**3 D Printing – Quick Reference**

Design & Prototype

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| 1. Go to [www.tinkercad.com](http://www.tunkercad.com) | | Create a Free Account | | /Users/teacher/Desktop/Screen Shot 2017-04-26 at 1.22.27 PM.png | |
| For some quick lessons select “Learn” on the top left corner.  ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.56.49%20PM | | ../../../Desktop/Screen%20Shot%202017-04-28%20at%203.07.17%20PM  Click on your avatar in the top right corner and  **+ New** to start | ../../../Desktop/Screen%20Shot%202017-04-28%20at%203.05.11%20PM | Click on the strange name to rename your creation.  ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.31.41%20PM | |
| ../../../Desktop/Screen%20Shot%202017-04-27%20at%203.03.15%20PM  Use various solids to design your 3 D objects. Simply drag and drop. | | Any shape can be  A solid ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.17.16%20PMor a hole ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.17.26%20PM../../../Desktop/Screen%20Shot%202017-04-28%20at%202.41.28%20PM  Measurements on the grid are in millimeters. The blue outline = 1cm or 10 mm | | You can adjust the shape dimensions in this box or by clicking on the white squares on each shape.  ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.18.34%20PM../../../Desktop/Screen%20Shot%202017-04-28%20at%202.13.39%20PM | |
| ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.21.35%20PM | Rotate the cube on the top left to see your objects from different angles | This toolbar is quite useful to align, group, ungroup, or flip objects.  ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.23.03%20PM | | When you are done, select  ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.28.08%20PM | ../../../Desktop/Screen%20Shot%202017-04-28%20at%202.30.00%20PM  Select STL |
| ../../../Desktop/Screen%20Shot%202017-04-28%20at%204.14.18%20PM | A copy of your design will be saved in the downloads folder on the dock. | At this point, you will need the slicer software ../../../Desktop/Screen%20Shot%202017-04-27%20at%202.38.36%20PM | | | |

Slice & Print

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| ../../../Desktop/Screen%20Shot%202017-04-27%20at%202.38.36%20PM | | Download  a free copy | This will slice your design in steps the printer can understand. |
| Import your file from the downloads folder. | ../../../Desktop/Screen%20Shot%202017-04-28%20at%204.21.36%20PM | You can make some adjustments which will affect the precision, density and print time.  ../../../Desktop/Screen%20Shot%202017-04-28%20at%204.21.53%20PM../../../Desktop/Screen%20Shot%202017-04-28%20at%204.22.41%20PM../../../Desktop/Screen%20Shot%202017-04-28%20at%204.22.57%20PM../../../Desktop/Screen%20Shot%202017-04-28%20at%204.23.04%20PMand | When you are done, select ../../../Desktop/Screen%20Shot%202017-04-28%20at%204.23.10%20PM |
| This will show you your print time and filament usage.  ../../../Desktop/Screen%20Shot%202017-04-28%20at%204.42.48%20PM../../../Desktop/Screen%20Shot%202017-04-28%20at%204.47.48%20PM the + allows you to insert a pause during printing if you want to change color mid project. Save for print if you are ready. | | | If you are ready to print../../../Desktop/Screen%20Shot%202017-04-28%20at%204.24.40%20PM |

M.Emery FH Collins April 28, 2017

Take your SD card to the 3D printer and print your design.

Learn More

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| ../../../Desktop/Screen%20Shot%202017-04-27%20at%202.15.15%20PM | | www.u.tinkerine.com | |
| ../../../Desktop/Screen%20Shot%202017-04-27%20at%202.26.42%20PM | ../../../Desktop/Screen%20Shot%202017-04-27%20at%202.26.49%20PM | | ../../../Desktop/Screen%20Shot%202017-04-27%20at%202.26.56%20PM |