



PLTW Virtual Learning

# 7th and 8th Grade Design and Modeling

May 12, 2020



## Lesson 26: Stranded Design Process Day 2

### **Objective/Learning Target:**

Students will use the engineering design process to design, model and test floating escape vehicle.

## Warm-Up:

Gather up your building materials that you found yesterday.

Draw 3 quick brainstorm sketches of possible escape vehicles.

## Lesson Introduction/Background Information:

You are ready to get off this island! Fill in the decision matrix to determine which brainstorm idea will be the best option for you.

	Ease of build	Do you have the necessary materials to build?	Will it stay afloat with weight?	Total
Sketch #1				
Sketch #2				
Sketch #3				

Rate each category on a scale of 1 (worst) to 5 (best).

# Practice:

Build your escape vehicle

HAVE

FUN :) )

## Self-Assessment:

Evaluate the effectiveness of your design:

Place your escape vehicle in a container of water.  
Does it float?

Find some weight to simulate a person riding on the  
escape vehicle.  
Does it remain floating with the weight?

## Extend Your Learning/Continued Practice:

Make modifications to optimize your design.

Think about what will power the boat to move across the ocean. Add this to your design.