



Fragrant Water-Lily

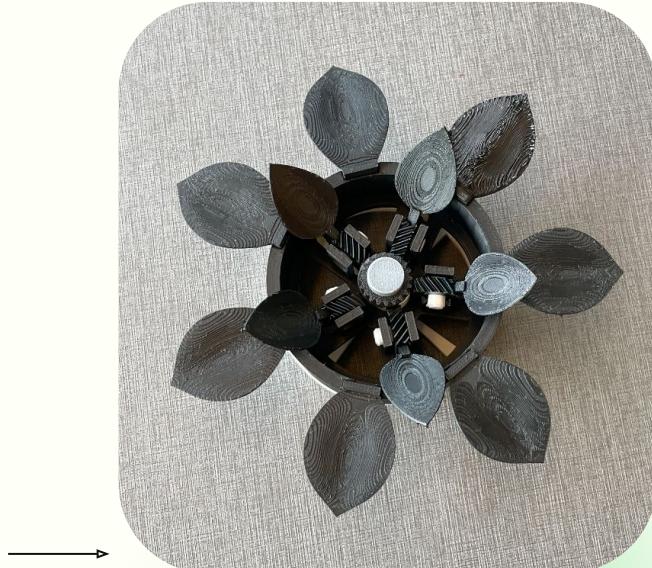


[1]

The Fragrant Water-Lily

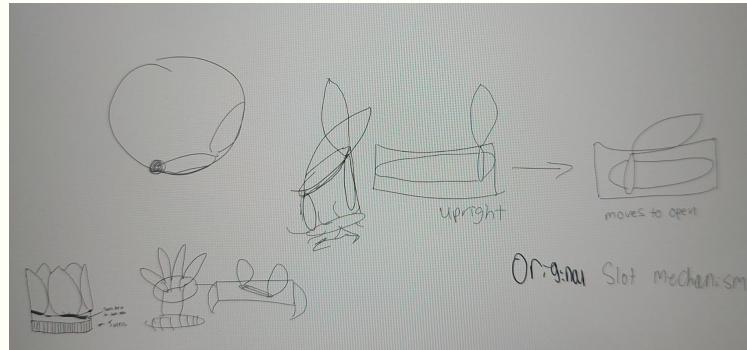
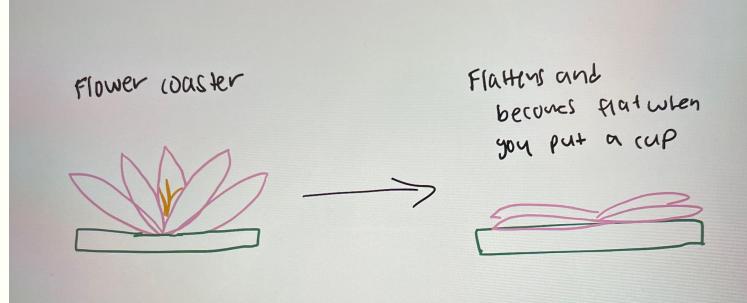
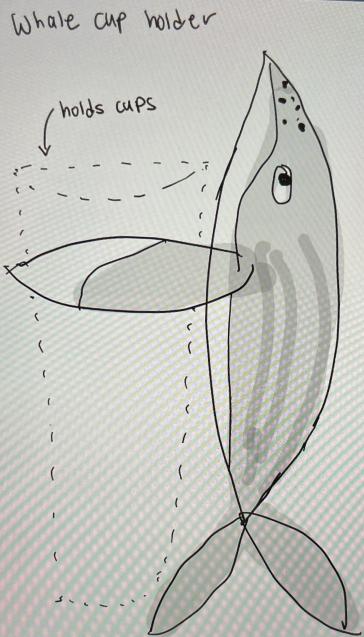


