

# PHYSICS

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## Lab 4-1: You've Got the Power!

In this short experiment, you are going to estimate the average power exerted by your legs (or your lab partner's) as you run up a flight of stairs. After you've done the calculations, you will know whether or not it would be wise to challenge a horse.

**(NOTE:** If you have a medical condition that prevents you from climbing stairs, notify your instructor!)

### INSTRUCTIONS:

1. Record your mass in kilograms. If you know your weight in pounds, you can calculate the equivalent mass in kilograms. If you're not sure of your weight, you can use one of the bathroom scales provided. For those who want to work (yes, pun intended) extra hard, weigh yourself with your backpack and climb the stairs while wearing it.
2. Determine the vertical distance from the base of the stairs to the top of the stairs.
3. Time yourself (or have your lab partner time you) walking up the stairs.
4. Have your lab partner time you running up the stairs. Please don't hurt yourself.

### DATA:

Mass (kg)	
Vertical distance (m)	
Time(s) walking up stairs (s)	
Time(s) running up stairs (s)	

