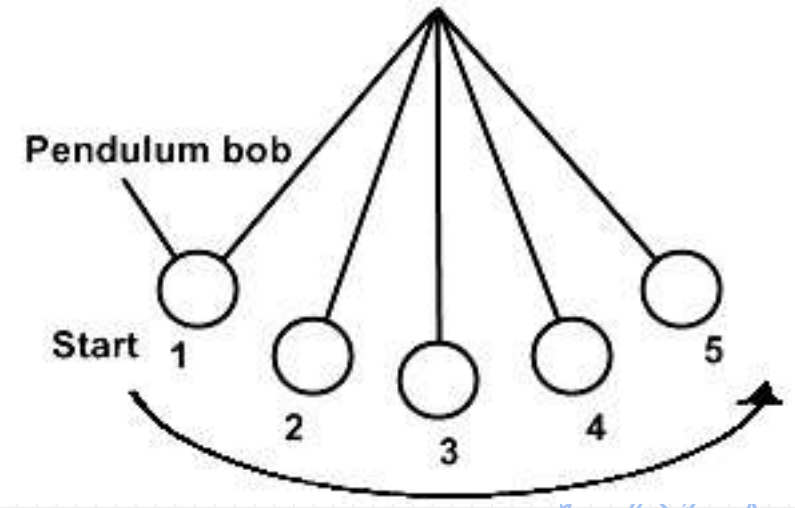
Unit 5 Energy

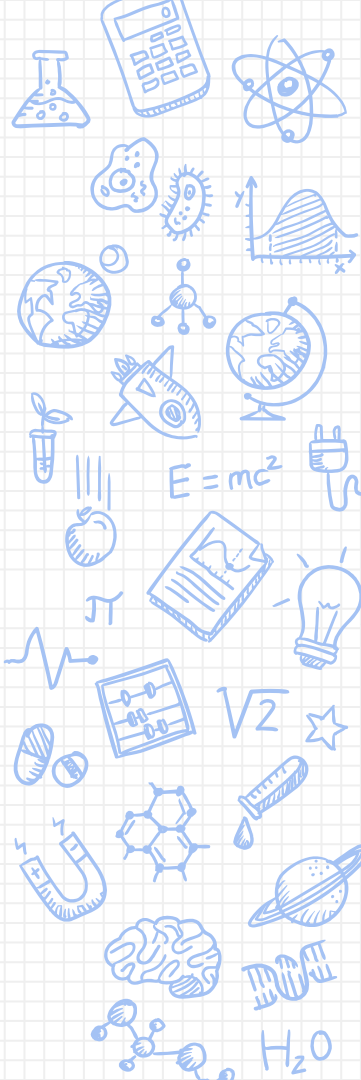
Physics Do Now

The pendulum starts at Point 1 and travels to Point 3, its lowest point and then to Point 5.

- Draw the situation and label the following
  - Max Potential Energy
  - Min Potential Energy
  - Max Kinetic Energy
  - Min Kinetic Energy
- If the total energy at Point 1 if 450 J, what is the total energy

