

## **SERVICE LEARNING WITH 3D PRINTING**

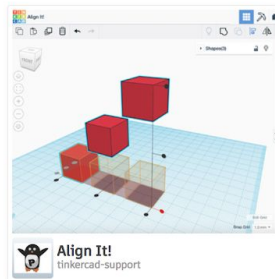
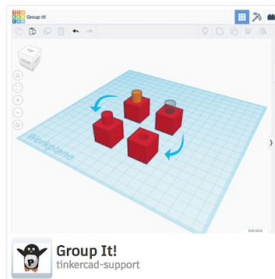
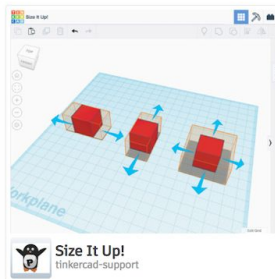
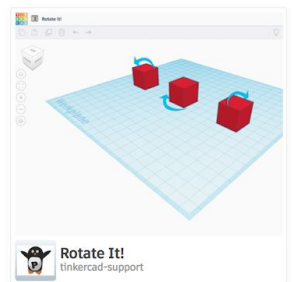
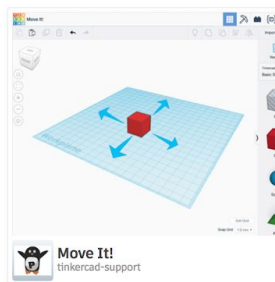
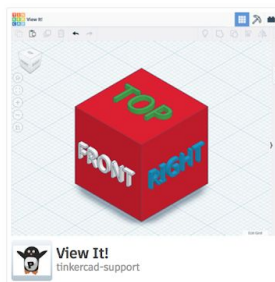
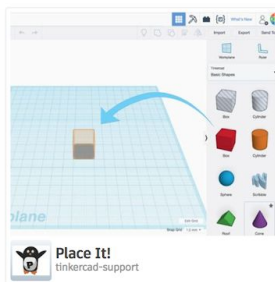
So you want to learn 3D printing? GREAT! It can be used for inventing all sorts of exciting and interesting things. In the Marymount printing lab, we use 3D printing to make a difference in other people's lives. We strive to invent tools to make life easier for others. This is your task in the 3D printing lab. To improve life for someone using the skills you'll learn in the lab!

You WILL be inventing something in this lab.

This will be time consuming. Some students can create things in just a couple minutes and others may have to put in several hours to learn enough to be able to design something that can be 3D printed. The skills you need to develop are not difficult. But they do take practice.

To start, go to <https://www.tinkercad.com/learn/designs/learning> and complete the 7 3D STARTER Lessons. Those teach you skills in manipulating 3D objects.

### **Start learning 3D**

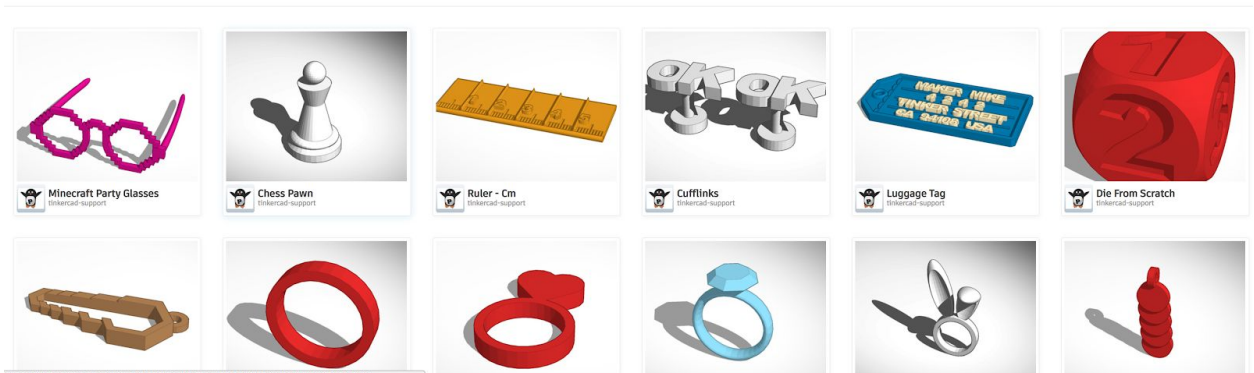


[Show all 3D Starters](#)

Next, you should choose ONE 3D LESSON

(<https://www.tinkercad.com/learn/project-gallery:collectionId=O2C1PXBIQ2KHCOD>) and complete a design from beginning to end. This will be your first, fully modeled 3D design, so choose something fun! The screenshot below is just a sample. If you scroll on the webpage you can see more options.

## Tinkercad Basic Skills



Once you've completed the above, you can start thinking of how to make a difference in someone's life. Start pondering what kinds of items you may be able to invent that can solve some sort of problem. This is NOT easy! You'll have to possibly be creative. Think about your own life and people you know and brainstorm. Talk to friends, family, professors, employers, classmates and come up with 5 ideas on things you could invent. Looking for inspiration? Try google! Once you have some ideas, take your newfound skills and visit the following google form to get started on your service project:

[https://docs.google.com/forms/d/1RTVXZxj08n83c1kGMQFt\\_PwhOWwFPodC-\\_CXNkSDSd0/e/dit](https://docs.google.com/forms/d/1RTVXZxj08n83c1kGMQFt_PwhOWwFPodC-_CXNkSDSd0/e/dit)

This will ask you some questions to guide you in how to create something. Its a place to submit your ideas HERE for something that you'd like to see 3D printed to help someone or something! There are a HUGE variety of ideas you can submit. You don't NEED to have a design. It doesn't NEED to be an original design. All you need is an IDEA to submit that can help make life easier for someone else!

You have THREE paths at this point:

- 1) If you don't have any ideas, go back and keep thinking. This isn't rocket science!

- 2) If you have an idea and DON'T KNOW how to make it reality, fill out the google form, request a consultation with Dr B in the form AND email Dr B directly ([ebubar@marymount.edu](mailto:ebubar@marymount.edu)) with some days/times that you can meet with him.
- 3) If you have an idea and think you can design it, GO FOR IT. CREATE/INVENT something new!

Once you've got a design invented, email it directly to Dr B (this video should show you how to do that - [https://www.youtube.com/watch?v=Wn\\_x1TAd70Y](https://www.youtube.com/watch?v=Wn_x1TAd70Y)). He'll take a look, offer suggestions and then we can get to printing!