



Outreach sessions: 3D printing and Laser

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During this session young people will be continuing to develop skills in design for 3D printing and laser cutting.

The plan

One young person is bringing in her art work and another young person was keen to continue to add designs to the 3D car print that they did in the previous session. If any other young people attend we will run them through a catch up 3D printing session.

The steps are:

Bring the group back and share 2 other ways to design

Working with own art work

1. Take a photo of the art work. Save and drag into Adobe Illustrator.

Select 'one colour logo'

Expand

Select the object and make smaller

Save and export for printing on the laser.

For young person 2

2. Go to Thingiverse <https://www.thingiverse.com/>

Download a design (explaining that it creative commons)

Import as stl to Tinkercad

Getting designs to Up mini:

- Export from Tinkercad and save to a usb
- Turn 3D printer on at the back
- Place perf board in
- Go to the computer attached and to *Up Studio*
- Go into Up
- Hit initialise button

- Click + (add)

- Go into maintenance and extrude (gets it working) Check the plastic that comes off this that it is smooth and thin

- Explain the following: ABS plastic (same as Lego), 1 in 7 prints fail, The nozzle heat needs to get up to 270C, explain how the plastic travels from the roll down to

the nozzle.

- Start the job (be sure to click 'easy...')