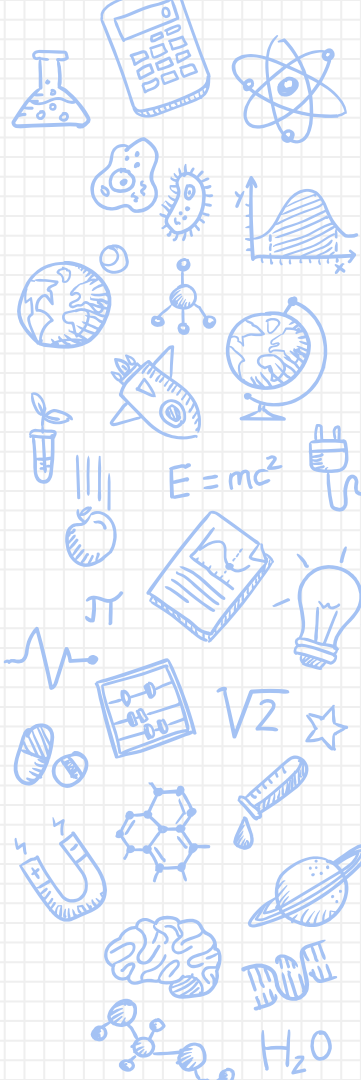


Flipped Lesson Review

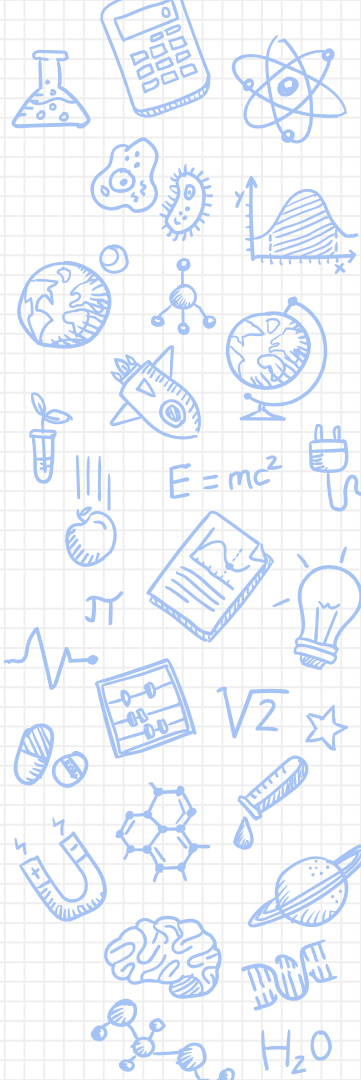


Conservation of Energy Videos

https://www.youtube.com/watch?v=xXXF2C-vrQE



White Board Practice



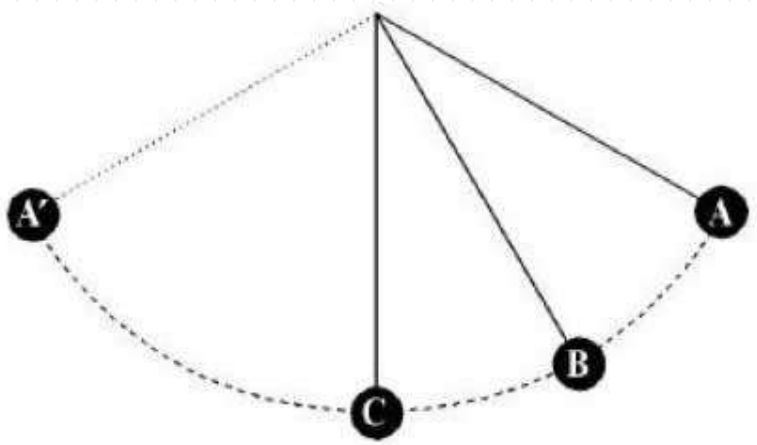
If I double the mass of an object, what will happen to the potential energy?

A 1500 kg car has a velocity of 60 m/s. What is the kinetic energy?

A 70 kg person standing on the top of Mt. Everest has how much potential energy?

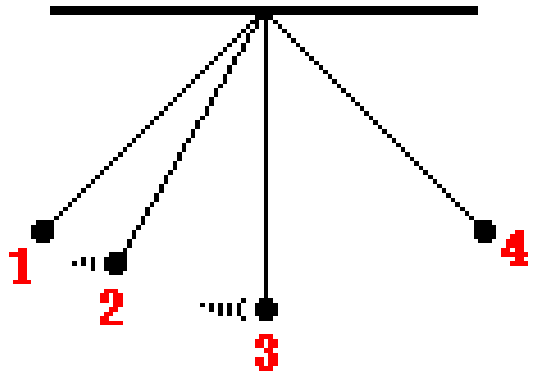
The person on Mount Everest makes their way down so they are at sea level. What is their energy now?

A pendulum (mass of 0.5 kg) is being held at A, which is 0.6 m off the ground. What is the potential energy? How fast will it be moving at C?



How high will a 7.9kg ball go it if has an initial velocity of 6 m/s upwards?
(Hint: Find KE, then PE)

A 8 kg ball is dropped from a height of 8 m. What is the velocity at the end? (Hint: find PE, then KE



