

Why Do Boats Float?





**Nimitz Aircraft Carrier:
200,000,000 lbs.**

Take out a blank piece of paper,
label it **Page 112: Intro to Boats**



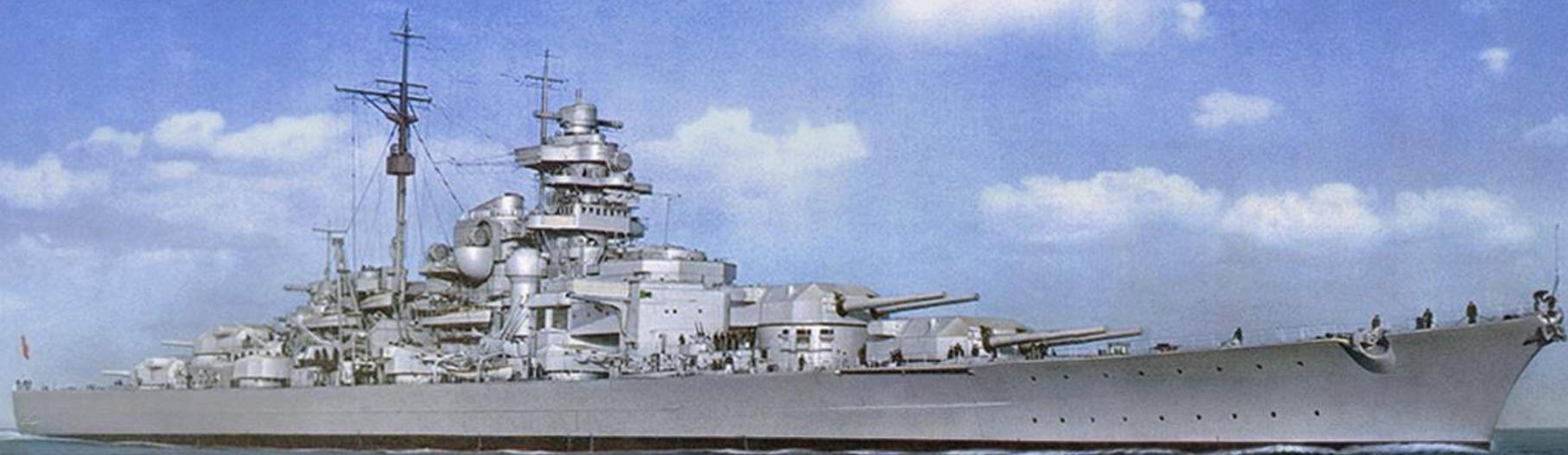
Take out a blank piece of paper,
label it **Page 112: Intro to Boats**

Type I Writing:

Brainstorm, with your partner,
as many different types of boats
as you can think of...







Digitally Colorized Photo 上色照片

KMS Bismarck.





USA-253
USA-253

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Boats float when their
density is _____

