

Fab Print Room Orientation

This document outlines the necessary steps for those who are to be trained on 3D printers in the TSD FAB PRINT ROOM. This training plan must be completed prior to gaining authorization to operate and maintain our various TSD 3D printers. This orientation plan does not implicitly grant authorization to members who satisfactorily complete it. It only allows said team members to be designated as authorized operators of specific printers as seen fit by our leadership.

Day 1

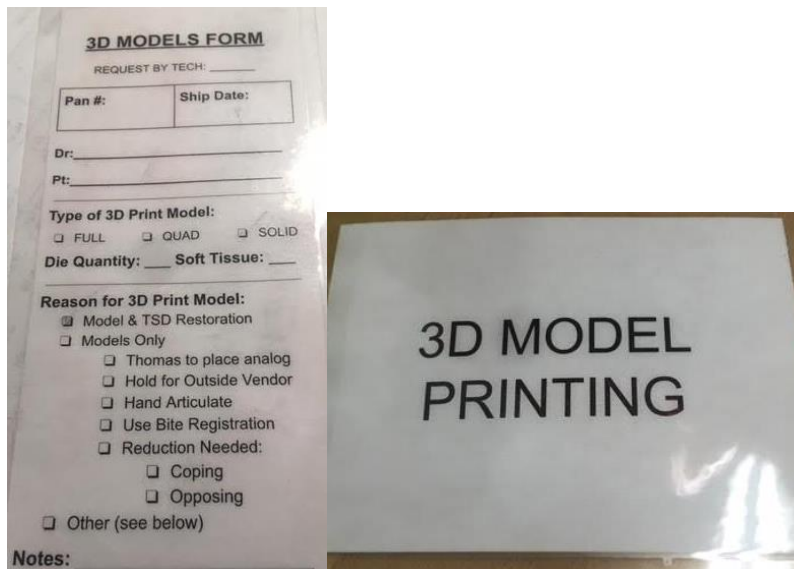
Background and Basics

[MIT 3D Print Video](#)

Physical Orientation in TSD FAB 3D Print Room

General talking points –

Basic flow of print jobs in and out of our room



The image shows a '3D MODELS FORM' on the left and a sign on the right. The form is titled '3D MODELS FORM' and has a section for 'REQUEST BY TECH:'. Below this is a table with 'Pan #' and 'Ship Date:'. There are fields for 'Dr:' and 'Pt:'. The 'Type of 3D Print Model:' section has checkboxes for 'FULL', 'QUAD', and 'SOLID'. Below this is 'Die Quantity: ___' and 'Soft Tissue: ___'. The 'Reason for 3D Print Model:' section has checkboxes for 'Model & TSD Restoration', 'Models Only', 'Thomas to place analog', 'Hold for Outside Vendor', 'Hand Articulate', 'Use Bite Registration', 'Reduction Needed: Coping', 'Opposing', and 'Other (see below)'. At the bottom is a 'Notes:' section. The sign on the right is white with black text that reads '3D MODEL PRINTING'.

Kinds of prints –

Models

Wax Rims

Custom Trays

Emax / PFM crowns

Frames

Surgical guides / jigs

Night guards

Dentures

Introduction to each printer type and make in our room

FFF - Creality CR10

SLA - Formlabs Form3

SLA - envisionOne cdlm

Jetted Material - Stratasys Objet

SLA - Carbon M2

SLA – HeyGears A2D4K + HIVE

Overview of processes of each printer

Creality CR10 – Design, nest/convert, print

Formlabs Form3 – Nest, print, post process / cure

Carbon M2 – Nest, print, post process / cure

envisionOne cdlm – Nest, print, post process / cure

HeyGears A2D4K + HIVE – Nest, print, post process

Basic terminology

Supports and associated dimensions / variables

Base / raft and associated dimensions / variables

Materials and associated characteristics

Quiz

Day 2

Detailed Training on simple post processing / curing

Clean as you go process fundamentals

Formlabs Form3

Carbon M2

HeyGears A2D4K + HIVE

envisionOne cdlm

Quiz

Day 3

Basic daily maintenance / upkeep on printers / machines

Utilizing maintenance and equipment board basics

Formlabs Form3

Carbon M2

HeyGears A2D4K + HIVE

envisionOne cdlm

Clean as you go process review

Weekly maintenance / upkeep on printers / machines

Formlabs Form3

Carbon M2

HeyGears A2D4K + HIVE

envisionOne cdlm

Quiz

Day 4

Basic setup, nesting, and misc.

Formlabs Form3

Carbon M2

HeyGears A2D4K + HIVE

envisionOne cdlm

Creality CR10

Clean as you go process review

Common defects and mitigation

Proper documentation of defects and troubleshooting efforts

Quiz

Day 5

Live run and final test.

Envisiontec cdlm and/ or HeyGears A2D4K + HIVE certification tests upon management request.