

Collaborative Project - Safety & Mechanical

4 groups per class? depending on number of students per class.

Design requirements:

- Materials limit
 - Set amount of sheet metal (12x10 in)
- Leave 1 face open

Procedure

- Day 1
 - Talk about the design process/cycle: Brainstorming, Prototyping, Testing, Evaluate, Repeat.
 - Design 3D shape to hold as many wiffle balls as possible
 - Draw outline of 2D shape onto cardboard to cut/fold into the 3D shape.
 - Test how many balls the cardboard prototype holds
- Day 2
 - Finish Prototyping.
 - Draw the shapes onto the sheet metal to cut
 - Go to 30 to cut/bend the sheet metal.

Mechanical = design; Safety = build

Materials

- Cardboard, box cutters and/or scissors, pencil/sharpie, paper for designs and brainstorming, wiffle balls, rulers, sheet metal