

Tool Proficiency Project: *Objet 3D Printer*

Instructions for Lab Assistant:

Before You Begin This Proficiency Assessment:

You must have been certified on the Fortus and Dimension before starting on this assessment

- Watch the training videos:
 - Determining which 3D Printer - <https://www.youtube.com/watch?v=82WXI9IGduM>
 - Objet Studio Basics - <https://www.youtube.com/watch?v=xmAKVHW0FIA>
 - Printing with multiple materials - <https://www.youtube.com/watch?v=7Fpxd3kxgm8>
 - 3D Printing Injection Molds - <https://www.youtube.com/watch?v=mIJ-vgDZ0Rw>
- Read and understand instructions associated with the equipment

YOUR TASKS

- Print the sample file with two different materials
 - Scale to use (NN) grams of model material
- Remove the support material from your part
- Explain how to replace the print and support material in the printer
- Be able to explain part orientation, support material, glossy versus matte, and what they have to do with finish and strength

Proficiencies to Demonstrate:

Load an STL

Orient simple object using a face

Locking orientation of a single object

Select material

Explain material properties:

How do the various print materials differ?

What do different materials do better or worse?

Export / Import an assembly

Designating multiple materials in one assembly

Hollowing an object (filling with support), overprinting of other materials

Pack a build plate

Start the print job

KVM swap

Take printer online

Cleaning build platform

Part cleanup and use of power washer

How to replace materials and check supply levels

Why we don't swap materials all the time

Glossy versus matte: differences between settings