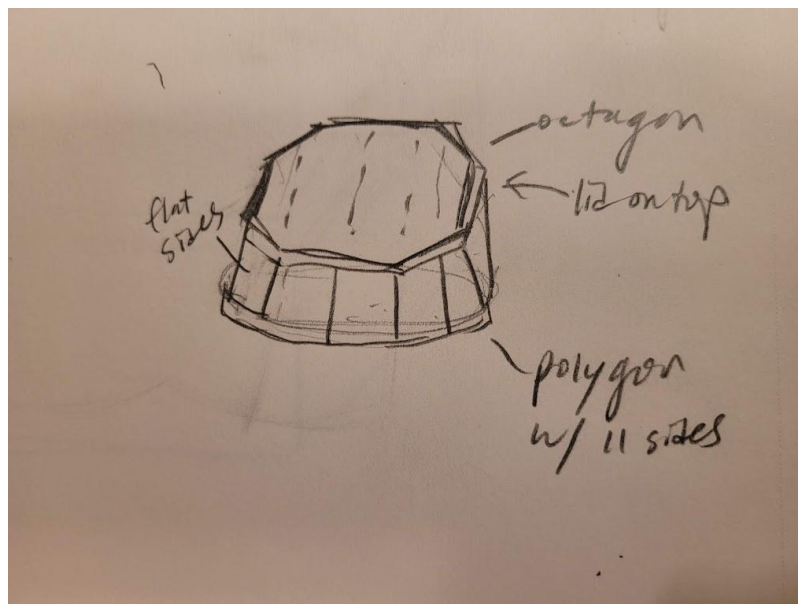
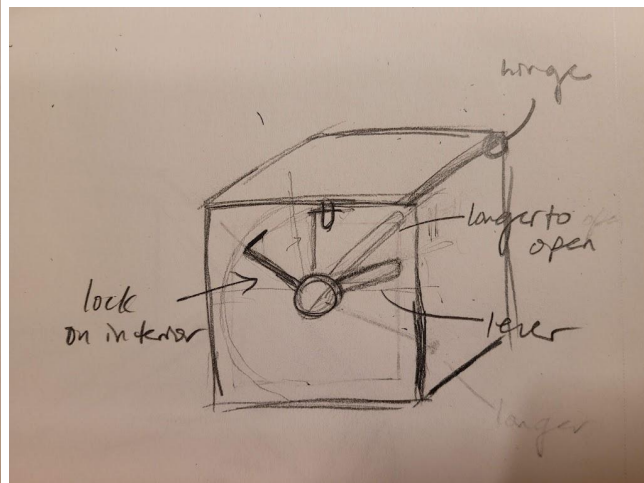
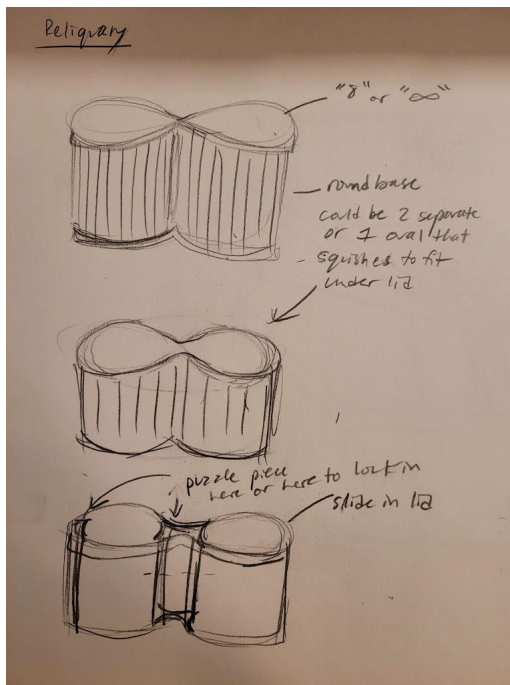


**Kelsey Cao**  
**Unit 3 Reliquary**

**Sketches:**

For the box, I thought about different shapes and closing mechanisms. One shape was that of an infinity sign incorporating two connected sections. However, I thought this might be too fragile and impractical to hold things. The second image shows a lock from turning a dial on the box's front. A third shape was a base of an 11-sided polygon and octagon lid. I ended up choosing a shape similar to the last.



### Inspiration:

There were plenty of existing wooden boxes of a polygon shape online. I liked the panels on the sides because I would be able to add clear images compared to a curved surface. I also liked the image on top of the box similar to the cherry blossom design. The space of an octagon-shaped box would be able to hold a lot of items, so I chose this shape.

