

CAD/CAM in Syllabus

Science and Technology (stage 3)

Technology (Mandatory)

Design and Technology (stages 4, 5 &6)

Graphics Technology (stages 4, 5 &6)

Information and Software Technology (stages 4 & 5)

Industrial Technology (stages 4, 5 &6)

Engineering Studies

NSW Curricula has many opportunities for 3D printing

Industrial Technology

- Timber, Metal (jewellery), Plastic, Engineering, Electronics

Design and Technology

Information and Software Technology

Visual Arts

But opportunity exists everywhere, e.g. Science molecules, Math's formulae, Fashion accessories

Software

must be able to:

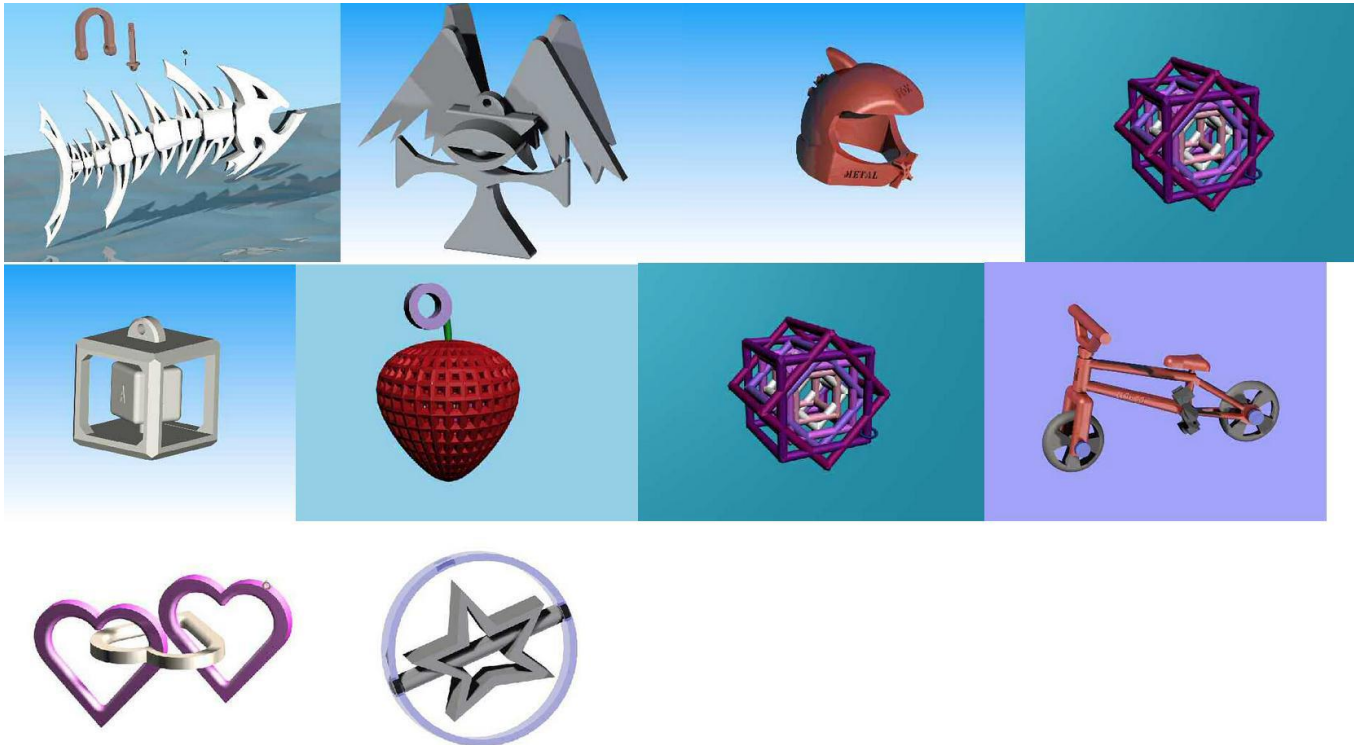
- generate the component as a solid not just a surface
- output an .stl file



3D printing in NSW schools

What some schools are already doing,

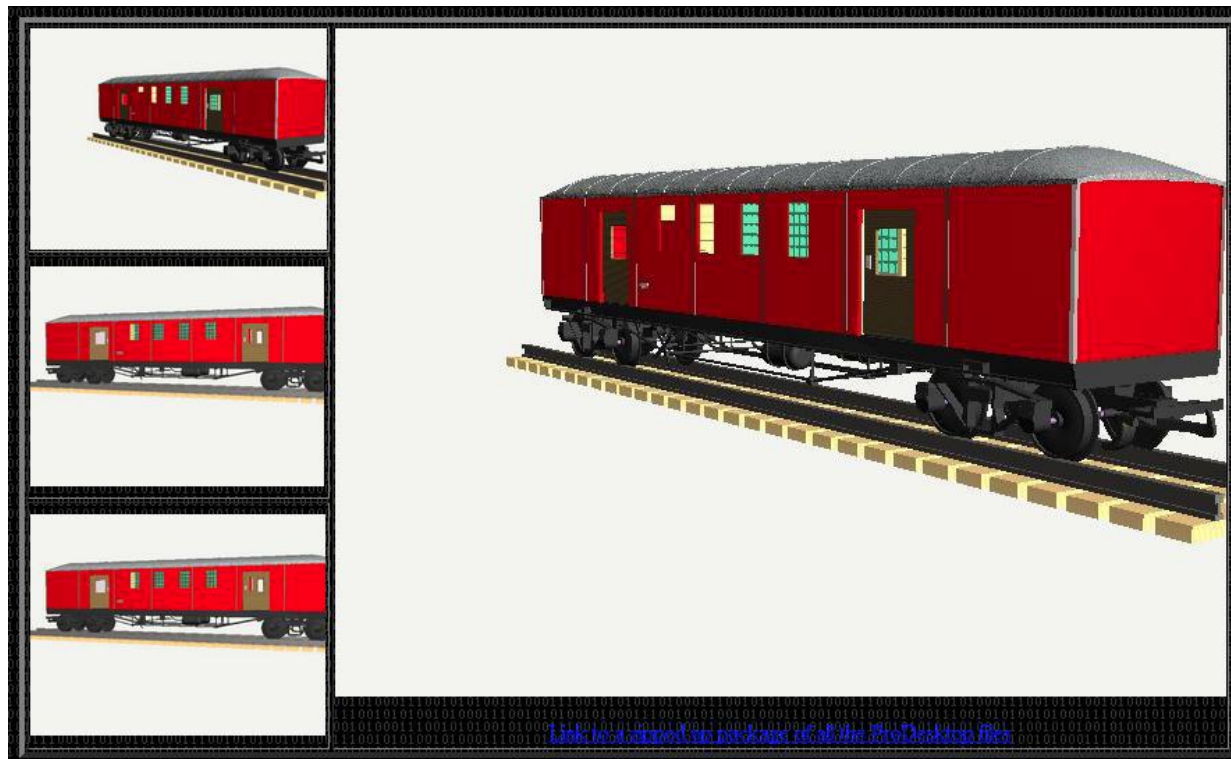
- Design a Bag Tag
- Design a Novelty USB stick
- Design a chocolate for the Japanese Tourist market.



