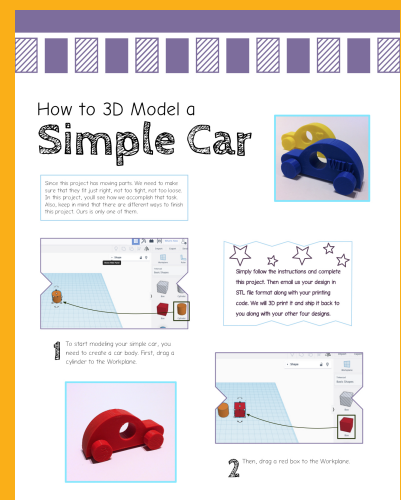
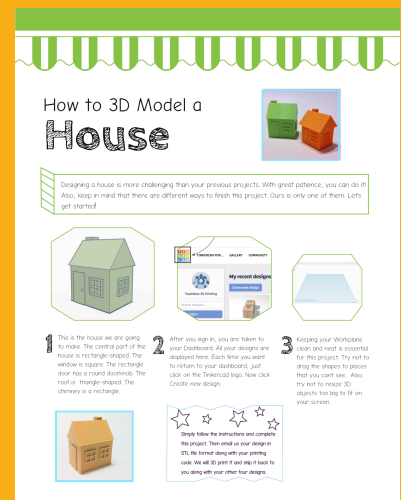
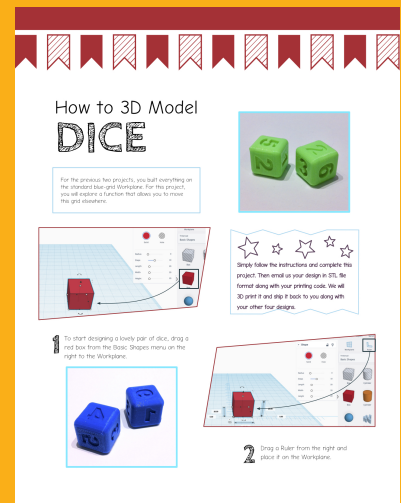
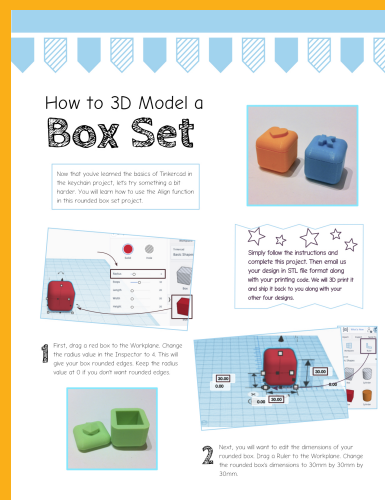
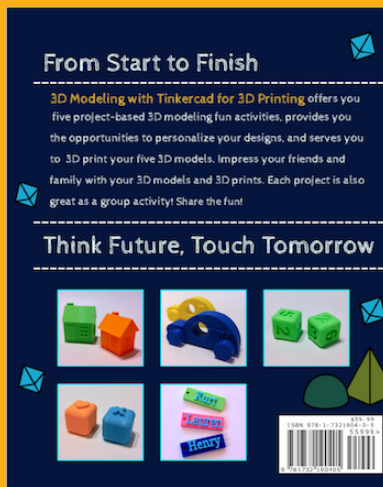
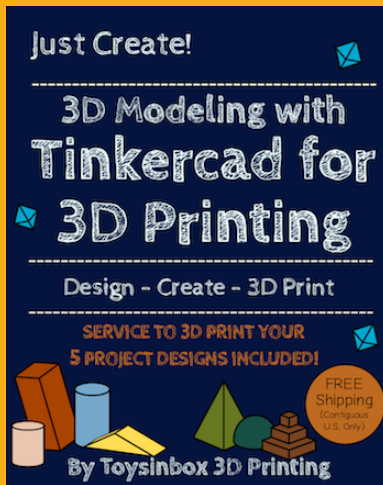


Hello, everyone!

Do you think it's intimidating to design in 3D? Are you interested in 3D modeling but don't have a 3D printer or don't have time to take care of a 3D printer? If your answers are YES, this book kit is perfect for you. Now Look inside the book.





Hello & How To Use This Book

Do you think it's intimidating to design in 3D? Are you interested in 3D modeling but don't have a 3D printer or don't have time to take care of a 3D printer? If your answers are YES, this book is perfect for you.

Using this book, you'll learn Tinkercad, a free and easy-to-use 3D CAD design tool, to quickly create 3D models. We'll use professional desktop 3D printers to print your designs. Also, we'll ship the 3D prints to your address in the 48 contiguous states free of charge. In short, you take care of the 3D modeling, we take care of the 3D printing. What a cool and fantastic experience! Why not join in the fun?

