Slice Project - Miniature Car Name_____

Prototype

Prototyping is part of the design process. Designers create prototypes to test a design and to improve the precision and functionality of the design.

Stacked slicing

Stacked slicing is a prototyping method in which 2d plans (called a ***cut layout***) are created and then stacked to create the object in 3D form.

Project Brief

We will apply the stacked slice method to prototype a car.

Day 1: Create a Cut Layout

First a cut layout will be created using the program *123D Make* (CAD software designed specifically for slice prototyping), then exported as a PDF. Slices will be cut precisely using the laser cutter (This last step will be completed by your teachers after school today - you're invited to come and view the process!)

Day 2: Assembly

Day 3: Complete assembly and final presentation

Material

We will be using 11" x 17" chipboard which has a thickness of 1/16" (0.0625")

Instructions for Day 1

1. Open **123D Make**
2. Click Import car design file in the **Open Example Shape tab.**
3. Under the **Construction Technique** heading in the left sidebar, choose **Stacked slices** option. You will see your model sliced.
4. Now you need to set the material size and thickness. Under the **Manufacturing Settings** in the left sidebar, click the dropdown and select **Custom Size**.
   - set your board to *11" width x 17" length* and *a thickness of 1/16 inches (0.0625 inches)*
5. Discuss within your group which axis to slice along. Adjust the **Slice Direction** by clicking on the **blue arrow** above your model.
6. Once you finalize your slice direction and scale appropriately (your model should be 5.5 inches in length), click **Get plans. Export the pdf and save to your 3D Modeling folder.**

Final presentation date

Wedesnday 6/4

Pd3 @11:00 am

Pd4 @11:50 am

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