2 and-a-Half D CAD using PowerPoint - Handout

Dave Ackmann – Gateway Division NMRA, August 2021

3D printing for model railroading is difficult, because it requires 3D Models.
3D models are built only with sophisticated 3D modeling software.
Unless you know PowerPoint and a tool to convert 2D objects into 3D Models, then it is relatively easy.

Use PPT's "Insert Shape" function to add a rectangle, circle or other shape to page.
Right click on shape, then on "Format Shape", then on "Size and Position" to alter size or rotation angle. Add additional shapes as desired.
When done designing, click on "File" tab, then "Save As" to save page as PDF.

A PDF is useless for 3D printing, but it can be converted into a Stereo Lithography file, which is immensely useful for 3D printing.
Open http://www.anyconv.com, click on "Choose File" button and select a PowerPoint PDF. From pulldown menu, select "STL" as target conversion type. Click on "Convert" button and then "Download" button to download 2D shape into Download folder as a 3D model, extruded 20mm tall.
Import 3D STL file into slicer (eg: CURA) and resize as desired for 3D printing.

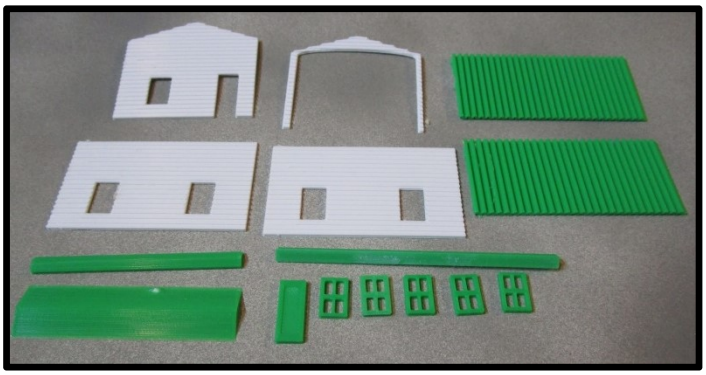
In PPT, shapes can be combined to create "holes", useful for windows and doors.

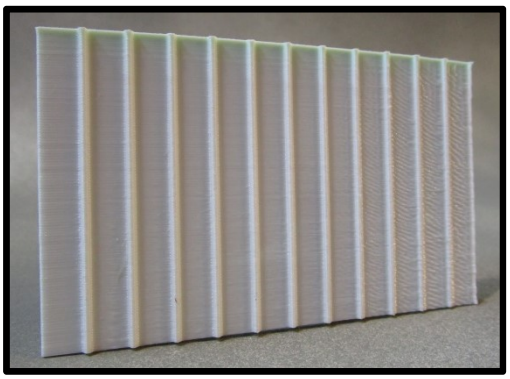
Many uses for extruded 2D objects, such as sign backers, walls, roofing, windows, billboard legs, fencing, trestle bents, rafters and much more.

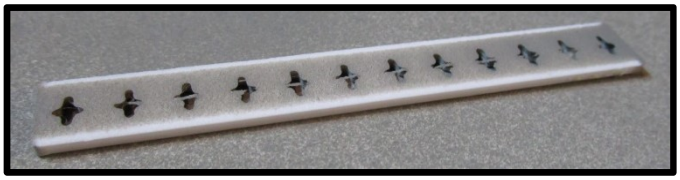
STL files can be modified in TinkerCAD software with 6 minutes of instruction.

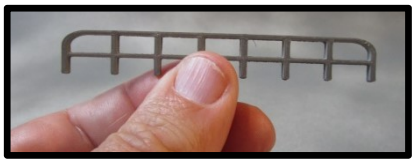
CURA slicer can extrude STL files in "layers", if you know the "M206" trick.

Many sample PPT files at http://daackm.github.io







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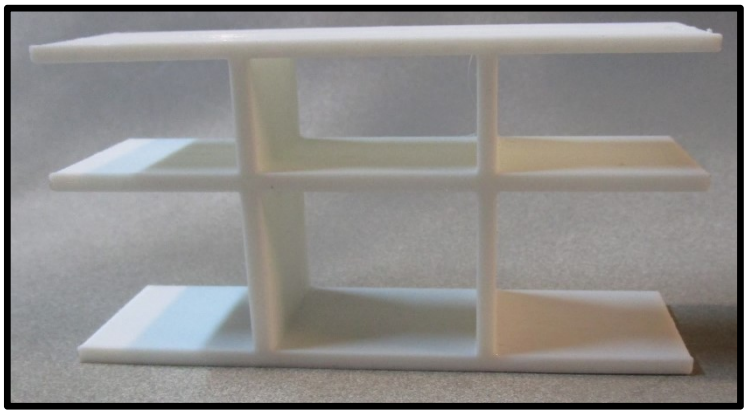
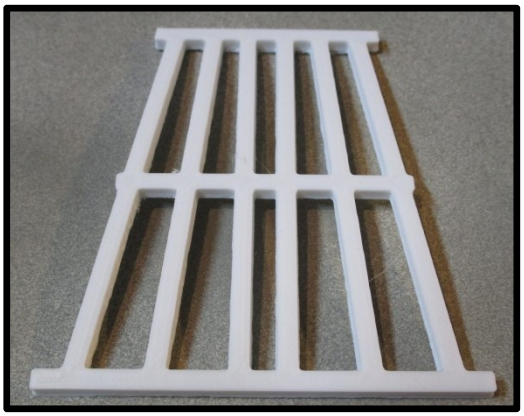
ANHEUSER-BUSCH
SOLD HERE
BIG RED WORMS
Marlboro
Coors LIGHT
WARNING
A WARNING SHOT



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