

## Leaping Levers!

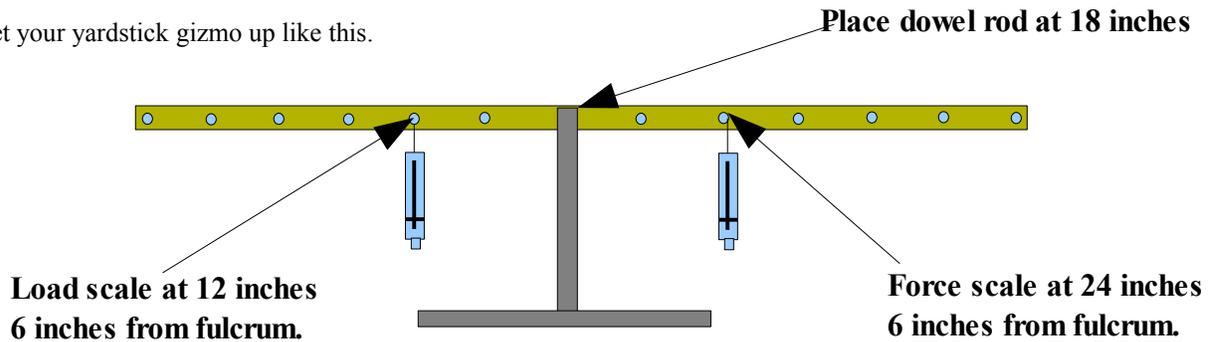
This time, let's just jump right in

### Lab1: Class 1 levers

Create a table kinda like this in your lab book....but make it longer!

Class one lever lab	Load distance from fulcrum (inches)	Weight in grams of Newtons	Force distance from fulcrum (inches)	Force in grams of Newtons

Set your yardstick gizmo up like this.



While holding down on the load scale, pull down on the force scale. **Never allow either scale to exceed 1000g!** Record a couple of values for each scale in your lab book. It stands to reason that the values on both scales should be about the same since the lever arms are the same length.....duh.....

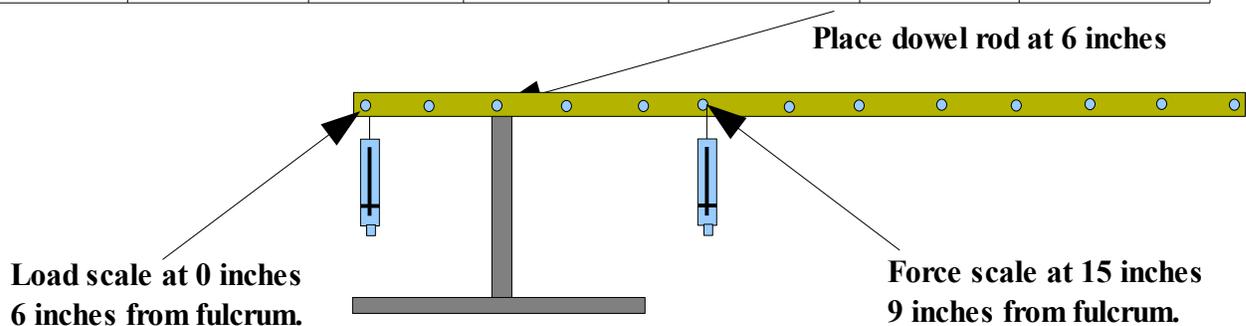
**In your lab book record the force in grams or Newtons in your lab book.**

Repeat this experiment with the force scale at 27,30,33 and 36 inches while leaving the load scale at 12 inches (6 inches from fulcrum).

### Lab2: Class 1 levers..extended lever arm

Create a table kinda like this in your lab book....but make it longer!

Class one lever lab	Load distance from fulcrum (inches)	Total length of force lever arm	Weight in grams of Newtons	Force distance from fulcrum (inches)	Total length of force lever arm	Force in grams of Newtons



While holding down on the load scale, pull down on the force scale. **Never allow either scale to exceed 1000g!** Record a couple of values for each scale in your lab book.  
**In your lab book record the force in grams or Newtons in your lab book.**

Repeat this experiment with the force scale at 18,21,24,27,30,33 and 36 inches while leaving the load scale at 0 inches (6 inches from fulcrum).

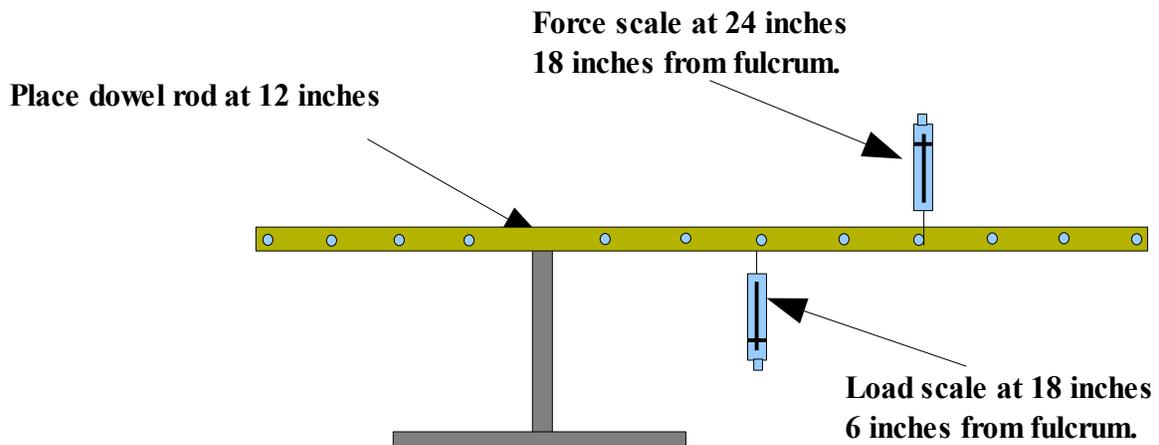
***Special Question:***

Were you able to get a reading when the force scale was at 33 or 36 inches??  
 Why or Why not??

**Lab3: Class 2 levers**

Create a table kinda like this in your lab book....but make it longer!

Class one lever lab	Load distance from fulcrum (inches)	Weight in grams of Newtons	Force distance from fulcrum (inches)	Force in grams of Newtons



While holding down on the load scale, pull down on the force scale. **Never allow either scale to exceed 1000g!** Record a couple of values for each scale in your lab book.  
**In your lab book record the force in grams or Newtons in your lab book.**

Repeat this experiment with the force scale at 27,30,33 and 36 inches while leaving the load scale at 18 inches (6 inches from fulcrum).