Quiz Help

Momentum = mass times velocity

$$p = m.v$$

before collision *after collision*

Prediction

Masses ☐ + ☐ = ☐ + ☐

Calculation

Apr 20-7:44 AM

Work

Something that applies a Force on a moving object is doing work on it.

$$W = F \cdot d$$

Work = Force · displacement

Apr 19-11:31 AM

Energy

Energy in = work done on the object

Energy out = work done by the object

Apr 19-11:31 AM

Power

Power is a quantity describing how quickly work is done.

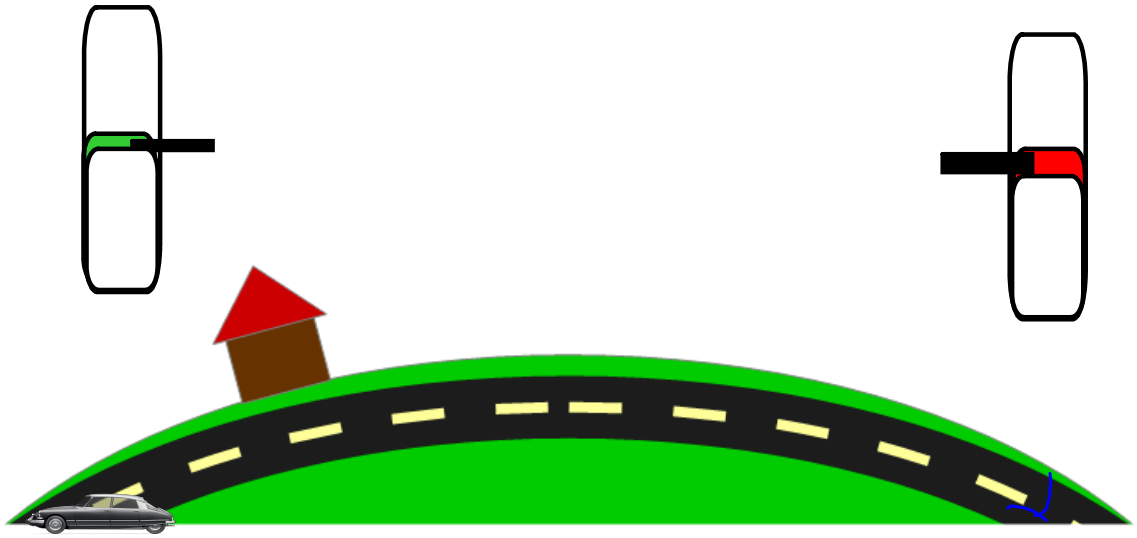
$$\text{Power} = \frac{\text{Work}}{\text{time}}$$

$$P = \frac{W}{t}$$

Apr 19-11:31 AM

Gravity Energy

Chemical Energy



Apr 19-11:04 AM

Final Project

Device

needs to be safe

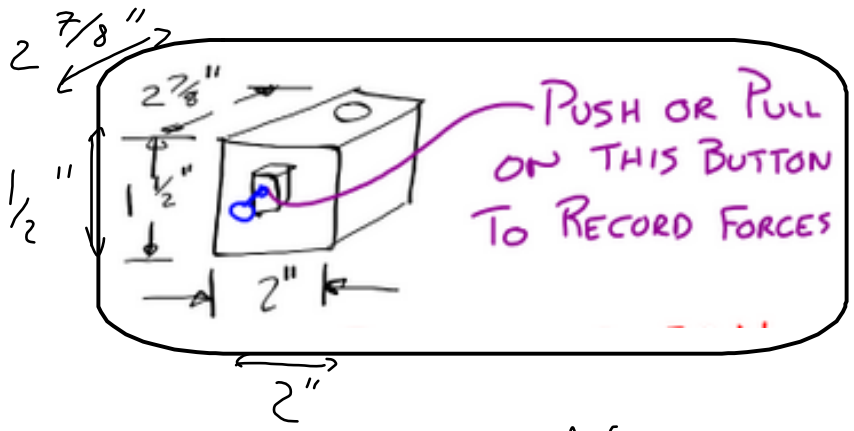
needs to be portable

needs to be fun

have a Force sensor built into it

Apr 19-11:42 AM

Final Project



0-50 N

$W = F \cdot d$

$W = F \cdot d = N \cdot m = \text{Joule}$

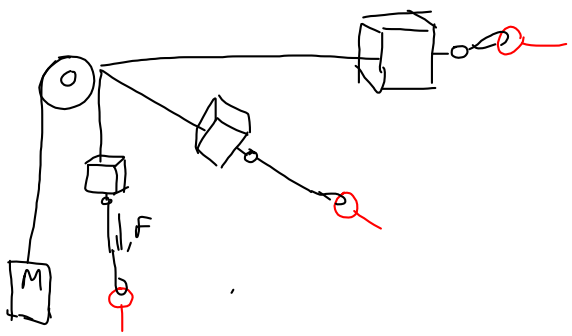
Newton.meter

Apr 19-11:42 AM

Final Project

Full piece of paper

- detailed drawing of device
- draw the force sensor into it
- explain how it is attached
  NO tape or glue
- label with an arrow the force your device will measure

