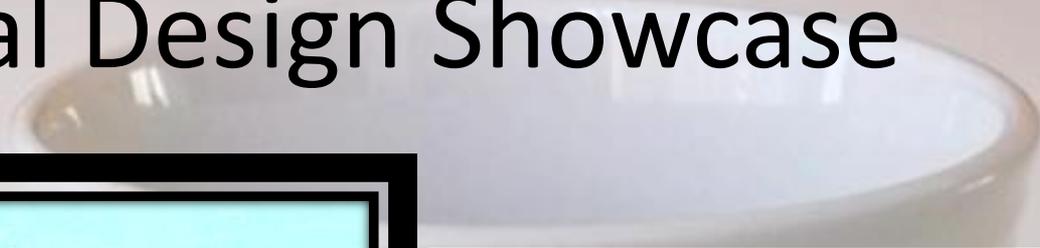


A white ceramic coffee mug with a handle, set against a light background. The mug is empty and has a simple, clean design. The text "Coffee Keeper" is overlaid on the front of the mug.

Coffee Keeper

Final Design Showcase



Goals:

- Effective
- Safe
- Ergonomics & Aesthetics
- Eco-friendly



bRaIn StOrM N'

External
Container

- Wanted to use insulation of coffee cup overtop

Lid

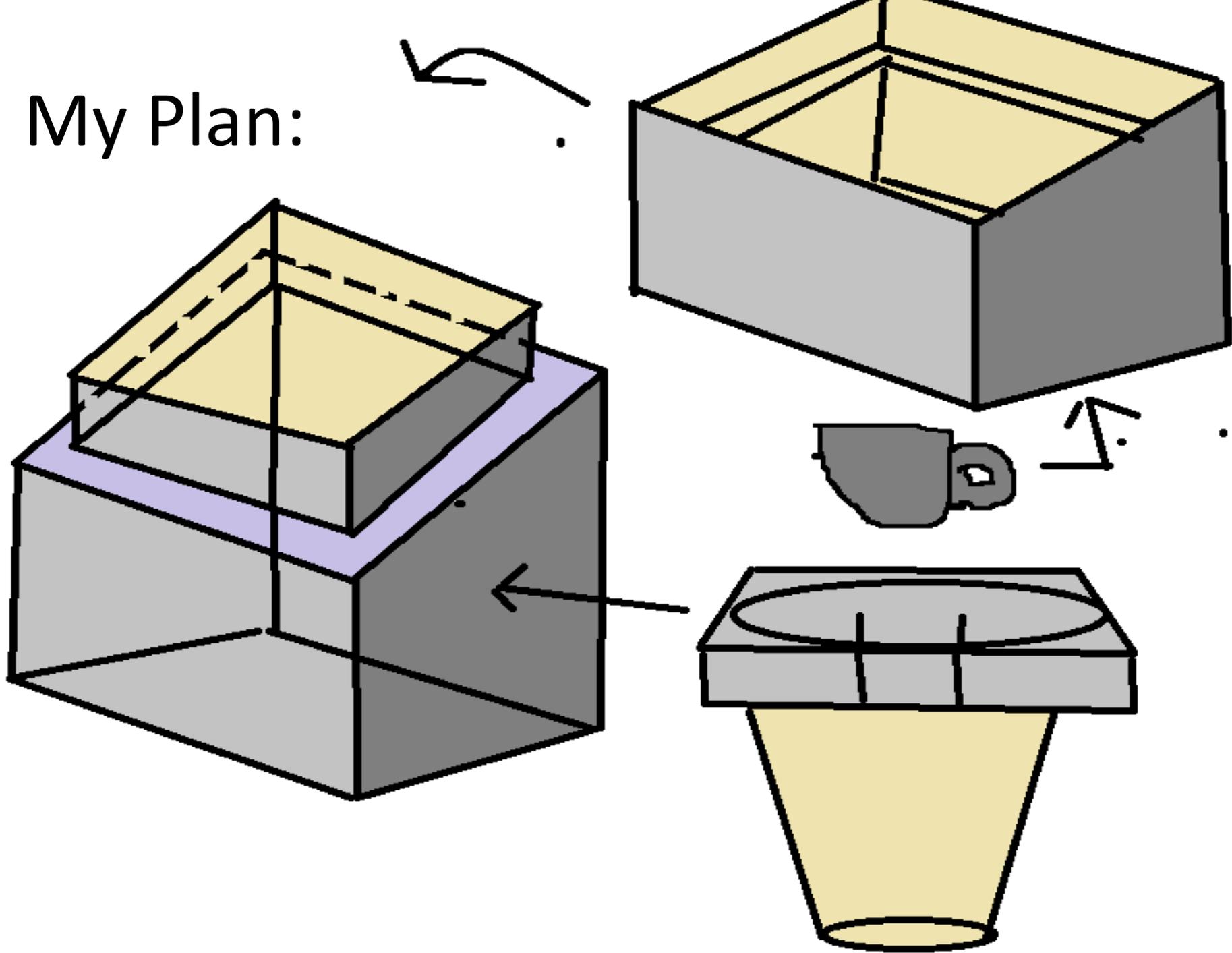
- Had flaps
- Modeled coffee lids already used

Box

- Presumed effective, layers
- Cut on a diagonal



My Plan:



Effectiveness

- Starting at 144 degrees F, the Coffee Keeper ended up retaining enough heat so that its final temperature was 127 degrees F after 42 minutes.
- My model predicted 156 degrees (temperature of ESG coffee) to 97.0 degrees F in two hours.
- My model with the parameters above predicts:
$$T(t) = 25 + 37.22 * e^{(-.000191t)}$$
- When $t = 2520$ s (42 minutes), the final temperature = 42 degrees C = 118.4 degrees F
- **Product was better than the Model!**

Safety

- Environment (e.g. the table),
 - Cardboard base of the box prevents drips/condensation
- Coffee drinker, the box is specially sliced on a diagonal to make it easy to place the coffee in and remove the coffee from the box.



