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