We have been teaching 3D printing and 3D modeling classes and workshops regularly in schools, libraries, and our store since 2014. **3D Modeling with Tinkercad for 3D Printing** contains five projects for beginning 3D modeling. They are classroom tested with elementary school, middle school, and high school students as well as adults. We designed these five step-by-step projects to get you into 3D modeling as soon as possible, from the simple to the complex.

Once you finish the five projects, just email us your design files along with your chosen colors and your printing code.



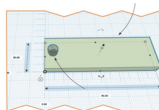
We'll first check your 3D models to make sure they are 3D printable. We'll also add rafts and supports if needed. Then we'll 3D print your designs using professional desktop 3D printers and with the filaments that best match your color choices. Our 3D printing quality is quite good. Next, we'll post-process your 3D prints, such as removing rafts and supports. Lastly, we'll ship the 3D prints to you in 3-5 business days after we receive your design files. Note that your 3D printing code could only be used once.

Requiring only a computer and this book, you can build 3D models of a name keychain in two colors, a small box with a lid, a pair of dice with numbers, a house with details, and a cute toy car. We use 3D printing technology to help you bring your 3D models to life. Also, don't forget to share the fun. When you receive your 3D prints, host a mini 3D printing show for your family and friends.

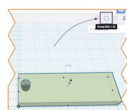
Now it's up to you. Let's start this exciting journey!

3D Modeling with Tinkercad for 3D Printing is a book-based activity kit.

Toycarbox 3D Printing Team



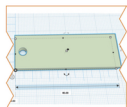
17 Release the left mouse button. You can see that the cylinder and the rectangular base are both surrounded by a light blue line. This means both 3D objects are selected.



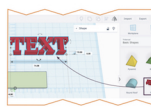
18 Click the Group button in the top toolbar. The Group function allows you to combine two 3D objects into one object.



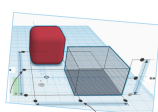
Tip Once you select both 3D objects, don't click anything other than the selected shapes or buttons. Otherwise, you will deselect the two 3D objects.



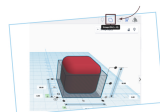
19 Now you can see that there is a hole in the rectangular base. Make sure the hole goes through the rectangular base and that you can see the blue Workplane through the hole.



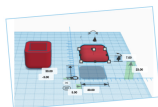
20 Next, you are going to add the text. From the Basic shapes category, find the red TEXT shape. Click-drag the TEXT onto a blank space on your Workplane. Please resist the urge to put the TEXT into the rectangular base.



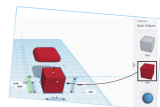
23 Click the center two slots to center the hole box with the rounded base.



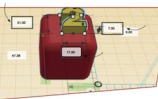
24 Afterward, click the Group button at the top.



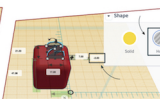
25 Now you should have something that looks like a lid and also fits the rounded base you made in the previous two steps.



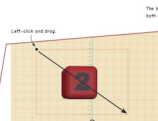
26 But wait, you're not done yet! The lid, if you noticed, has nothing to keep it from sliding off the rounded base. You need to design a piece holder. Drag a red box to the Workplane.



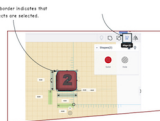
19 Scale up the number 2 lid you did with the number 3 Using Ruler, you can easily make it larger by typing in the new dimensions of 30mm by 30 mm by 10mm.



20 Change the left of Green to 30mm and click on the Scale button in the Inspector on the right.



21 You need to center the 2 on the disc. Select the disc and the number 2 by left-clicking and dragging diagonally across the screen. Both objects should have a blue border around them.



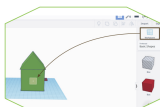
22 Click on the Align button in the top-right corner.



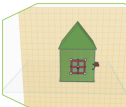
Tip (repeated) If you plan to add a 3D object to a surface that is not parallel with the light blue Workplane, copy the 3D object first. Then add the yellow Workplane helper to the targeted surface.



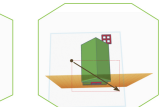
52 First, copy the red window before you add the Workplane helper to the side surface.



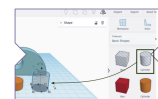
53 Second, add the Workplane helper to the side surface.



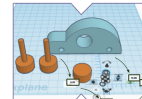
54 Third, click the yellow Workplane and then paste the window.



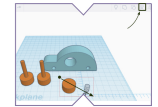
55 Fourth, select the mouse and the newly placed red window to prepare for applying the Align function. Note that you need to select the house and the red window at the same time. You must include the red window in the blue Workplane in your selection.



43 Next, drag a clear cylinder to the Workplane.



44 Now you need another object for the other side. Simply copy and paste (Ctrl + C, Ctrl + V) the wheel to make another copy.



45 Select the two cylinders by left-clicking and dragging. Once both objects are selected, click on the Align tool.



46 Click on the two middle slots to center the hole cylinder with the solid cylinder. Then click the Group button to combine the two objects into one.