Water Filtration Workshop

Presenter Notes, 30/04/2016, by Charling L. Adapted by Phi Do.

# Presentation Runthrough

### Water Filtration

* [Action] Start on this slide.
* Welcome students, teachers and staff.
* Introduce yourself, your co-presenter, and volunteers.
  + Time permitting, ask volunteers to state what they’re studying, for context.
* State the name of the workshop.

### Acknowledgement of Country

* [Action] Read off the slide.
* Preparation permitting, give the name of the tribe to which the land belongs.
  + Ask school if unsure, and if necessary.

### Today’s Workshop

* [Action] Quickly run through the slide.
  + This slide is mainly for the teachers, as a way to signpost the presentation.

### Outcomes

* [Action] Quickly run through the slide.
  + Feel free to explain some of the terms if necessary, or omit altogether.

### Who are Engineers Without Borders?

* [Action] Read off the slide.
  + This is all the information relevant to give to the students for context.
  + However, now is also a good time to briefly mention Design Summits, overseas projects, and other experiences if appropriate.
* Alternatively:
  + Engineers Without Borders Australia (EWB) is a member-based, community organisation that creates social change through engineering
  + EWB works in partnership with developing communities in Australia and overseas, helping them to gain the knowledge, resources and appropriate technologies that they need to give them more control of their lives.
* [Conclusion] Try to segue into the topic of engineering:
  + “So now that you’ve heard a bit about our organisation, what about some of its members?”

### What are Engineers? (1)

* [Action] Spend a minute or two on this slide.
* [Animation] The text giving a formal definition of an engineer is hidden at first.
  + Use this time to engage the audience, and ask whether they have relatives who are engineers/work with engineers, and if so, what they do.
  + Also pose the question – what does an engineer do?
* Read off the definition, going into as much detail as time permits.

### What are Engineers? (2)

* [Action] Ask the audience.
  + Ask the audience to name a type of engineer they know of.
  + Failing that, get other volunteers to raise their hands if the class is quiet.
  + Expand on the duties of each type of engineer, time permitting.
* [Animation] The text giving showing the names of the different types of engineers will appear when clicking on the picture.

### Where Does Water Come From?

* [Action] Ask the audience.
* [Animation] On click, the pictures will appear.
* [Animation] Clicking on the pictures will fade in labels.

### Water Filtration Methods (1)

* [Action] Ask the audience.
* [Animation] Clicking on the pictures will fade in labels:
  + Clarifiers
  + Home Water Filters
  + Rainwater Tanks
  + Desalination Plant
  + Reverse Osmosis Plant

### Access to Drinking Water (1)

* [Action] Quickly run through this slide.
  + “The world today has lots of challenges that need to be faced:
  + 780 million people lack access to clean water – that’s 1 in every 9 people around the world.
  + ½ of world population have very low income to support this need.”

### Access to Drinking Water (2)

* [Action] Quickly run through this slide.
  + Compared to the rest of the world, Australians have it really good when it comes to clean water.
  + As shown in dark green on the map, more than 95% of Australians have access to clean drinking water that flows from our taps.
  + There are many countries, particularly in Africa and Asia (as shown in red/purple on the map), where significant portion of the population do not have access to clean drinking water.

### Alternative Water Filtration Methods (2)

* [Action] Quickly run through this slide.
* [Animation] The right and middle images are hidden at first, then revealed on click.
  + “Left: Ceramic/clay pot filters. An inexpensive and effective type of water filter that rely on the small pores in the material to filter dirt and debris out of the water.
  + Right: Solar water disinfection using plastic water bottles. Solar energy and UV radiation rid contaminated water of bacteria and viruses.
  + Middle: Sand filters. This is the water filter we are going to build today.”

### What is Appropriate Technology?

* [Action] Ask the audience.
  + “What should we consider when planning and implementing any project in a developing country?”
  + Again, have volunteers on standby to offer information is the class is too quiet.
* [Animation] The pictures and labels will appear after click
  + Cost
  + Physical Location
  + Available materials
  + Required knowledge
  + Maintenance
  + People and culture

# Activity Runthrough

* Students will get 20-30 minutes to complete the activity.
* At least one volunteer will be required to operate the global shop
* Roaming volunteers should be walking around to facilitate teamwork and discussion