Position 1

PE = 6 J

KE = 0 J

h = A m

v = 0 m/s

Position 2

PE = 3 J

KE = 3 J

h = B m

v = C m/s

Position 3

PE = 0 J

KE = 6 J

h = D m

v = E m/s

Position 4

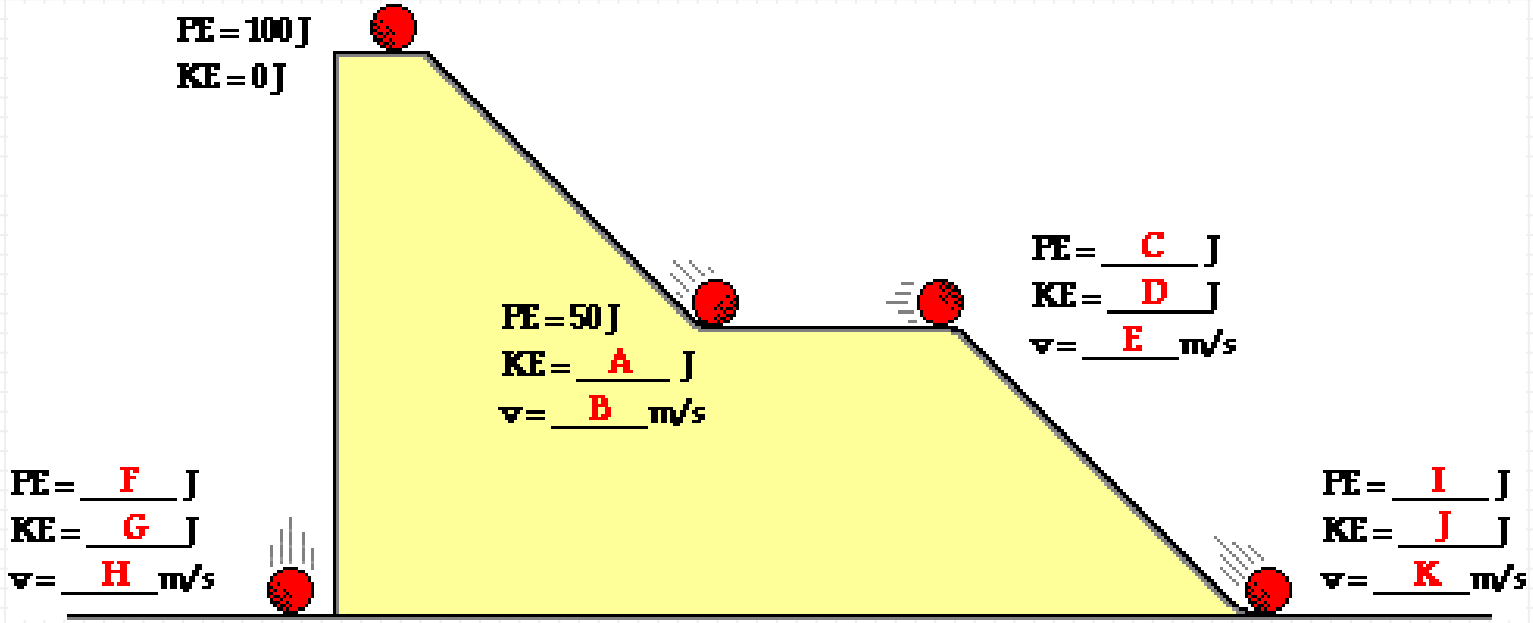
PE = 6 J

KE = 0 J

h = F m

v = 0 m/s

Solve for letters A–K. Use KE and PE equations and the conservation of energy! Mass = 1 kg



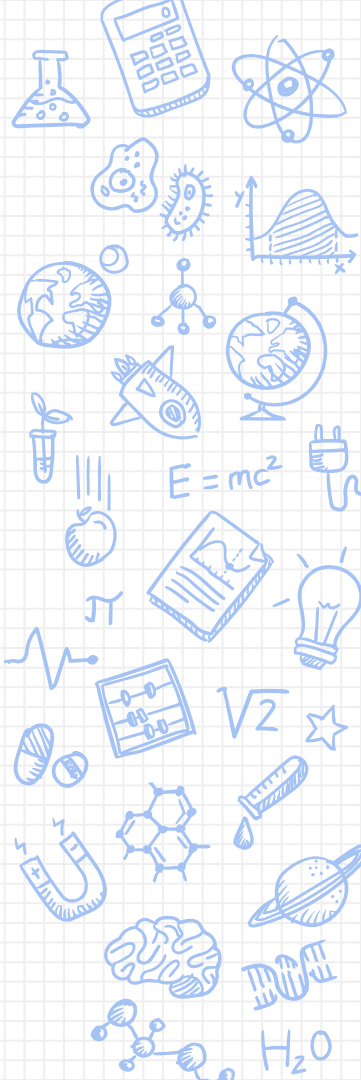
Complete Pages 1-3 Work & Power FL for Tuesday is posted!