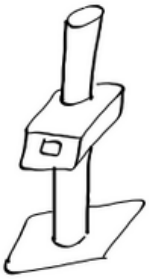


Apr 19-11:42 AM

Final Project

How To Attach The Sensor

- Put it in a wood cradle / box
- Mount it on a ring stand using the hole in the middle of it
- Clamps
-



Apr 19-11:42 AM

Toy / game / fun to play with

Includes force sensor

describe how you will attach it

Measures a force over a distance:

use the force sensor and some way to measure the distance (ruler, rotations, etc.)

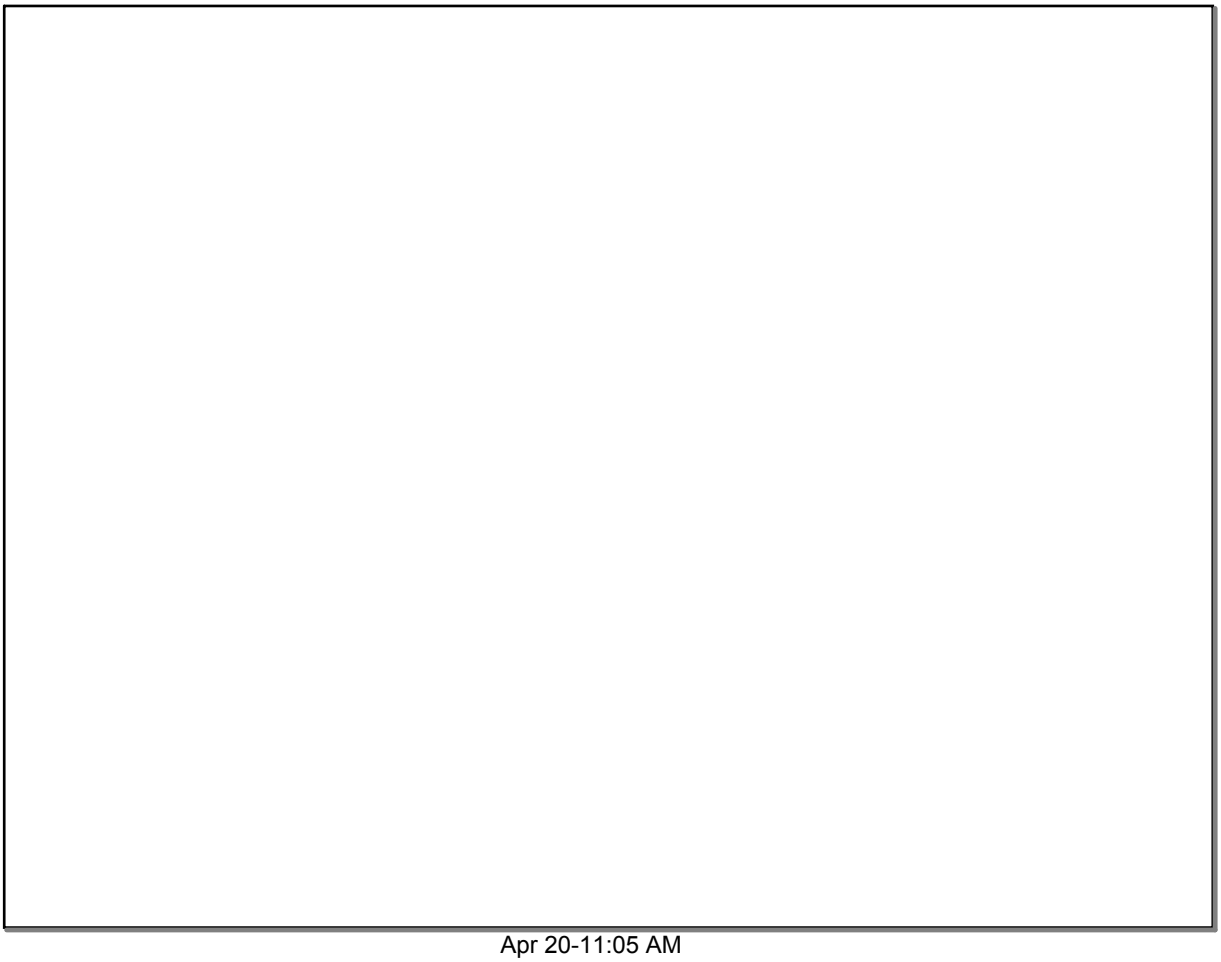
W = F . d

Work = force times displacement

First page: drawing + force sensor

Second page: 3 sentences explanation

Apr 19-12:01 PM



Apr 20-11:05 AM