Ergonomics & Aesthetics

Lid, Box, Name

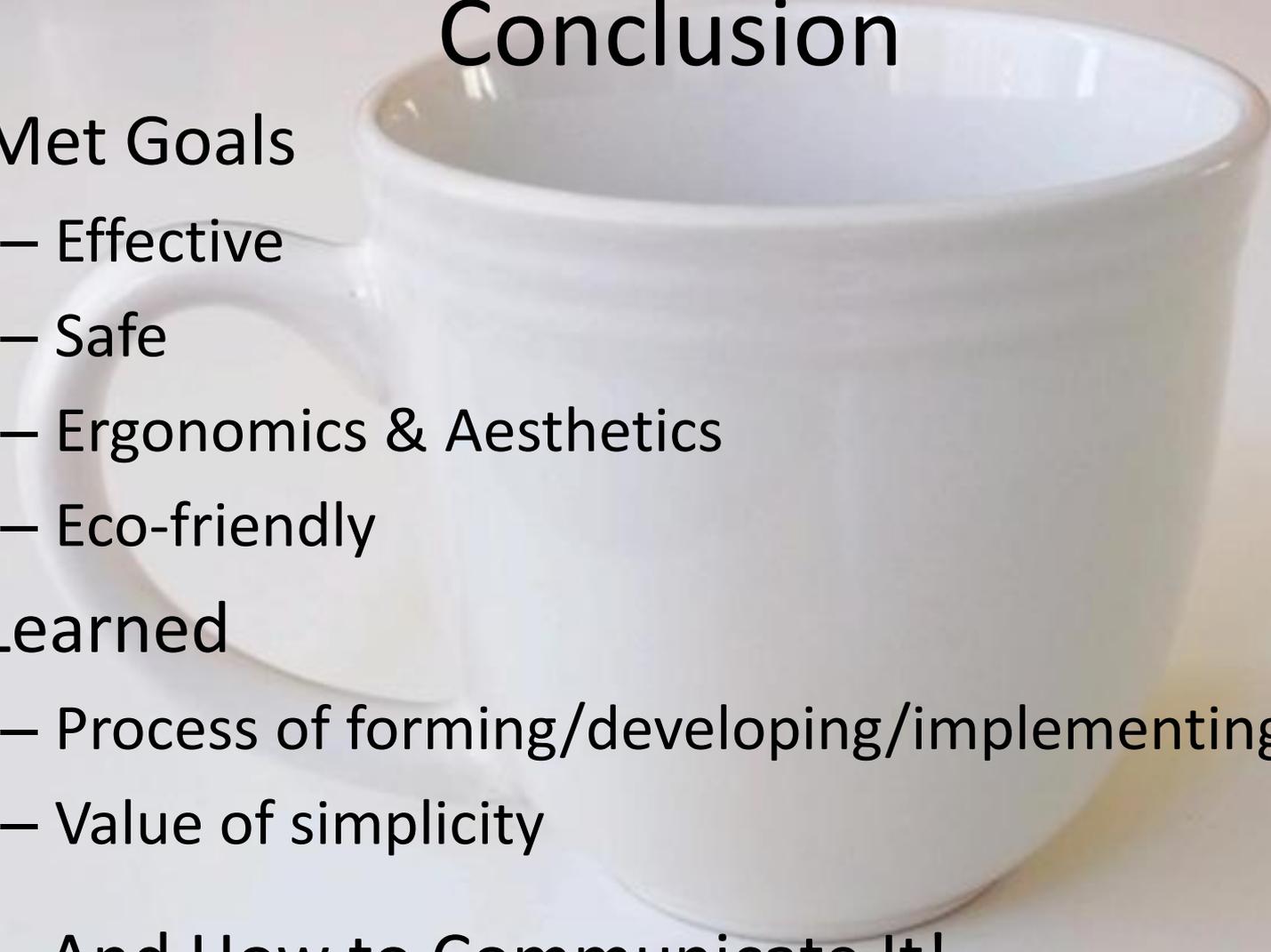


Eco-friendly



- Estimated: 600 square inches cardboard, 15 minutes
- Reality: 600 square inches cardboard, 2 hours
- Reused materials
- Problems: cardboard not ideal, gluing took time
- Future attempts

Conclusion

A white ceramic mug is positioned in the center-right of the frame, partially overlapping the text. The mug is empty and has a simple, clean design. The background is a light, neutral color, possibly a table or desk surface.

- Met Goals
 - Effective
 - Safe
 - Ergonomics & Aesthetics
 - Eco-friendly
- Learned
 - Process of forming/developing/implementing ideas
 - Value of simplicity
 - And How to Communicate It!

Questions:



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