

3 Day Awesome 3D Assignment: Make 1 and Make 2

Due Tuesday/Wednesday October 26/27, 2021

Design an original, unique, interesting 3D object in Tinkercad. The object must meet the following criteria:

1. It needs to be original. Meaning, you created it in October 2021, you didn't copy any part of it from anyone else or from something you made previously.
2. It needs to be non-trivial, meaning it took a lot of effort to create. Your work must span over at least three days of working on it (not three full days, but three different days of working on it.)
3. It needs to be really cool and interesting.
4. You may not use more than 2 items from the "characters" type of shape in Tinkercad. You may not use any items in the CIRCUITS or PRINTABLE KITS categories.
5. The object does not have to be printable - this assignment is just to make something super cool. If you want to print it, we can try to do that but printing the object is not a requirement for this assignment. Talk to me if you need advice on making something printable (I give you a few tips on the next page, too.) Just make something super cool.
6. Right away please rename your project in Tinkercad to " yourname - awesome 3D creation". I will not give you credit for this assignment if you turn your project without your name in the title.
7. After the first day of working on this, open a new Google Doc. Write the day and date (for example, Tuesday 10/19). Write a few lines explaining what you are making and what you got done today. Go back to Tinkercad, orient your creation in a clear way, then take a screen shot (Shift-Windows-S) of your project, go back to the Google Doc, and paste it.

After the second day of working on this, go back to the Google Doc, after your pervious entry, write the new day and date and then write a bit more about how things went this day, take a new screen shot, and paste it after your notes.

After the third day of working on this, go back to the Google Doc, after your pervious entry, write the new day and date and then write a bit more about how things went this day, take a new screen shot, and paste it after your notes. Include a share link to your creation at the end.

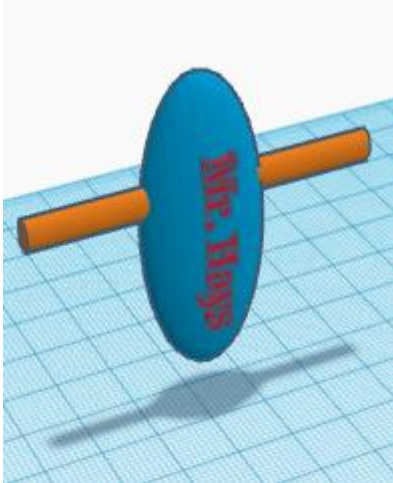
Tinkercad automatically saves your work as you create it, so no need to download or save or turn in anything until you are finished, just document your progress each day that you work on it with some notes and a screen shot.

When you are finished, turn in the Google Doc containing you work history and the share link and turn it in to the Google classroom.

We aren't printing most of these: the main idea is to make something that looks really cool in Tinkercad using the 3D design environment. If you want to make something that you can print, see my printing tips on the next page.

Printing tips

If you want to print your creation, we can give it a try if your object is printable. Printing is not a requirement. Also, it is very easy to create objects in Tinkercad which our printers cannot print. Things to avoid if you are wanting to print are thin branches or arms, or huge overhangs, things that are not touching the build-plate, and text. Here, for example, is a very simple creation that shows all three problems I just talked about:



1. The blue part is not touching the work plane. That is a problem. Try not to build things that are above or below the work plane.
2. The horizontal bar is all overhang. 3D printers are OK with a little overhang, but this wouldn't turn out well. Overhanging things are particularly difficult to print if they are thin. Most 3D printers can do a 45 degree angle with no problem. I'm not saying we can't do overhangs, but thin or huge overhangs are problematic.
3. Finally, the text simply will not print well, it never does, unless you are printing very large things.
4. One last problem with the above creation: it is not "super cool" and would obviously not be acceptable for this assignment; if you need help figuring out what is cool, talk to me. But I think you know what cool is when you see it, so jump in, go for it, have some fun.)