- Get a Conservation of Energy Lab
- Read and complete the questions on the first page.

Late Work

Last Day to turn in late work (no exceptions)

Friday, December 16th at the end of the school day



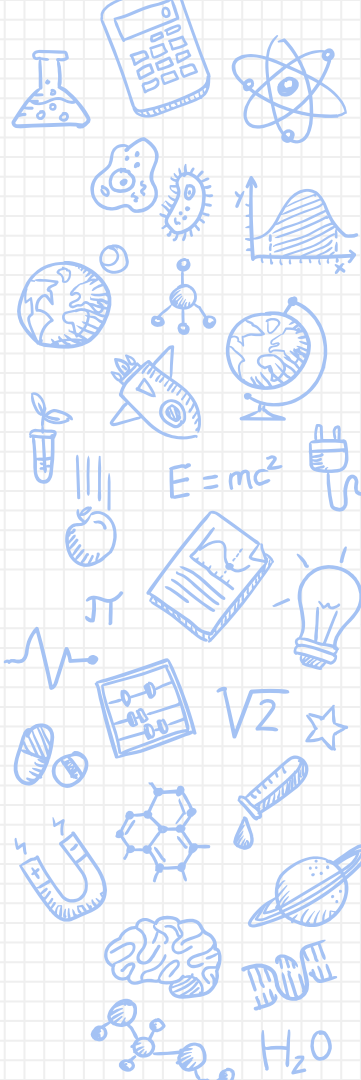
Conservation of Energy Lab

- 5 lab groups
- Build a ramp using hot wheels track
  - It should take you less than 5 minutes to build

- Photogate- set up so it can capture the WHOLE cart

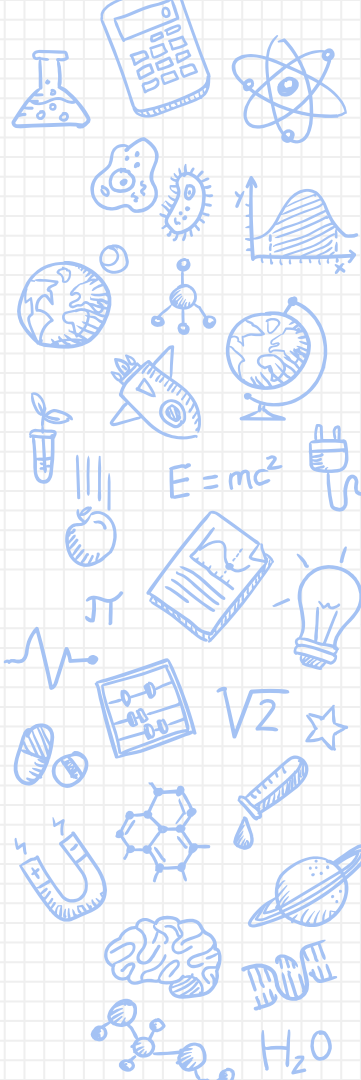
- Directions are on the board on how to set up the photogate