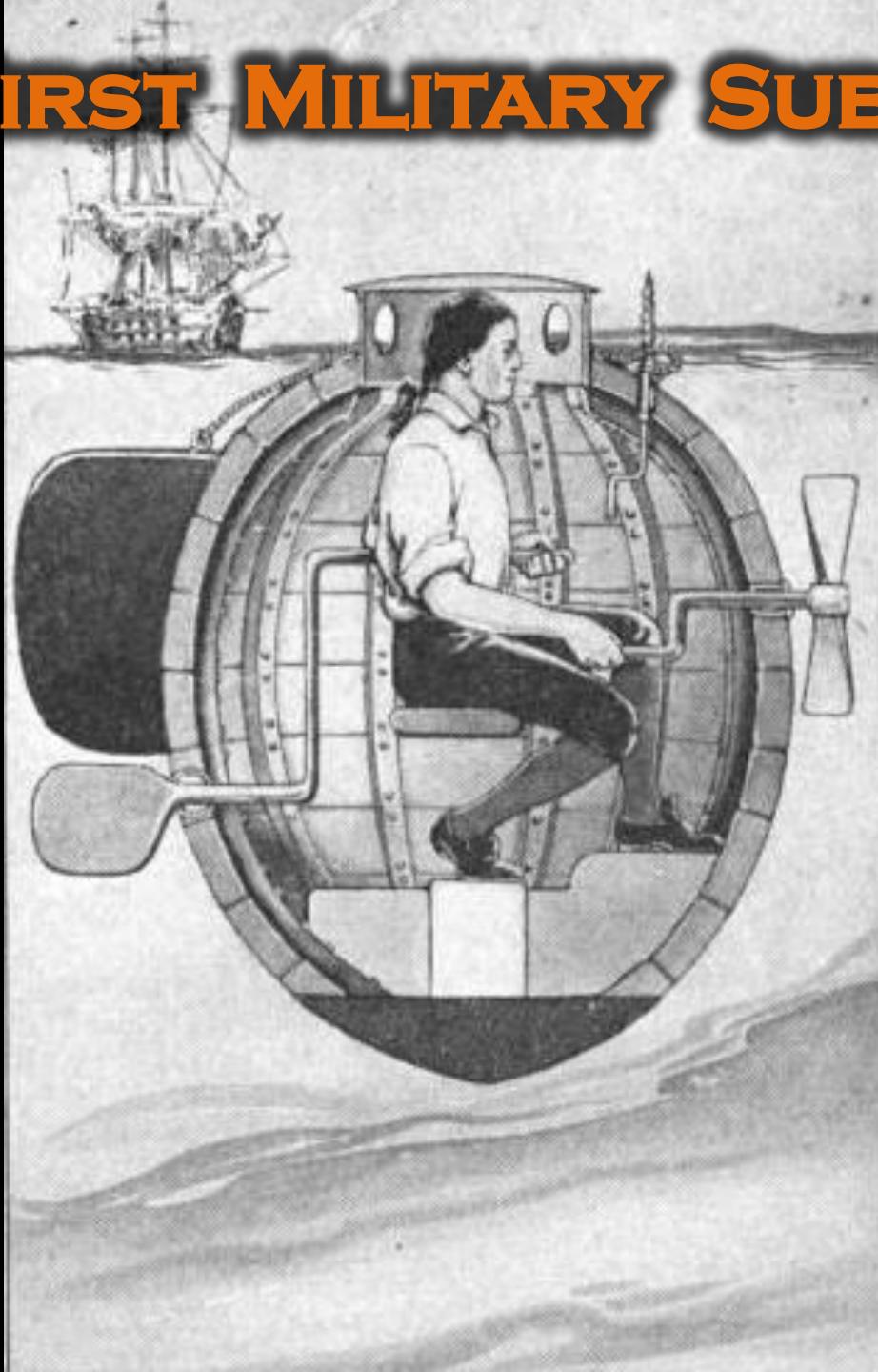


Boats float when their density is less than 1 g/ml.

