

Create your keychain with Tinkercad!



Create your own keychain

Use the cards in this order:

1. Choose the letters
2. Align
3. Change size
4. Create the ring
5. Customize it!
6. Ready to print

Create by  links
PASSION FOR INNOVATION

Inspired by Scratch Card 

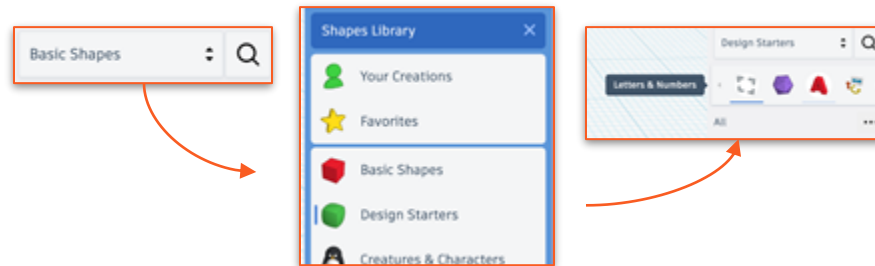
1. Choose the letters

Follow the steps on the side to get what is represented in the image.
You can freely modify the project to your liking!

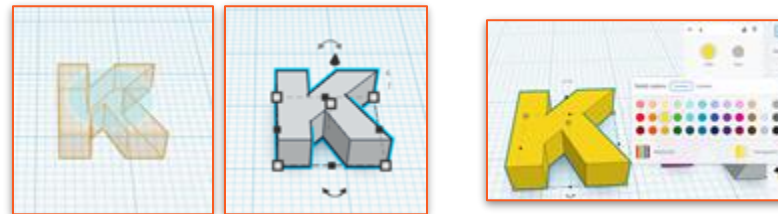


Choose the letters


Connect on tinkercad.com and create a new 3D project. To find the letters and numbers, select "**Design Starters**" in the drop-down menu on the right.



Choose the letters and **drag** them on the workspace. If you want to copy a letter, select it and press *ctrl+C*, *ctrl+V*. Try changing the color too!



How to move around the workspace?

- Zoom in or out from your project by pressing + and -, using the touchpad or the mouse wheel. Use  to change the view angle. For precise navigation, press the right mouse button or hold down *ctrl* and *click* to change the view angle.




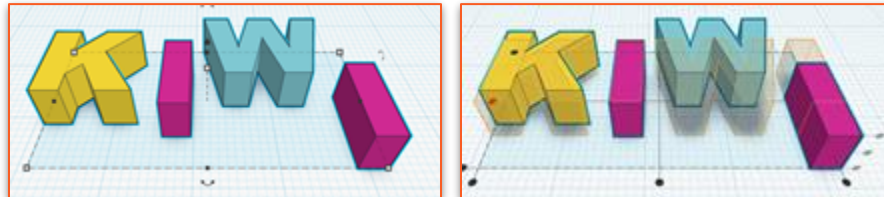
2. Align

Follow the steps on the side to get what is represented in the image.
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Align

Select all the letters and click the **icon**  to align them.
Find out different alignment types by using the different **black dots**.



Place the letters close together: you can also move them using the arrows.

Select all of them and **group**  them together.



Tip: Change the setting of the *Snap Grid* to work with greater accuracy.





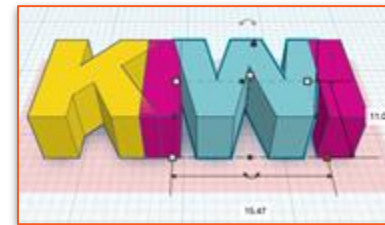
3. Change size

Follow the steps on the side to get what is represented in the image.
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Change size


To change the size of a single letter, *double-click* on the group and select the element, then use the **small squares** that will appear. To maintain the aspect ratio, hold down *shift* while changing the size.



If you want to change the height, use the square in the middle position.



Try it yourself!

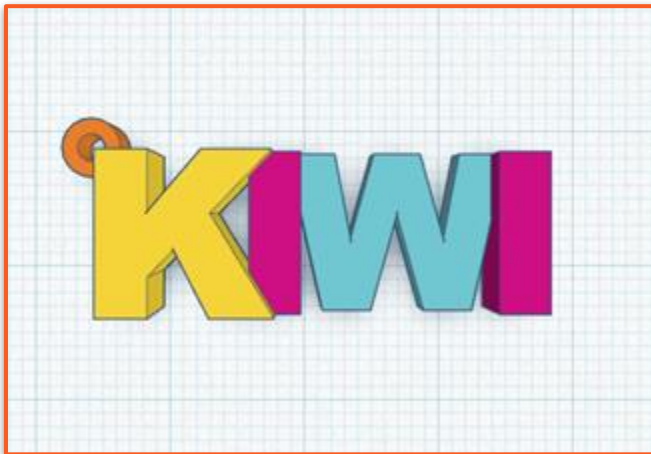
What happens if you act on the arrows  ?





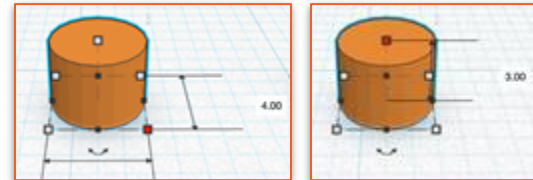
4. Create the **ring**

Follow the steps on the side to get what is represented in the image.
You can freely modify the project to your liking!

