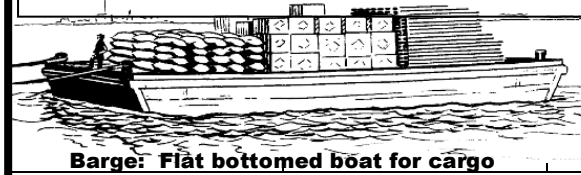


# PROBLEMS... ...CONTINUED...

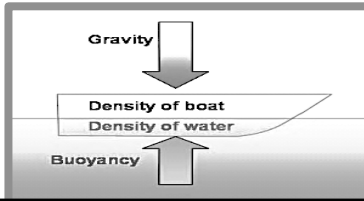
Science 8 April 2018 Mrs. Plyter plyter.com/science

Name \_\_\_\_\_

Period \_\_\_\_\_



$$D=m/v$$

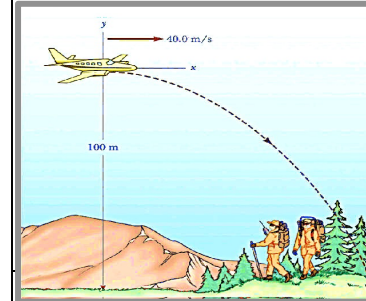


18

19

20

Plant Collection



## A Cargo Drop

**The Role of Inertia & Gravity:**

- 1) Consider the Role of **INERTIA** as you predict a drop point for the release of cargo, from a height of 1 m, when moving by a target at constant speed.
- 2) Graph your prediction using a line graph ↓.
- 3) **Demonstrate.** Add your actual data to your graph.

## Penny Barge: A Cargo Carrier

Barge = Flat bottomed Cargo Carrier

- 1) Construct a rectangular Penny Barge out of only a 10X10 cm of aluminum foil, and a string (or paper clip) for tow/tug, to carry more than 5 pennies. Consider density & stability.
- 2) Calculate Density/Buoyancy **WITHOUT WATER**. Record on your Solution Data Worksheet →.

**Your Final Solution Design Data:**

- 3) Barge + Cargo of \_\_\_ pennies = \_\_\_\_\_ grams
- 4) Record Your Final Solution Data Here:

Length In cm.	Width in cm	Height in cm	Volume In cm <sup>3</sup>	Mass with Cargo In g	Density

- 5) Original (1<sup>st</sup>) Water Test Results: Demonstrate:

Float Time: \_\_\_\_\_

Float/Tow distance: \_\_\_\_\_

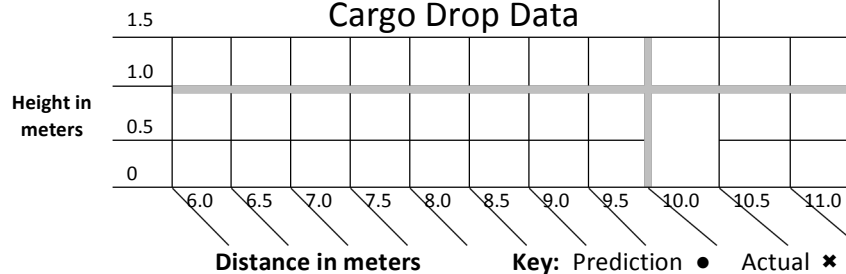
Checked \_\_\_\_\_

## Central Science Page

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## Cargo Drop Data



Points  
Objectives

Barge

Plant  
Collection

Cargo Drop

Quizzes:

Initial in Color. \_\_\_\_\_

Mon \_\_\_\_\_

Tue \_\_\_\_\_

Wed \_\_\_\_\_

Thu \_\_\_\_\_

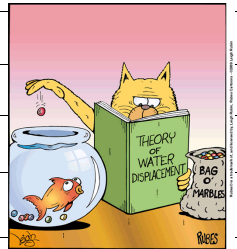
Fri \_\_\_\_\_

Total \_\_\_\_\_

# OBJECTIVE:

Write the Objectives:

1)



2)



3)







**Demonstrate your ability to use criteria and constraints to produce a solution to a problem.**

- 1) Design a cargo carrier that is buoyant (floats) in the water.
- 2) Create a collection that demonstrates variation in common plants.
- 3) Drop a cargo on a target as the cargo carrier continues to move by.