in action to **education@practicalaction.org.uk**

Good luck! We hope you enjoy the challenge ☺

Above: Farmer ready to transport tomatoes down the mountainside in the traditional way using a basket with a head strap.

Left: View from the mountainside showing how far tomatoes really have to travel in Nepal

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