

Think Like an Engineer Journey Pt. 1

Engineering Notes: Corgi Life Vest

Design Challenge:

You've been hired by a family who has a corgi named Champ. Corgis have a hard time swimming because of their short legs. In preparation for an upcoming trip, the family would like a life vest made for Champ that would allow him to play with the children in the lake.

Note: If you made an animal model other than a dog, use your imagination to create a reason why your animal might need to be able to float.

IDENTIFY & INVESTIGATE THE PROBLEM.

Goal: Engineer a life vest that keeps the model dog's head above water.

Design Thinking Process

- Identify the Problem
- Investigate the Problem
- Brainstorm & Plan
- Build
- Test
- Analyze Results and Improve
- Share Your Solution

CRITERIA: Things you or your design need to accomplish.

- Your life vest must allow the model dog to float with its head above the water for 10 seconds.
- Your life vest must attach and detach from the model dog as quickly as possible.

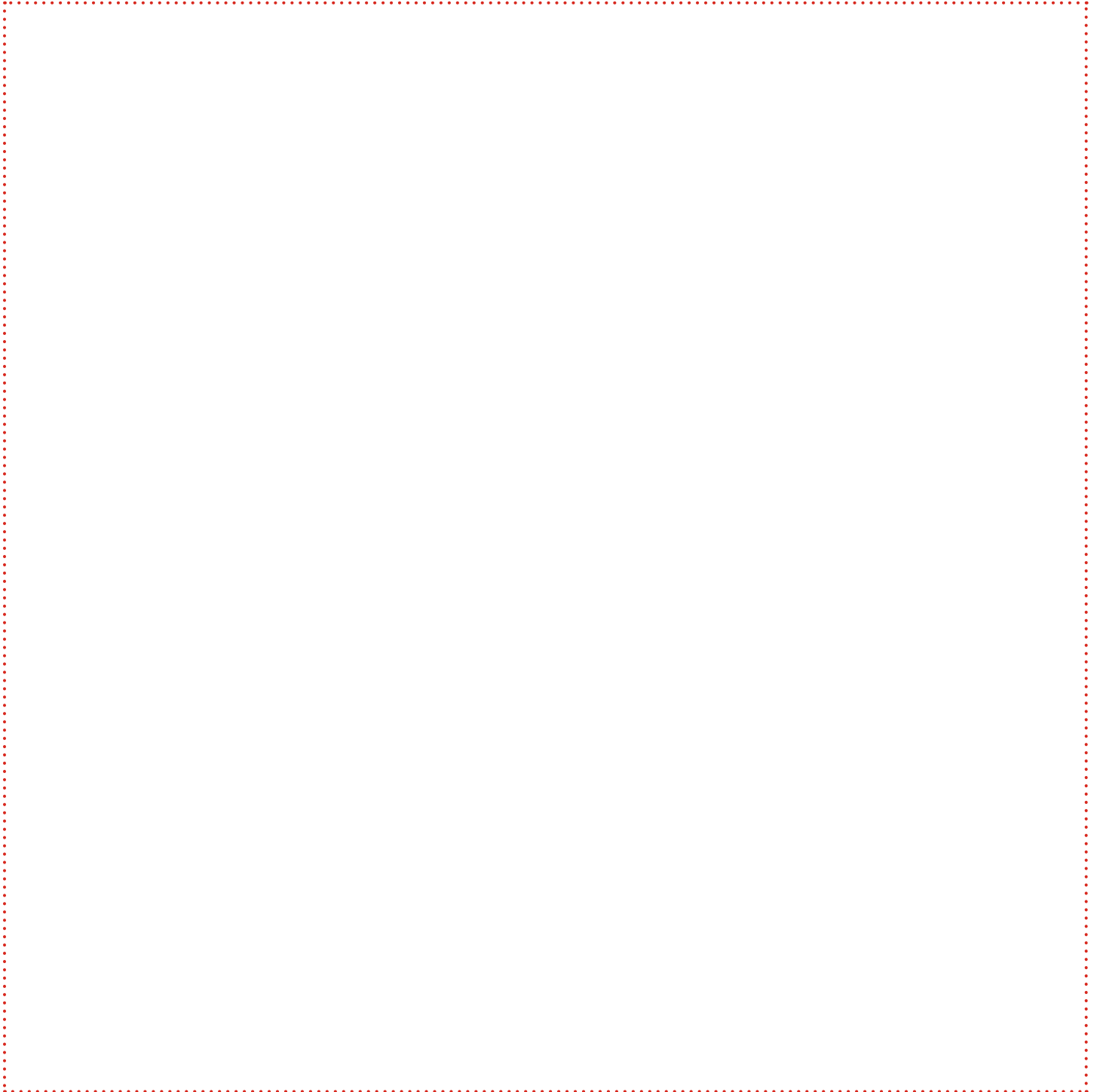
CONSTRAINTS: Ways that you or your design are limited.

- You can use up to two plastic bags, two sheets of foam, three rubber bands, one measuring tape, and one pair of scissors.
- The scissors and measuring tape cannot be used as a part of the life vest.
- You cannot test the life vest on the model dog until the designated testing time.
- You have 20 minutes to engineer your life vest prototype.
- After, you'll have 20 minutes to test, iterate, and improve the life vest.

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BRAINSTORM SOLUTIONS, PLAN & BUILD A PROTOTYPE.

What's the design plan for your life vest? Write ideas or draw plans for your design here. Use extra paper if you need to!



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TEST, EVALUATE, AND REDESIGN.

What materials or methods worked best for keeping Champ afloat?

A large rectangular area enclosed by a red dotted border, intended for students to write their answers to the question above.

What materials or methods worked best for quickly attaching and detaching the life vest to and from Champ?

A large rectangular area enclosed by a red dotted border, intended for students to write their answers to the question above.

Courtesy of the Museum of Science, Boston. Adapted from the Engineering is Elementary, Go Fish: Engineering Prosthetic Tails. ©2014, 2016 Museum of Science.