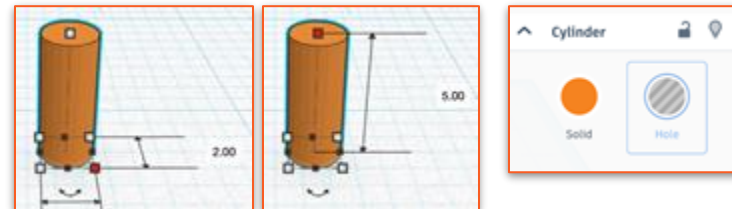


Create the ring

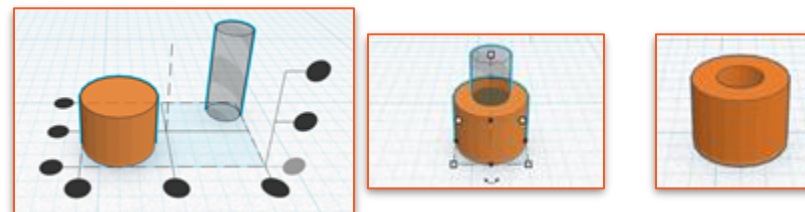
Place a **cylinder** (diameter 4mm and height 3mm) on the work surface.



Place a second cylinder (diameter 2mm and height 5mm) and select "**empty**".



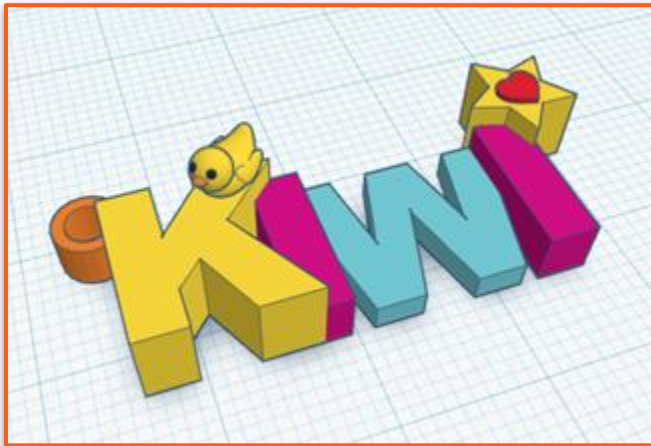
Align the two cylinders in the center and **group** them together to create a **hole**. Then, place the ring in one corner of the keychain and group all the objects together.






5. Customize it!

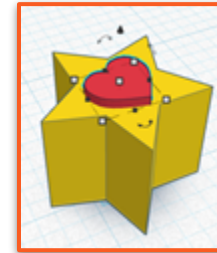
Follow the steps on the side
to get what is represented
in the image.
You can freely modify the project
to your liking!



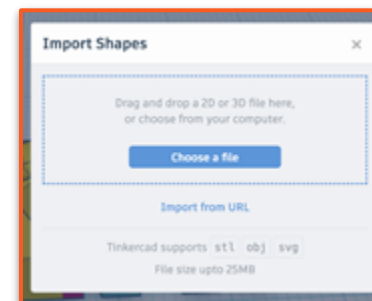
Customize it!

To customize your keychain you can:

1. **Add** new objects from the gallery by searching through categories. You can use the cone  to move elements vertically.



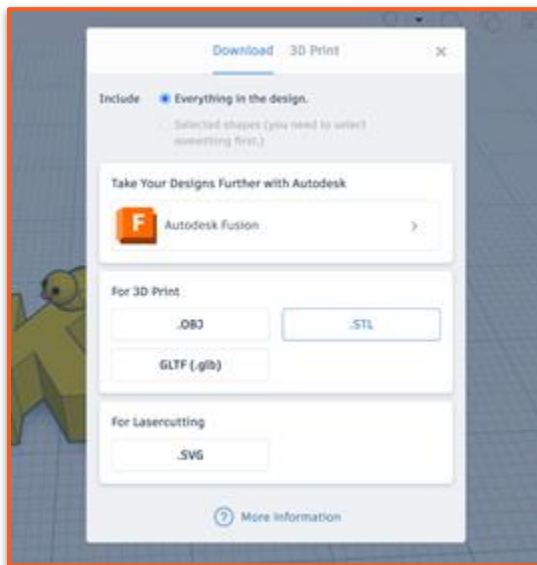
1. **Create** and invent new shapes, combining different elements and grouping them.
1. **Import** items from files. You can find useful sites online with libraries of ready-made and ready-to-use objects. For example thingiverse.com





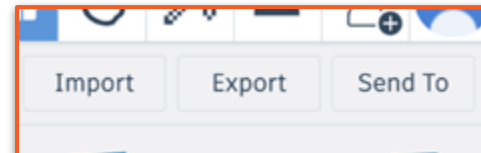
6. Ready to print

Follow the steps on the side to print your keychain!

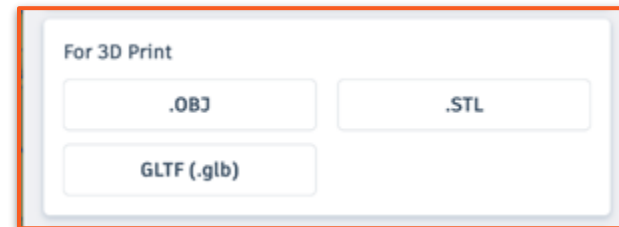


Ready to print

Select **"Export"** to prepare the project for printing



Select **.stl** format



Import the .stl file in *Ultimate Cura* software to resize the keychain, check for possible errors, and enable printing supports if necessary. Export the file in **.gcode** format and upload it to an **SD card**.



Insert the **SD card** into the slot on your printer and start pt printing process!