



Education Kit

Notes for teachers

Design Project - Cardboard Stool

What is 3D Design?

'Three Dimensional Design is most readily defined as design which creates those wonderful objects we interact with in our daily lives and which enable us to accomplish things beyond our natural abilities, or achieve them more quickly, more accurately, more often, or which give us pleasure and enable us to live in comfort...Three dimensional objects abound in our lives and well-designed objects can change the way we feel about ourselves and the task at hand. They can enable us, enhance our performance, define our image to the world and become prized possessions and future heirlooms. These are the artifacts, the useful art of our age.'

DIA Queensland Branch. (2009). *queensland design on show 2009 – Winners Unleashed Exhibition Catalogue*. Brisbane: DIA Queensland Branch.

When designing a piece of furniture we need to consider and understand the following:

- The 'User' - WHO will be using the item?
- The 'Function' of the item - WHAT will the item be used for? WHAT is its life span?
- The 'Aesthetics' of the item – WHAT will it look like?
- The 'Context' of the item - WHERE will it be used?
- The 'Ergonomics' of the item – HOW can we make it comfortable for the user?
- The 'Environmental Impact' of the item – HOW can we reduce waste by using naturally decomposing materials or adapting existing products?
- The 'Concept' for the item – WHY do we need a new design for a stool and why would people want to use it?

Understanding these design issues helps us to develop awareness of design within our environment and helps us to become more discerning consumers as we search for products that best suit us and the function we wish them to perform.

In the exhibition *unleashed – queensland design on tour 2010*, there are many types of objects made specifically for seating. They are made from all sorts of materials, to suit many different activities and users. The *Void Furniture* stool, created by a group of Queensland University of Technology School of Design students, uses found objects (coat hangers) in its construction. The concept of using found objects from home forms the basis of this design activity.

Discussion/Introduction Activities

- Ask the students to draw a chair, any chair that pops into their mind. It could be from home, school or anywhere.
- In small groups, have the students discuss the chairs that were drawn. Who uses these chairs? Where can they be found? i.e. lounge room, classroom, kitchen, theatre etc? What are they made from? When you sit in that chair what activity are you doing?
- In small groups, have the students brainstorm a list of as many places as they can think of that have chairs, and share their findings with the class. Explain what sorts of chairs are found in these places. What are they made from?
- From magazines or the internet, find images of chairs and stools and stick them onto butchers paper to display in your classroom. The idea is to start to understand that there are hundreds of different types of seating options available, and that primarily it is the function that governs size, shape, materials and look.

Activity Description

Students will need to have brought cardboard boxes and string from home, preferably items that were going to be thrown out anyway, rather than purchased specifically.

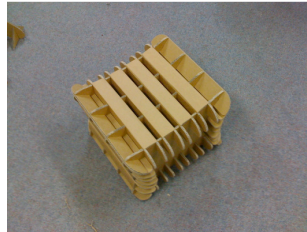
- In small groups, design a stool for a classroom reading space. The stool needs to be able to support the weight of one person and needs to be safe, easy to use, and look fantastic!
- You are only to use the materials noted below to create your stool. Please note that sticky tape can look messy, so only use a little bit and try to hide it, either inside or under the stool.
- Before students start, it might be necessary to go through some construction techniques with them. The following list covers a few techniques that can be achieved without the use of Stanley knives:



unleashed

queensland design on tour 2010

**wrapping
slotting
tearing
stacking
folding
tying
lacing**



Images courtesy of
QUT School of Design

For inspiration look at the following websites for ideas on construction techniques and design ideas:

<http://www.leokempf.com/cardboard.html>

<http://www.designboom.com/cardboard.html>

www.kartonart.eu/

<http://www.foldschool.com/>

<http://www.designboom.com/cardboard3.html>

<http://notbeige.wordpress.com/2009/06/06/repurposing-roundup-cardboard-furniture/>

- Once all the stools are complete, have volunteers test the effectiveness of the stool by sitting on them and as a group evaluate them against the Design criteria i.e. consideration of the 'User', 'Function', 'Aesthetics', 'Context', 'Ergonomics', 'Environmental Impact' and 'Concept'.

Materials

- A variety of corrugated cardboard boxes of all sizes
- String, wool or twine in a variety of colours
- Scissors
- Sticky tape

Outcomes

- Students will have a better understanding of their own thinking processes
- Students will gain an insight into the world of professional designers and their responsibilities as consumers
- Students will be able to evaluate the effectiveness of design decisions and will be able to determine what elements could be improved to enhance their designs
- Students will experiment with a material's properties and various construction techniques

Extension Activities

- Produce a brochure for your stool highlighting its uses and features
- Produce an advertisement for your stool to go in a glossy interior design magazine

Useful Design Links

<http://www.design.org.au>

<http://www.thecoolhunter.com.au/>

<http://www.dezeen.com/>

http://www.stylepark.com/srv.do?op=show_products&doctype=produkte&choices=pgroup:prd_pgroup:wohnbembel_pgroup:sitzmbel&site=stylepark&lang=en

<http://www.interiordesign.net/newproducts/34099.html>

<http://www.architonic.com/pmpro/stools-garden-terrace/3220306/2/2/1>

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