Overview



- Gear Components
- Detachable Petals
- Puzzle-like Base
- Moving Petals

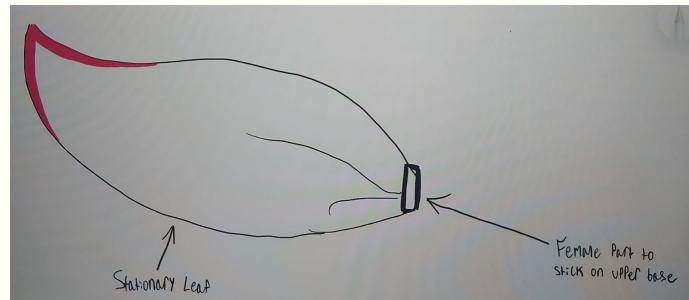
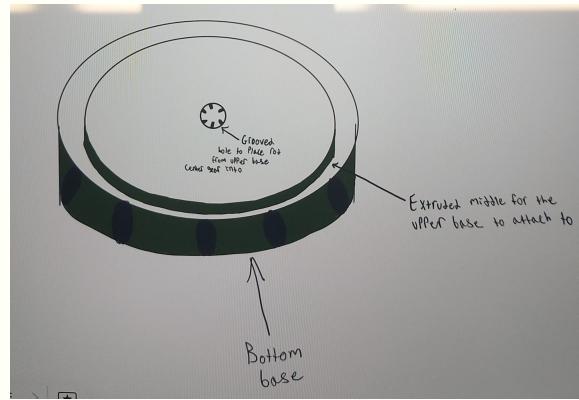
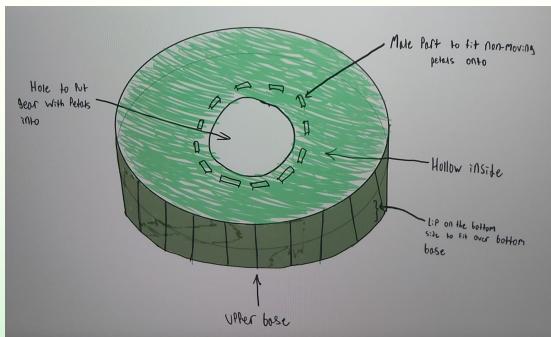
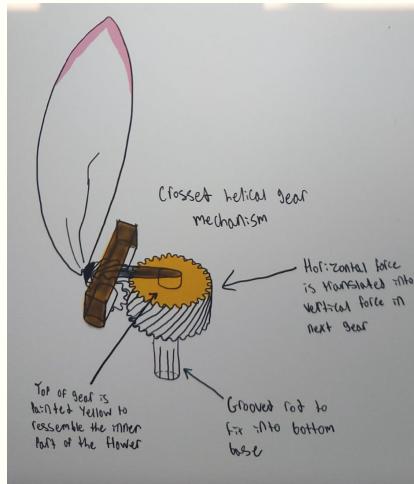
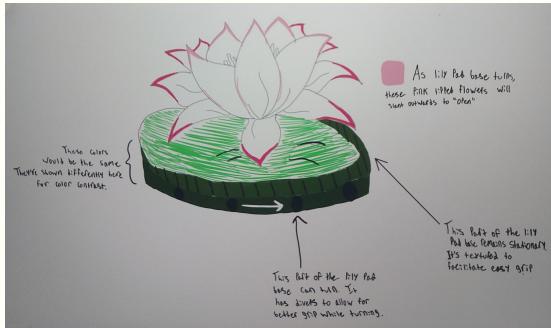
The Design Process - Early Stages