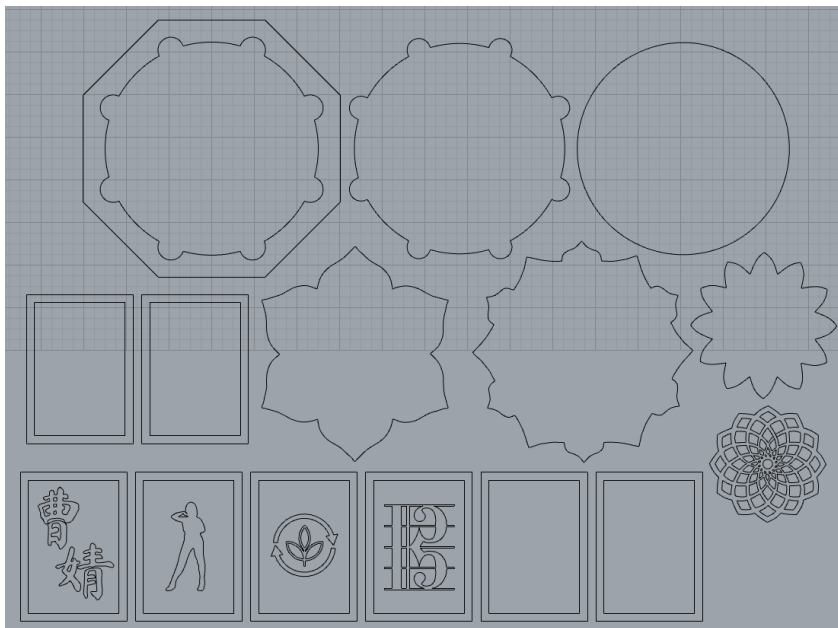
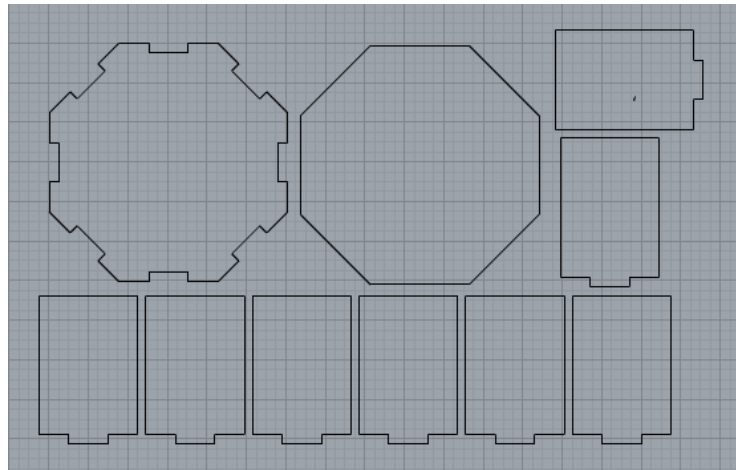
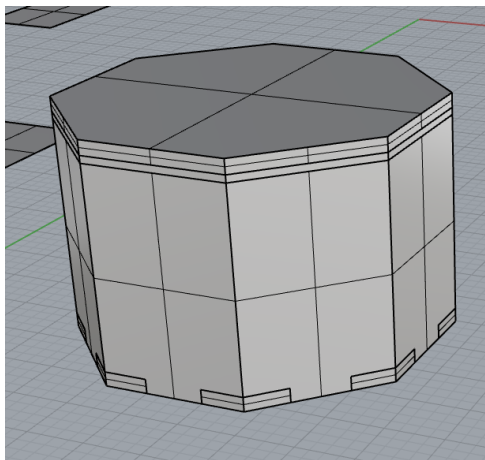
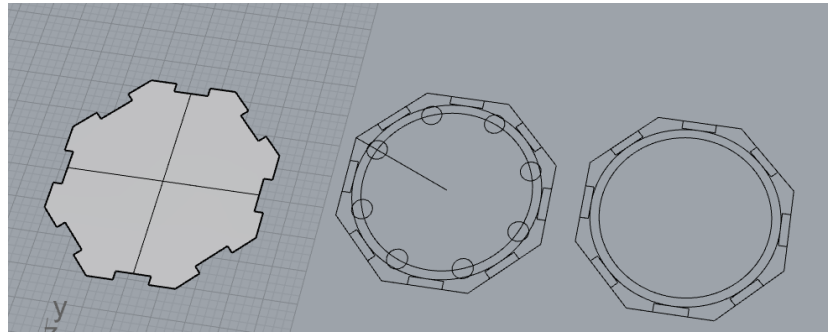
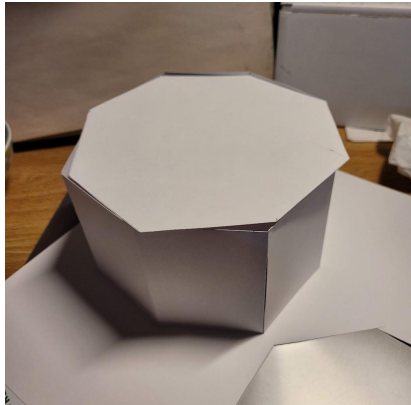


For designs on the box, I thought of things important to me. I thought of my Chinese name, music, dance, sustainability, and flowers. Below are some images that I used and or inspired my final decisions.



### Prototypes:

I made a prototype of my box using Bristol board. Moving my box design into Rhino, I made edits to my dimensions when checking the shape and placement of each piece. The last two screenshots show the drawings for my final laser-cut pieces.



**Final piece:**



For the final pieces, they were laser cut from sheets of MDF ( $\frac{1}{4}$ " and  $\frac{1}{8}$ " ) and the 8 sides of the interior were sanded down with a belt sander at an angle of 22.5 degrees on each side. All pieces were glued together with wood glue. The details include images of my Chinese name, a silhouette of a pose I did for a dance performance, the alto clef, a sustainability motif, and a lotus mandala on top of the lid. To open the box, the lid must be turned to the position in the 2nd photo and lifted up as the layer under serves as a lock. The 8 bumps under the lid were sanded to a height so that when turned, the lid would feel a resistance as if it were locking. The box itself feels heavy and sturdy.