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: 
  \[ T(t) = 25 + 37.22 \times e^{(-0.000191t)} \]

• 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

• Met Goals
  – Effective
  – Safe
  – Ergonomics & Aesthetics
  – Eco-friendly

• Learned
  – Process of forming/developing/implementing ideas
  – Value of simplicity

--And How to Communicate It!
Questions: