

A global vision for Design and Technology

The sustainability challenge



The sustainability challenge

‘The message is that there are known knowns. There are things we know that we know.

‘There are known unknowns. That is to say there are things that we now know we don't know.

‘But there are also unknown unknowns.
There are things we do not know we don't know.’

Oxfam's relationship to design and technology



Emergency response



Development work



Campaigning for change



Technology for change



Devastating affects of floods in Nepal



Dried up well in Kenya

Technology for change

There is no shortage of hi-tech gadgetry mobilised in emergency situations – ranging from state-of-the-art communications technology, to water testing



Technology for change



Design for change

The main design features of this bucket are: -

- The tight-fitting lid prevents loss of water through spillage and keeps out dirt and germs.
- It's smooth sided so that germs can't get trapped.
- They stack inside each other, which means they are easy and cheap to transport
- The new design includes a tap (which can be removed for stacking) to dispense water more hygienically
- It has a built-in cap, which never gets lost and helps to keep water safe and clean

Design for change

- Where the wall meets the base it is curved to prevent dirt and bacteria lodging in the corners and enables better cleaning
- Moulded from plastic that is durable and doesn't deteriorate in sunlight - these Oxfam buckets last longer than other containers
- The base is designed to allow air to flow freely underneath the bucket, thereby preventing build-up of stagnant water and removing an ideal breeding ground for mosquito larvae.
- And what would one normally find on the bottom of a bucket? Yes, a sharp plastic pip would normally be left on the underside of the bucket at the end of the manufacturing process. We probably don't even notice it when we use a bucket – but this has been removed to enable the bucket to be carried on a person's head which is the normal method of carrying items in many cultures.

Adaptable design

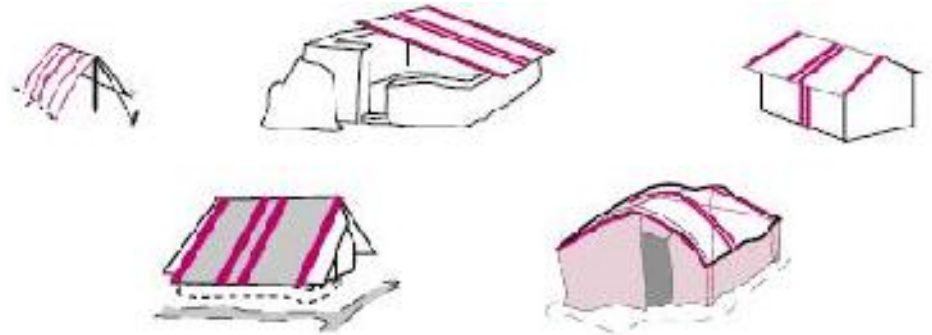
Some of the uses of plastic sheeting...



Adaptable design

Family shelter:

- Basic shelter structures
- Repair of damaged buildings
- Upgrade of tents and shelters
- Timber framed shelters



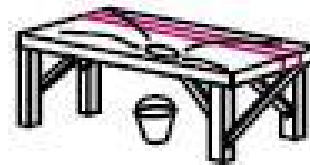
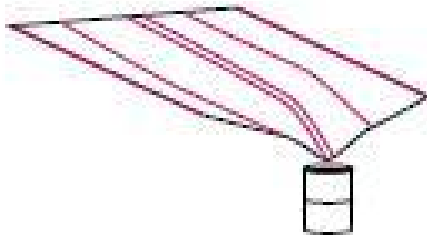
Sanitation and water supply:

- Latrines
- Washrooms
- Protection of water tanks

Adaptable design

Infrastructure / other uses:

- Fencing
- Repair of schools and clinics
- Temporary structures
- Rainwater harvesting
- Cholera beds
- market stalls
- food storage and drying



Sustainability challenge: A global perspective



Sustainability challenge: A global perspective

Climate change is about people. It's affecting lives here and now.

- It is making extreme events like cyclones and floods more frequent and intense causing the destruction of homes, schools, crops and animals
- It is throwing the seasons out of sync, causing crops to fail and water supplies to dry up
- Poor people are being hit first and worst.

Sustainability challenge: A global perspective

- **UK**: emits almost **10 tonnes** of carbon dioxide (CO₂) per capita
- In the **USA** **20 tonnes** of CO₂
- In **China** **4 tonnes** of CO₂
- In **India** **1.1 tonnes** of CO₂

(It is also worth noting that contrary to popular belief – per capita emissions in India and China are not rising as quickly as they are in some of the world's richer countries.)

- In **Senegal**: less than **0.4 tonnes** of CO₂

MITIGATION

ADAPTATION

Sustainability Challenge for education

'Issues of global significance are brought into our lives in a way that they never were for previous generations. Global media and communications, travel and immigration mean that we now have much more exposure to people and cultures from many different parts of the world. This provides a tremendous range of positive opportunities to broaden young people's experience and knowledge. At the same time, issues of poverty, inequality, conflict, and economic and environmental damage present major challenges for society. Education for the global dimension and sustainable development helps young people to appreciate these challenges and opportunities and to recognise their responsibilities as members of a global community.'

A curriculum for the 21st century should encourage learners to be aware of global issues. Learners should evaluate information and events from a global perspective. By exploring the connections between the local and the global, they can also realise that it is possible to play a part in working towards solutions to challenges, such as climate change and global poverty.'

Design & Technology Responsible Citizenship

Design and Technology is being invited to contribute to the much bigger project of 'responsible citizenship'.

- Climate change is the big global issue of our time and it encapsulates most sustainability issues in one way or another.
- Climate change is increasingly becoming a context for learning itself
- And the role of Design and Technology in both reducing greenhouse gas emissions and supporting people in adapting to a changing climate is an obvious one

Global dimension and sustainable futures

The distinctive contribution of design and technology

- Achievement everywhere
- Social and political issues
- Interdependence
- Diversity
- Shared humanity
- Local-global connections
- Universality
- Climate change
- Social, cultural and economic context
- Links to other subjects

Sustainable fashion

ReNew Fashion

gives students the skills and confidence to restyle their old clothes and at the same time cut their carbon footprint.

After our workshop, students will be able to put their new textile skills into practice, save money, and understand that reducing, reusing and recycling doesn't just mean cans, paper and plastic.



How can we help you?

- Free copy of global citizenship guides
- www.oxfam.org.uk/education
- 'Term of Action' Sept – Dec 2009

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Any Questions?