1. Fragrant water lily coaster
2. Flower jewelry holder
3. Animal rubiks cube
4. Orca cup holder puzzle

Brainstorming Ideas

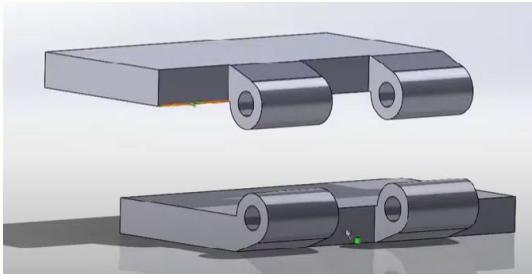
The Design Process - Early Stages



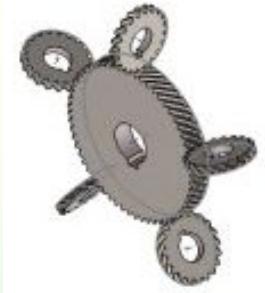
Fragrant Lily Pad

Top base as a cover, solid bottom base, outer gears are smaller and attached to the middle gear

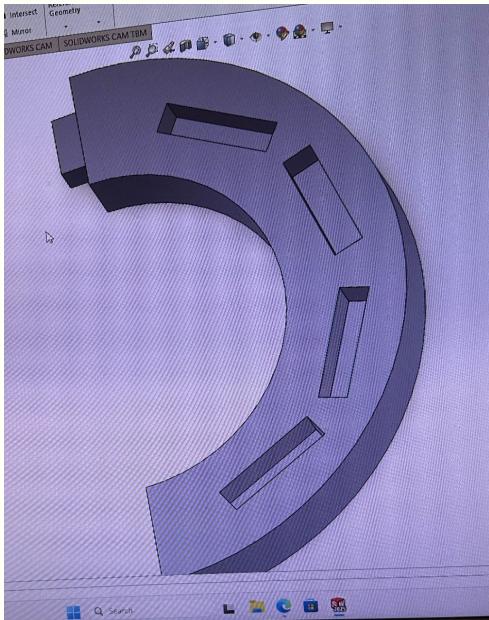
The Design Process - In Between Stages



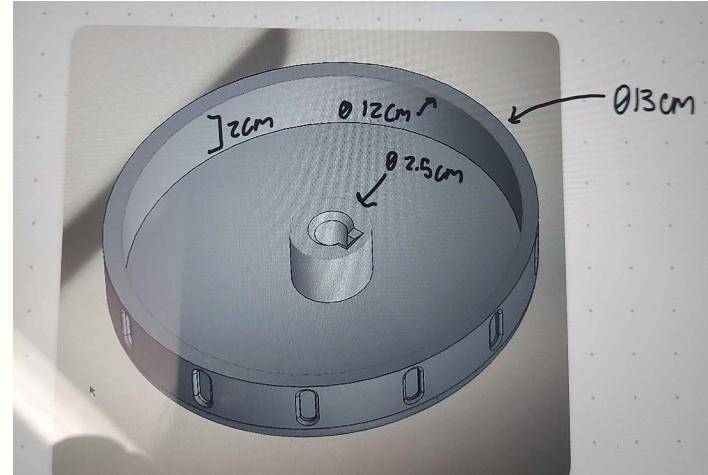
Hinges for petal movement



Gear mechanism

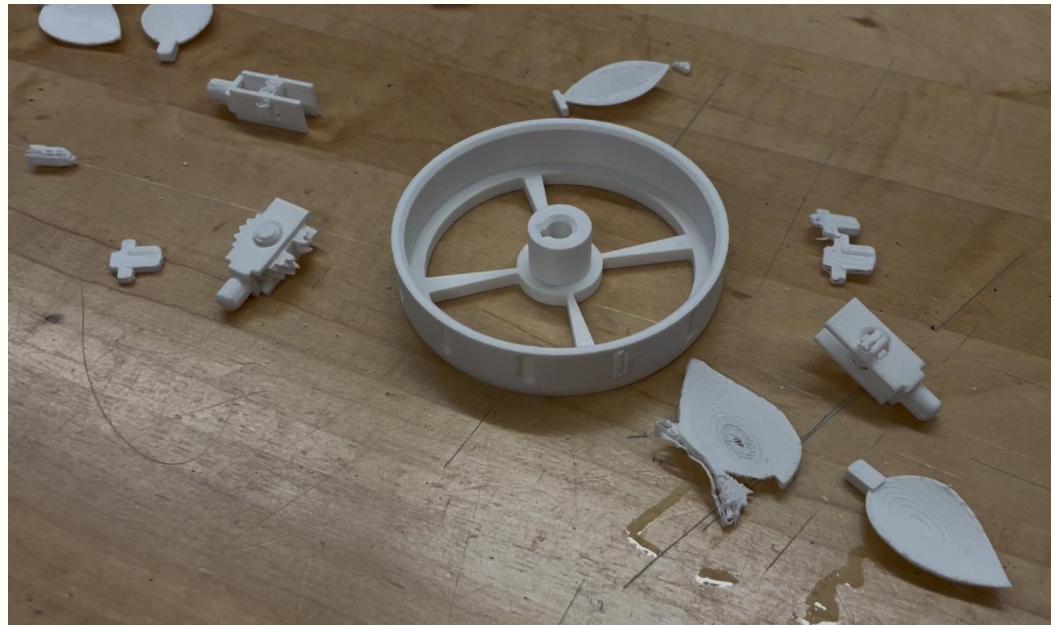
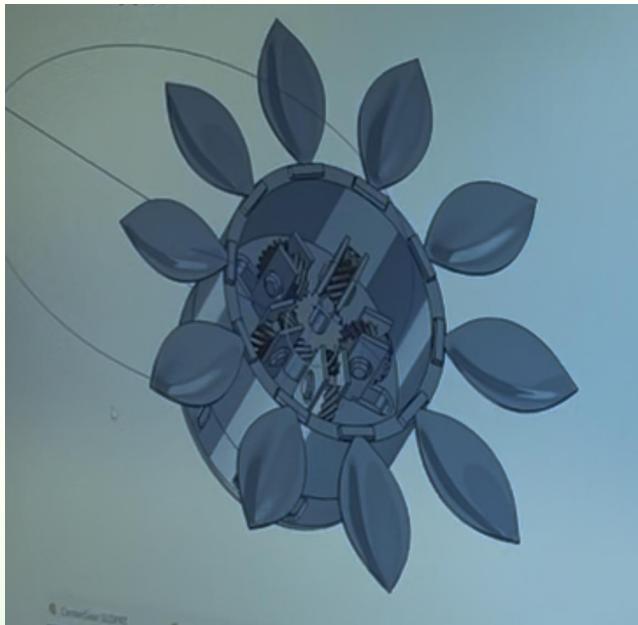


Two part upper base



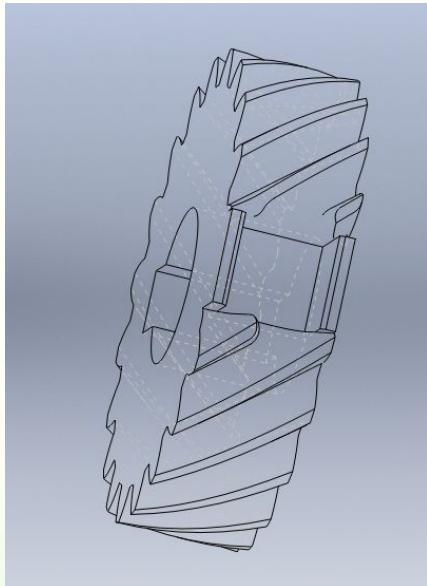
Lower base

The Design Process - First Print



First print – gear mechanism didn't work, petals were too fragile, pieces did not fit well together

The Design Process - Second Print



Final print – changed the direction of inner gear, added walls to the outer gears, thickened outer petals, added a cap

Design objectives



Lessons Learned/ Conclusions

1. Gear Mechanism

**2. Solidworks extensions
(Slicer & Composer)**

3. Importance of exact measurements

Potential Future Design Iterations

- 1. Cover gears**
- 2. Make petals closer together**
- 3. Make pin thinner so that gears are removable**

References

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