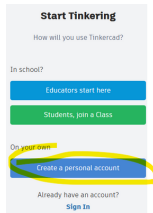
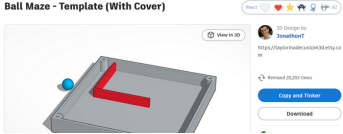


Follow the steps below to make your own 3D printed ball maze!  
This is a beginner-friendly activity for ages 13-18.

### Step 1: Tinkercad Login

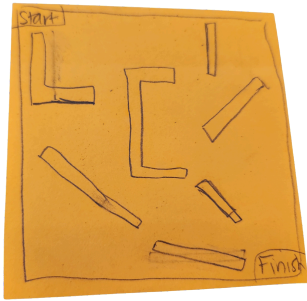


Go to  
Tinkercad.com.  
Sign into  
Makerspace  
account.



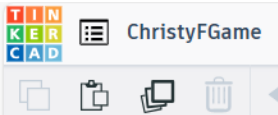
Go to Makerspace  
Website → Prototyping  
→ 3D printers. Click on  
Ball Maze template.  
Choose Copy & Tinker.

### Step 2: Design Maze

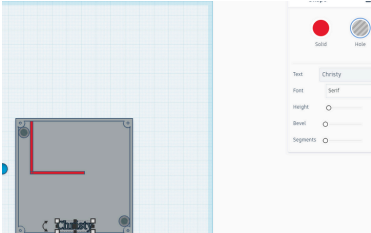


Use a sticky note to  
sketch maze design.  
Mark start & finish.  
Design path that  
works from start to  
finish, Keep it simple.  
Use rectangles  
instead of lines.

### Step 3: Add Name

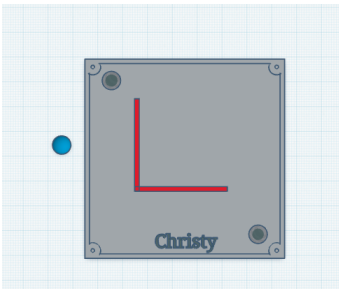
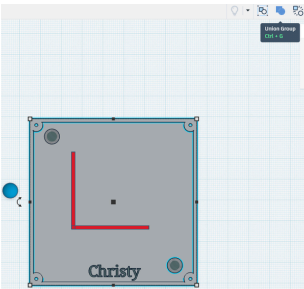


Click on the title.  
Change it to: Your First  
name Last Initial  
Game. Ex:  
ChristyFGame




Click on the "Your  
Name" on the  
template. Drag it to  
the bottom. In the  
upper right, change  
Your Name. Change  
font.

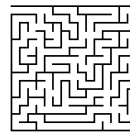
### Step 4: Start & Finish

There are two hole  
cut-outs. Click on  
them. Use  
keyboard keys to  
move them to  
start & finish  
locations.



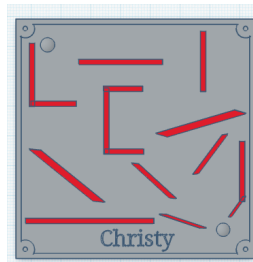
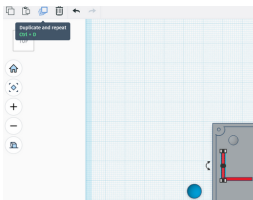
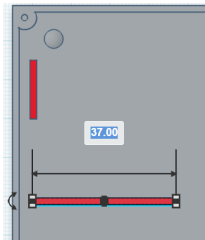
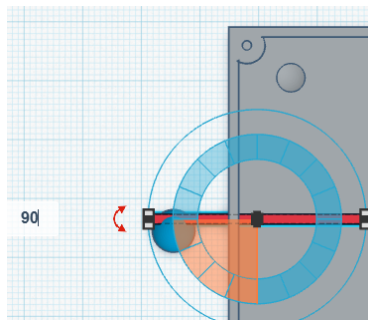
Click Shift while  
you click on  
"Your Name,"  
the grey box,  
and two holes.  
Then, click on  
Union Group.



At home, add the plastic sheet to the top and screw in the screws at the four corners. ENJOY!

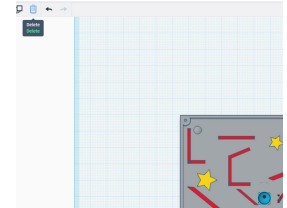
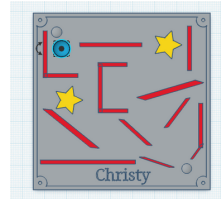
### Step 5: Add Walls & Path

There are two red rectangles provide. Use the arrow keys to move them. Rotate them with rotate arrow.



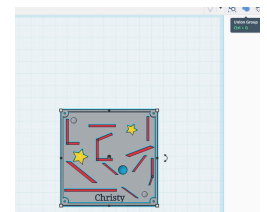
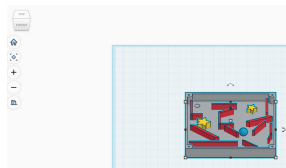
Duplicate shapes with the duplicate button. Add shapes from the side that are 8-10 mm high.

### Step 6: Test Maze



Click on the blue ball. Use arrow keys to move it through the maze. Make sure the walls leave enough room for it to pass. Delete it when done.

### Step 8: Finalize



Use the view cube to check all angles. Ensure the walls are lower than the outside.

Click and drag from the top left to the bottom right to select all. Click Union Group.

**Deselect all. Click Export → STL.**

**Go to [cedarparktexas.gov/makerspace](http://cedarparktexas.gov/makerspace) -> Tools -> Prototyping -> 3D Printers.**

**Submit a 3D print request with ALL files.**

