



#SkillsAtHome Challenge Series

Challenge #5 – Tinfoil Boat

This challenge brought to you by:



This program is funded by the Government of Ontario.



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Challenge—Challengers are to create a boat out of ordinary household Tin Foil that can hold as many coins as possible! The Challengers are to first create a to-scale blueprint design with pencil and paper. They are then to build a boat, using only one 30cm long piece of ordinary household Tin Foil, based upon the Blueprint design they had created.

Once the boats are finished, they are ready to test their strength! Challengers will need either a bathtub, sink, or large bucket filled with water to test their boats. They will also need an abundance of household coin change, such as pennies, dimes, loonies, etc. Using the coins as weights, challengers are to place the coins inside their boat with the goal of holding the most amount of weight. We ask that the challenger films their weight tests and include that video in their submission post on Twitter. Follow and tag @SkillsOntario and use the hashtags #SkillsAtHome and #SkillsBoatChallenge in your submission post!

Once the Challenger's boat has sunk, it is time to count how much weight the boat held! Using the chart below, the Challenger is to calculate the total weight (in grams) and total amount of change (in dollars).

Coin	Weight
Dime	1 Gram
Penny	2 Grams
Nickel	3 Grams
Quarter	4 Grams
Loonie	6 Grams
Toonie	7 Grams

Challenger's submission posts are to include:

- Picture of blueprint design
- Picture of total weight held
- Video of boat in water with coins being placed in. (If possible, try to video tape the moment it sinks)

Challengers are to post the video to Twitter and include the pictures in the replies to their video post. Challengers are to follow and tag @SkillsOntario and use the Hashtag #SkillsAtHome and #SkillsBoatChallenge.

Challenge Materials

- One piece of household kitchen Tin Foil exactly 30cm in length (no wider than 35cm)
- Bucket, bathtub, or sink full of water large enough to test your boat
- Coins (Pennies, Nickels, Dimes, Quarters, Loonies, Toonies)
- Ruler or Measuring tape (to measure tin foil length)

Skills: Design and Planning, Communication, Creativity, Attention to Detail

Skilled Trades/Technologies: Marine Engine Technician, Ironworker-Generalist

[Click here for a full list of all recognized Ontario skilled trades](#)

***Note:** Health and Safety is always important. Please be sure to check with a parent or guardian when participating in challenges. If you are under the age of 18, ask for parental guidance.*

Challenge Rules

1. Be sure to create a blueprint design of your boat. See below for design mark rubric.
2. Only use the materials listed. The boat may ONLY be made from the single piece of Aluminum Foil.
3. Challengers are to include a video of their boat being tested as well as include pictures of their boat designs and final weight totals in order to receive marks.

Judging/Scoring

Submissions will be marked in the following:

Weight Held by Boat (In Grams)	Points
< than 20 Grams	5 points
21 - 100 Grams	10 points
100 - 200 Grams	15 points
200 + grams	20 points
Total Marks (Total out of 20)	

Design Plans	Points
Submitted design plan	5 points
Submitted design plan with straight lines	10 points
Submitted design plan with straight lines and measurements provided	15 points
Submitted design plan with straight lines and measurements/to scale. Legend provided as well.	20 points
Total Marks (Total out of 20)	

Challenger Total Marks: / 40 points