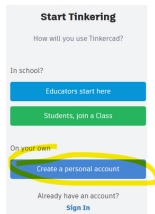


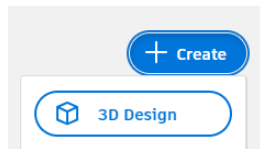


Follow the steps below to make your own 3D printed snowflake!
This is a beginner-friendly activity for ages 5-18.

Step 1: Tinkercad Login

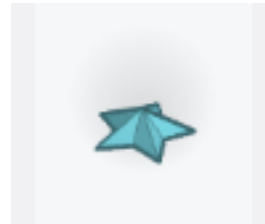


Go to
Tinkercad.com. Sign
into Makerspace
account.



Create a new 3D
Design. Title the
design with your
first name and last
initial.

Step 2: Create Star

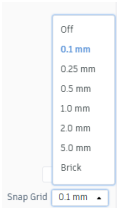


Under Shapes, drag
out a blue star onto
the workplane.

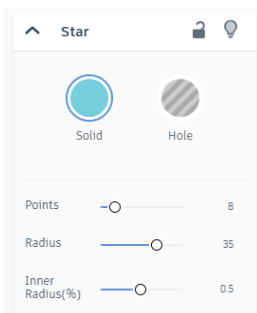


Click on
Settings in
the bottom
right. Ensure
it is metric.

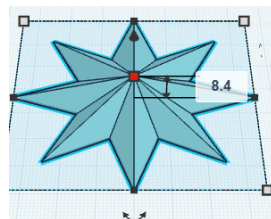
*Set snap
grid to
0.1mm.



Step 3: Adjust Star

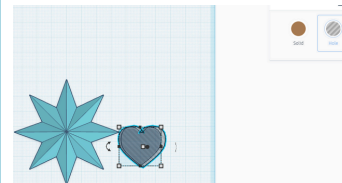


Click on the blue
star in the
Workplane. Adjust
the points to 8,
radius to 35 mm,
Inner radius to
0.5.

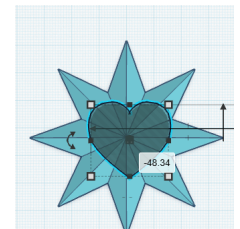


Click on the star
again. Click on one
of the white boxes
(turns red). Type in
8.4 mm for height.
Lock star by clicking
lock.

Step 4: Create Snowflake



Click and drag
the heart shape
(or other
approved shape)
to the workplane.
Select "Hole" in
properties.

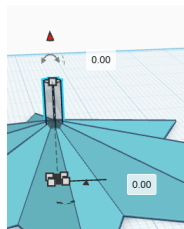
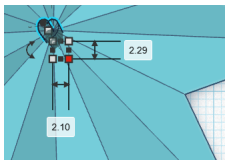


Move heart to
center of the
star.



Follow the steps below to make your own 3D printed snowflake!
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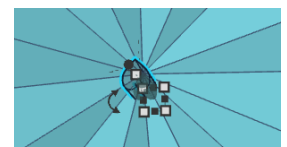
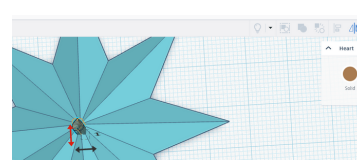
Step 5: Adjust Heart Size



Click on the heart.
Click on a white box
(turns red). Drag the
box in or out to
adjust the size.

*Make sure the heart is
not too large or too
small. It should be
touching the workplane.

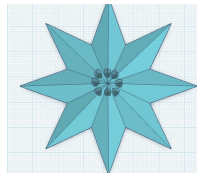
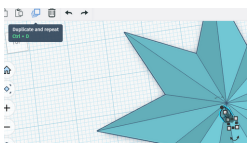
Step 6: Mirror & Rotate



*No object
should be
in the
center.

Mirror (flip) any objects. Click
on Mirror. Click on direction.
Rotate any objects by
clicking on object and
moving the arrow.

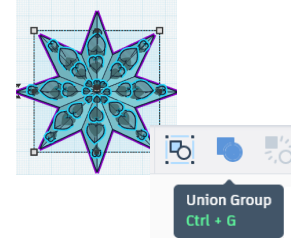
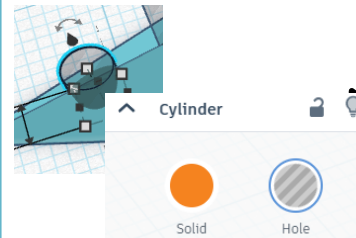
Step 7: Duplicate & repeat



Click on an
object. Click The
Duplicate button.
Drag it to correct
position (ensure it
is a "hole" shape).

Rotate shapes,
mirror shapes as you
add them. Ensure
they are "holes" &
that they are on the
workplane.

Step 8: Holes



Drag out a cylinder to
the top. Click Hole.
Ensure it is on the
workplane.

Click on Star. Unlock
it. Drag a box
around everything
with your mouse.
Click Union Group.

Deselect all. Click Export → STL.

Go to cedarparktexas.gov/makerspace -> Tools -> Prototyping -> 3D Printers.

Submit a 3D print request with ALL files.

