

DESIGN CHALLENGE

Background

This year's GO! Forum Posey Leadership Award recipient is Japanese architect Shigeru Ban. The hallmark of Ban's designs is the innovative use of paper tubes as a building material for his humanitarian work. *Over the last two decades, Ban has responded to many of the world's largest natural and man-made disasters by designing buildings to improve the lives of those affected.* In many cases these emergency structures and temporary houses are built with recyclable and locally available materials. *His work has inspired many around the globe to begin exploring this type of architecture in more than just emergency situations*

Challenge

Our challenge to you is to respond to one of the hypothetical disasters described on the following pages by designing and building a model of a structure, facility, or item that would improve the situation. You are not limited to the types of structures suggested in each scenario. This challenge is not for you to replicate Ban's work and we encourage you to be creative in your responses. The finished projects will be displayed on campus to celebrate Ban's visit to Austin College, and finalists selected by outside experts will be displayed at the Dallas Center For Architecture and the Perot Museum. **Finalists will be awarded \$75 and the grand prize winner will be awarded \$250 and a Humanitarian Architect Award signed by Shigeru Ban.**

We will provide materials, access to tools, and workspace in Forster Art Complex room 214. The Art Department will also host a workshop to teach you how to use the tools and give some tips for how to best utilize the materials (**date and time TBA**). The projects will be due on Wednesday, March 18, 2015, turned in to Heidi Rushing in Forster 202.

Get involved

If this sounds like something you or your organization would be interested in, sign up by submitting the completed registration form by Wednesday, February 18, 2015 to Heidi Rushing in Forster 202 or mailbox number 61603.

Design Challenge Registration

Group/Organization: _____

Contact person, phone number, email address: _____

Case Study: _____

1) Brief description of your design: _____

2) Models will be constructed primarily using paper tubes, wire, cardboard, and other reusable materials. Please provide an estimate of how many tubes you will need (they are 2.5 feet long and 2.5 inches in diameter), and what other materials you plan to use for your model.

Number of tubes: _____ Other materials: _____

3) Attach a Sketch of your model

If the plan for your model changes or you would like to request more materials from the list of provided materials, please email Heidi Rushing at hrushing@austincollege.edu.

****This sheet due to Heidi Rushing by Wednesday, February 18, 2015 by 5 p.m.**
Forster Rm. 202, Suite #61603**

Design Challenge

Case Studies

Case Study 1

In a village in Bhutan, an avalanche has destroyed many homes, farms, a blacksmith shop, a butcher shop, and the local temple. The destruction, particularly of the temple, has left a hole in the community's morale.

Case Study 2

A group of civil war refugees have settled in a small village in Rwanda. With little hope of returning to their homeland, it has become clear that the people need houses, schools, meeting centers, and market places. Spirits are low, especially for young people who have nothing to do to occupy their time.

Case Study 3

A severe drought has hit the villages in the Andean Mountain range in Peru. They've lost all crops and need a way to replenish the food stores they've lost to be able to feed the people of their community until the rain starts to come down again.

Case Study 4

During the most devastating winter in Sherman's history, a severe ice and snow storm blows through and prevents Austin College students from leaving town. Several buildings, including residence halls and classrooms, were damaged by the weather and are temporarily uninhabitable. The Sherman Animal Shelter has also been damaged, and they have reached out for help in housing their animals.

Case Study 5

If none of the previous case studies interest you, you may come up with your own situation and response to it. Because this is a wildcard case study, you must explain the situation and response in such detail that your audience understands why you have built your structure, facility, or item.



Your task is to create a structure, facility, or item that will meet the needs of the community described in the case study of your group's choosing.

While some case studies call for certain buildings, below is a list of possible structures, facilities, or items your group can choose to construct. Feel free to move beyond what is listed below if your group thinks of a better solution to your chosen case study.

- Greenhouse
- School
- Community center
- Livestock/pet facility
- Furniture
- Recreation facility/equipment
- Place of worship (church, temple, synagogue, mosque, etc.)
- Kitchen/food preparation facility
- Retail shop building/ market place
- Restrooms/bathing facility
- Dormitory/Residence Hall

Remember, this challenge is intended to encourage creativity of design and inclusion of materials that could be found in the areas in which you are constructing a structure, facility, or item. These things could be recycled plastic, metal, glass, cardboard, or other things your group finds around campus or the Sherman area. For more ideas, check out Shigeru Ban's website, <http://www.shigerubanarchitects.com/>.

Contest Guidelines

There are two parts to the contest: a written description of your project and the model itself. **Both parts should be turned in to Heidi Rushing by Friday, March 20th at 5 pm in Forster Office 202.**

The projects will be judged by outside judges who are experts in related fields according the following criteria:

Models: Overall Design (10 points), Execution/Craftsmanship of Model (10 points), Use of Materials (10 points).

Written Statement: Response to Case Study (10 points), Explanation of design and materials, including sketches (8 points), a picture of your team with the finished model (2 points)

Bonus: Submit photos or videos of your team and the model during the construction process (5 points).

The Art Department will host a workshop to teach you how to use the tools and give you some tips on dealing with the materials, **date and time TBA**. Once your team is registered, team members will be given access to Forster room 214, where you can build your models. Tools and materials will be available in room 214 or by asking Heidi Rushing (hrushing@austincollege.edu, 903.813.2048, Forster 202) during regular working hours.

The following materials and tools are available, but other recycled or reused materials are welcome.

- Paper tubing
- Bolts/ screws
- Wire
- Hot glue gun
- Cardboard

Each model or item should be a minimum size of 2 feet by 2 feet and should use the materials provided, recycled/reused materials, or a combination of those. The final product that will be turned in will need to include your group's model and design project statement (see next page of this packet).

Things to consider and include in your design and statement:

- Appropriateness of design for chosen case study
- Functionality of structure/design
- Preparatory drawing(s) that help explain the structure
- Foundation minimum of 2 ft x 2 ft
- Craftsmanship of model
- Overall appearance of model
- Efficient and/or creative use of materials
- Additional materials are reused, recycled/able, sustainable
- Logical correlation between materials used in model and real life equivalents

Design Challenge Project Statement

Attach a statement for your team that addresses the following (to be turned in FRIDAY, MARCH 20, 2015 by 5 p.m. with your group's model). Each response should be about 200 words.

Group/Organization: _____

Contact person, phone number, email address: _____

Model Title: _____

Case Study: _____

A. Response to Case Study

Tell us, for your chosen case study, what type of structure your team chose to design, and why. What need will your structure fulfill in the community? Who will use it?

B. Explanation of Design

Explain the particular design features of your structure, what materials you chose for the model, and what materials these would represent if the item were actually built for real-life use. Include sketches of your design that might help explain its features. Also include a picture of your group with your finished model for the remaining 2 points.

*****Bonus:** Include photos or videos of your team with the model from start to finish for 5 extra points! Send photos or videos to Heidi Rushing at hrushing@austincollege.edu or attach photos to finished model when it is submitted.