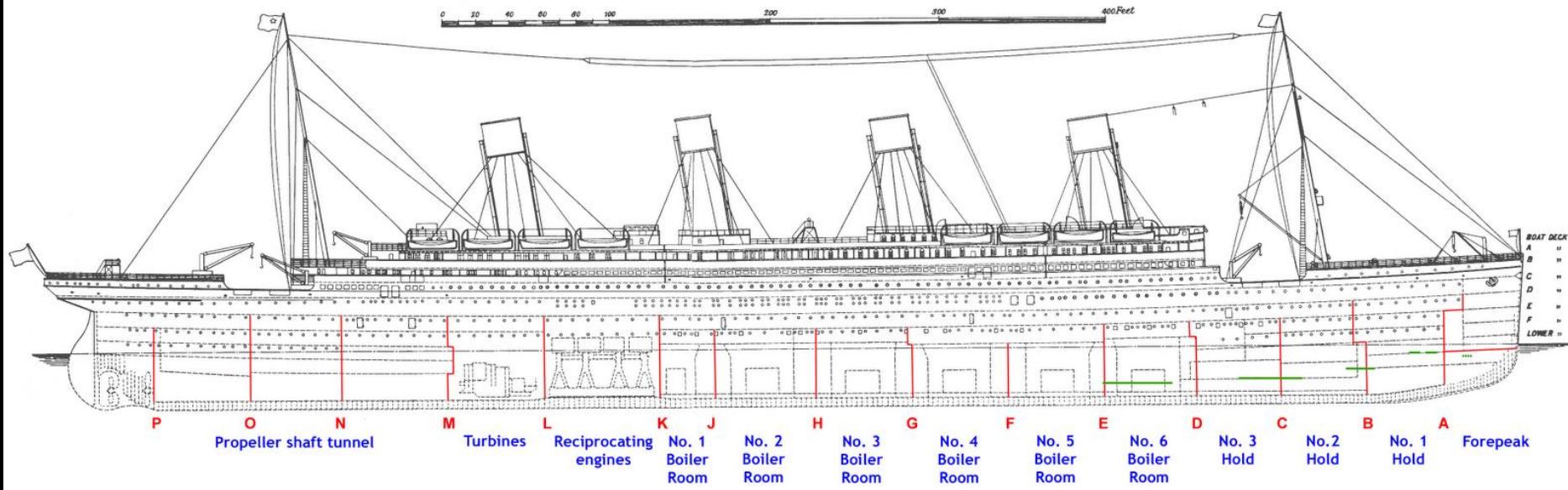


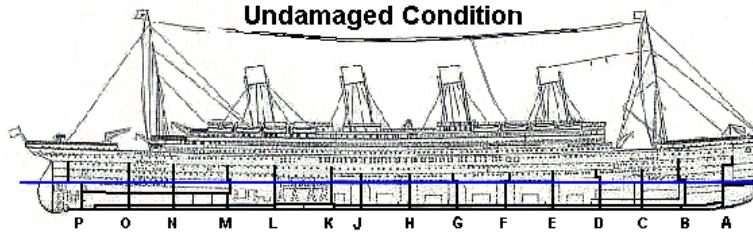
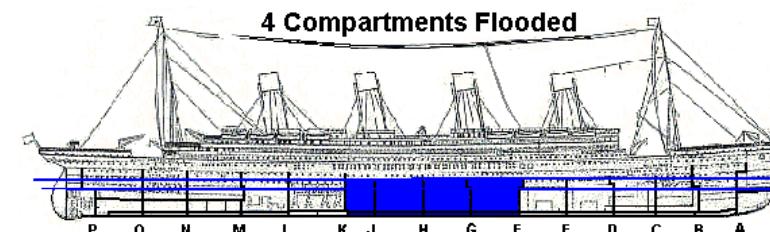
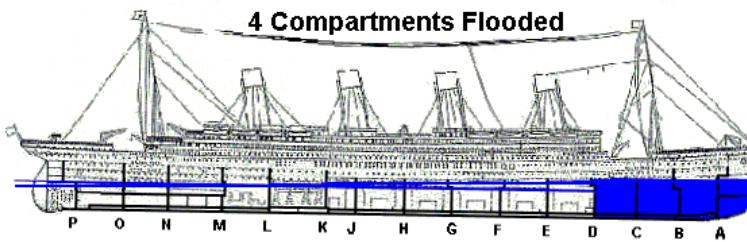
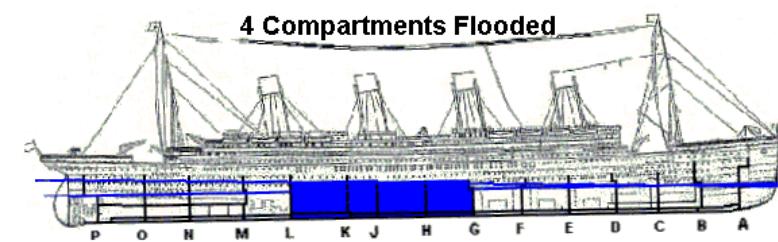
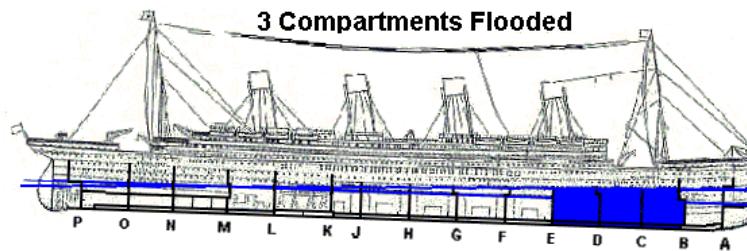
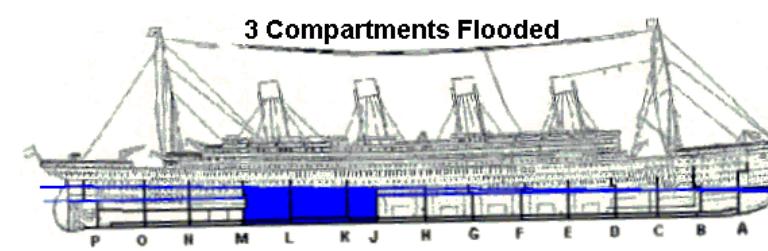
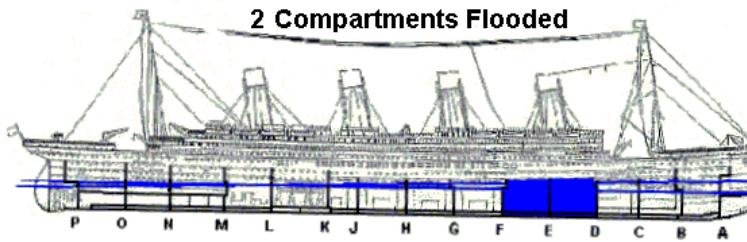
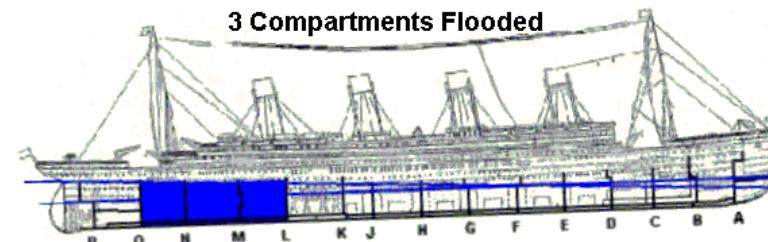
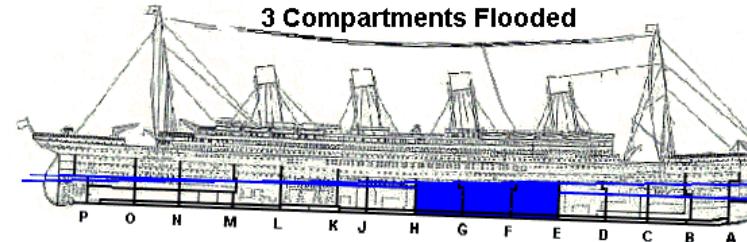
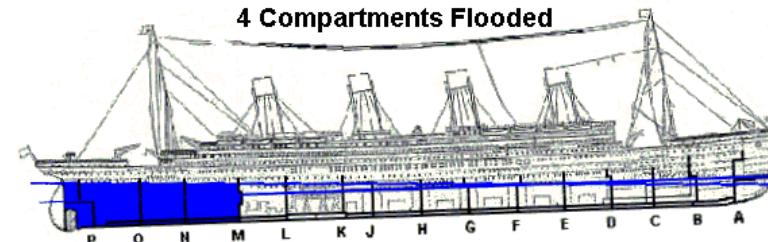


THE FIRST MILITARY SUBMARINE



The Titanic



Permissible Flooding Conditions**Undamaged Condition****4 Compartments Flooded****4 Compartments Flooded****4 Compartments Flooded****3 Compartments Flooded****3 Compartments Flooded****2 Compartments Flooded****3 Compartments Flooded****3 Compartments Flooded****4 Compartments Flooded**

Boats sink when their
density is _____.



Boats sink when their
density is more than 1 g/ml.



Your Goal: Design a boat that can hold as much weight as possible.



Your Supplies:

- One sheet of paper,
 $22 \times 28\text{cm}$
- 30 cm of masking tape
- 4 index cards
- One sheet of tin
foil, $30 \times 30\text{ cm}$
- 20 toothpicks
- 12 Styrofoam peanuts

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22

30

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Eric A. 2012