- Velocity = distance of car/average time

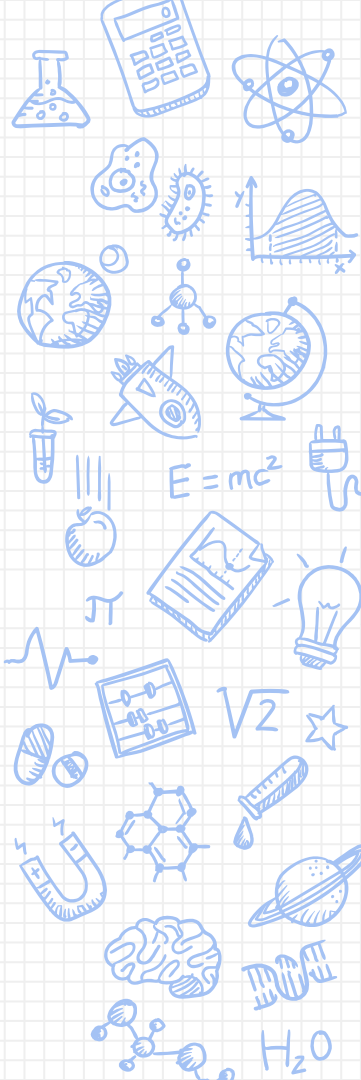


Physics Do Now

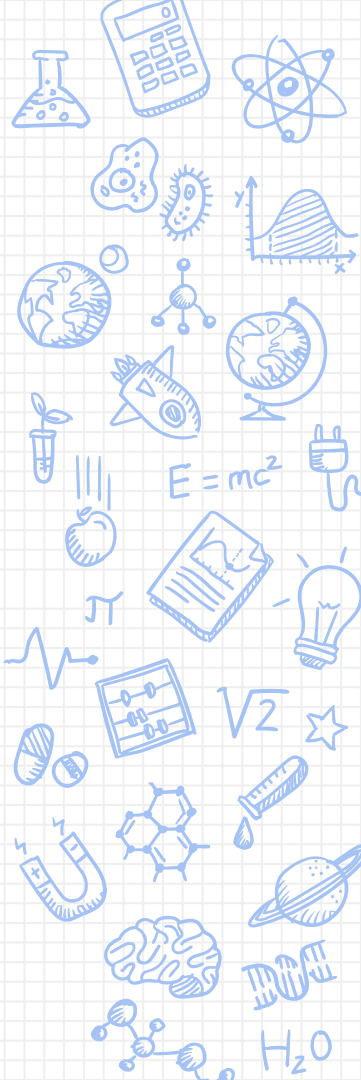
- Take out your Conservation of Energy Lab and complete this now if you have not already
- Take out your Stamp Sheet for this month
- Turn both in!



Work and Power Review

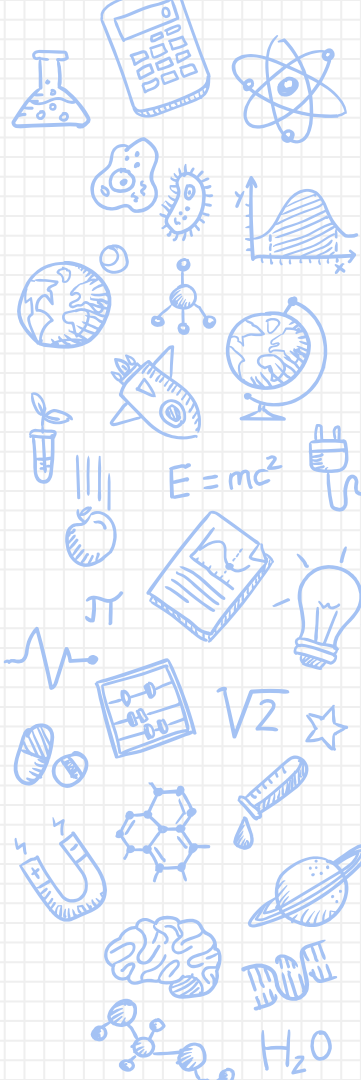


Work and Power Lab

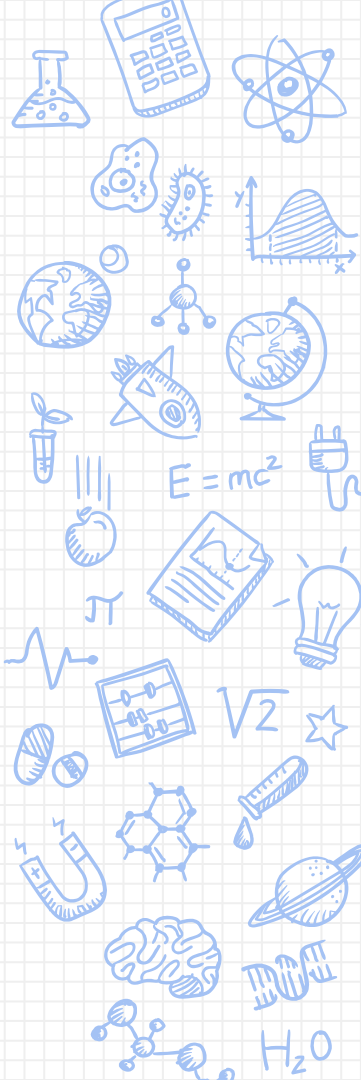


Energy, Work and Power

Using the equations...



- Complete your Work and Power data analysis on Pages 5-6
- Complete the energy, work and power problems on Pages 2-3



Physics Goals

- Turn in your Work and Power Lab
- Work on Pages 4-5 in your Practice Packet

Your Practice Packet is due by the beginning of class tomorrow