TRASH STOOL
(Initial project for Sustainable Design)
INTERIOR DESIGN LEVEL 2/3

ESSENTIAL QUESTIONS

What can we do with an excess of stuff?

How would you design a stool from disposable materials that is both functional and has strong visual appeal?

What is trash – disposable versus recyclable?

SUMMARY
Working in teams, students will design and create a full scale model of a stool constructed from disposable/recyclable materials.

STANDARDS

ART
Create, Present, and Perform

- Apply the use of ideas, techniques and problem solving to the creative process and analyze the influence that choices have on the result.

- Explain the choices made in the creative process when combining ideas, techniques, and problem solving to produce one's work, and identify the impact that different choices might have made.

HISTORICAL AND CULTURAL PERSPECTIVES

- Understand the relationship of works of art to their social, historical and cultural contexts, and the influence of the arts on individuals, communities and cultures.

- Explain how works of art from around the world reflect the artist's environment, society and culture.

CAREER RELATED LEARNING

TEAMWORK
Demonstrate effective teamwork through a multi-step problem
PROBLEM SOLVING
Apply decision-making and problem-solving techniques through the design of a piece of furniture in response to a specific set of requirements.
EMPLOYMENT FOUNDATIONS
Illustrate an idea through design sketches and model making.
Demonstrate an awareness of creative design practices around reusable objects.
COMMUNICATION
Communicate ideas visually and through oral presentation

OREGON SKILLSETS: Design and Pre-Construction

Apply the basic principles of environmental impact to enhance project acceptance and quality.
- Evaluate and align sustainable design elements to add value to the project.
- Integrate sustainable elements into project designs.

●Apply appropriate representational media to convey essential formal elements
LEARNING OBJECTIVES

■**Students will:**

■Begin to develop and defend a definition of "green/sustainable" design as applied to reused materials.
■Design a product based on reused materials.
■Create a model, sketches and storyboard to demonstrate their design process.

ACTIVITIES:
Day 1
Basic pre-assessment:
In their journals students will define:
■Sustainable Design
■Green Design
■Identify some examples of each that they are familiar with

Pose the problem, research and begin to brainstorm: Design a functional and visually appealing stool out of throwaway/recyclable materials
■Have students partner up

■ What happens to stuff? Show landfill images

■ How will we determine throwaway versus recyclable? Will we want to use recyclable materials? Show different materials and have the students decide? (Show cardboard, newspaper, water bottles, wire reels, plastic "curlers", tape holders, fabric sample books...)

■**DEFINE THE PROBLEM:**
Design a stool made of throwaway /recyclable materials/objects.
■Must use the main material repetitively or more than one material.
■Needs to be functional
■Needs to be visually appealing

Material criteria:
■Must be things that you can manipulate with the studio tools. (Drill will be available.)

■ Come up with a definition of a stool. – show examples of concept stools. What size should a stool be? Measure chairs in room.

■What are people designing ? – show examples

■Resources online:
http://www.home-designing.com/2009/03/recycled-chairs

http://weburbanist.com/2009/01/13/20-stool-designs/

■Teams to build a collection of inspirational images and brainstorm materials they

could use.

■ Create six quick idea sketches. Give each one a name.

■ Go public. Each team to have a section of the bulletin board with butcher paper. This will be used to explain the evolution of their design. Essentially students will be generating a design storyboard as they work.

■Develop criteria during presentation:

■How will we know if the stool is functional?

■What determines visually appealing?

■Are the designers using throwaway/recyclable materials?

■"Homework" Students to bring in samples (if not complete quantity of materials they are thinking of using.

Day 2

Test the materials:
■What are the properties of the material? What can you do with it? I.e. Paper can be cut, folded, rolled, crumbled. What haven't you thought of? **Save the ideas?**

Refine the design:
■Finalize a name

■Create additional small sketches as you change your design. Identify why you are making the changes.

■Create full size sketches of your stool – plan and elevation or perspective

■Go public. Present and receive feedback. Evaluate with the three criteria

Day 3/4
Build the full size model

Finish the displays

Present

Assessment:
Does the final project meet the basic criteria?
Can designers defend/explain their material choices and design process?
Can designers explain if their material is disposable or recyclable?

Final product - model and display of process

Oral presentation

Peer to peer feedback

Materials: *(Besides existing studio materials)*
Examples of "throwaway" materials
Tape measures
Drill and bits
Glue guns
Super glue

SCRAP is a possible source of materials.