

Variables Review

Variables Review

to control variables means-

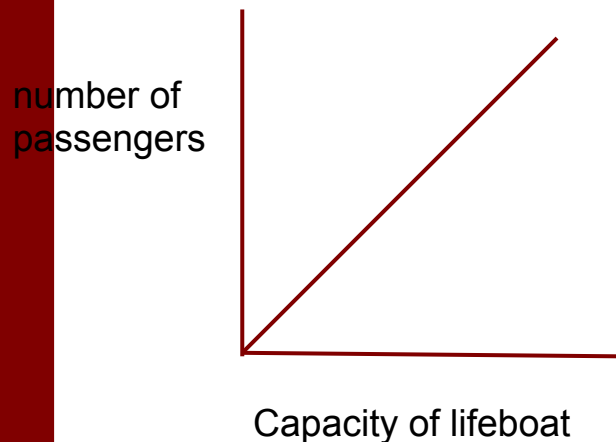
- change one thing at a time
- keep everything else the same

Swingers

- Variables in swingers experiments
 - release position
 - mass
 - length (this is the only one that effect the exp.)
- The longer the swinger the fewer swings
- The shorter the swinger the more swings
- To slow a swinger down
 - Make it longer
- To speed a swinger up
 - Make it shorter
- Pendulum System
 - string, paper clip, penny, masking tape, pencil

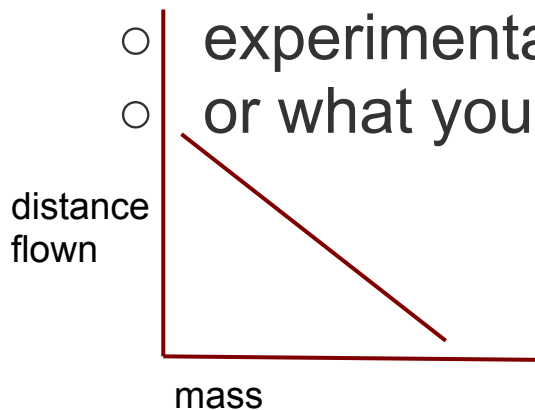
Lifeboats

- Variables that affect the number of passengers
 - Capacity of the boat
 - Size of the boat
 - arrangement or (placement) of the pennies.
 - Dry pennies



Planes

- Variables that effect a FOSS plane
 - Number of winds
 - angle of line
 - starting position
 - mass
- What is the only thing you change in an controlled experiment is the
 - experimental or independent variable
 - or what you are testing



Flippers

- Longest flip
 - Small ball
 - flipstick all the way in
 - pushed all the way down
 - 40 degree angle
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Controlled Experiments

- For Accurate results:
 - Control all variables
 - Multiple trials or repeat the experiment
 - Use smaller units
- Keep everything the same except the experimental or independent variable
- Look at swinger graph
 - mistakes and relationships
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Graphing

1. Independent variable
 - a. on bottom of graph
 - b. found on the left side of a table
 - c. this is what you know at the beginning of an experiment.
2. Dependent variable
 - a. on left side of graph
 - b. found on the right column of a table
 - c. this is what you find out by doing the experiment
3. Title
 - a. on top
 - b. How does _____ effect _____

Graphing

4. Independent scale
 - a. comes from left column of the table
 - b. space evenly
5. Dependent scale
 - a. must be as high as biggest number
 - b. use a money number
6. Plot points
7. Draw line

Relationships and Predicting

- Use graph to come up with relationships
- Use graph to predict

Catapult Parts

Spring

Flipstick

Pivot

small stones

large stones