3D printing in NSW schools

What some schools are already doing,

Collaborative Graphics projects - students each draw a part of a complex object.



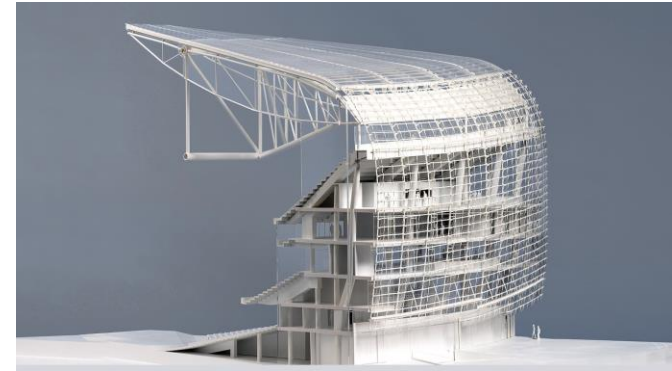
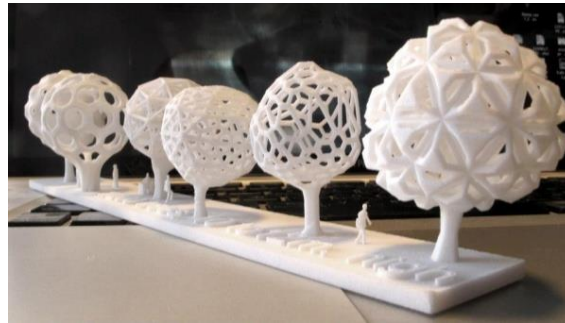
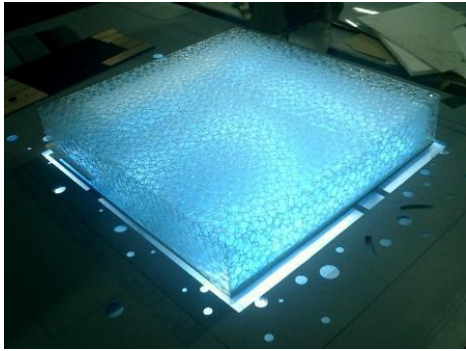
[Link to a series of pages of all the 3D models files](#)

This example was part of an ASISTM project conducted in 2006.

The mail carriage is at Junee where the students from The Riverina Anglican College each measured, drew and modeled an individual part of the carriage ready for printing.

Interesting Ideas

- Architecture
 - Model of Beijing Watercube



- Fashion



Interesting Ideas

- Lighting
- Furniture
- Medical



Not just the End Product

- Plugs for vacuum forming or casting
- Scale models for assessing proportion
- Jigs for tricky angles in furniture
 - marking out and glue up

Outsourcing

- Bossley Park High School hosts the IIATE Dimension 768SST machine – subsidised printing for students FDM, soluble support material, hollow objects, larger parts
- Contact - R. Thompson
- IIATE has 6 small UP printers for loan to schools, pay for freight and a reel of filament.

Contact - J. Perdriau



Outsourcing



Outsourcing

- Local 3d printing studios, negotiated costs



Image References

- <http://www.3ders.org/images/rapid-manufactory-lebenon-8.jpg>
- <http://retaildesignblog.net/wp-content/uploads/2012/12/DENTELLE-3D-printed-lampshades-by-Samuel-Bernier.jpg>
- http://3dquickparts.com.au/public/editor_images/water_cube.JPG
- http://www.eyebcam.org/sites/default/files/imagecache/node_top/projects/images/compufashion.jpg
- http://www.magicmodel.co.uk/wp-content/uploads/2014/01/Magicmodel_SLS_Architecture_in_3DPrinting.jpg
- <http://wpc.4d27.edgecastcdn.net/004D27/2013/ProjectRunway/ProjectRunwaySeason12/PRS12E13/PRS12E13RWL+6.jpg>
- <http://www.2014interiordesignideas.com/wp-content/uploads/2014/02/printed-furniture-bigrep.jpg>
- <http://weburbanist.com/wp-content/uploads/2013/07/custom-3d-printed-cast.jpg>

Want more info?

- Contact me at:

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