



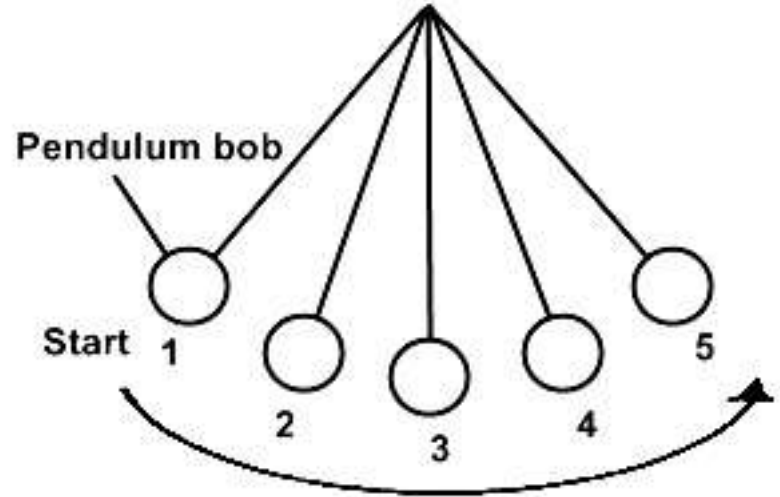
Unit 5 Energy



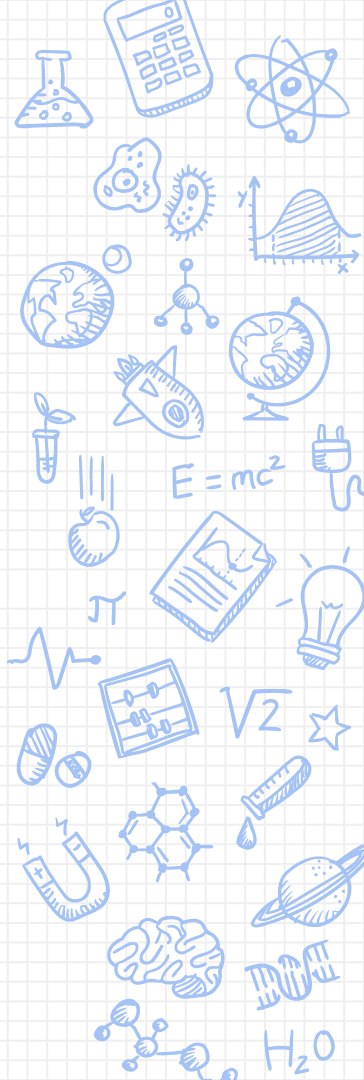
Physics Do Now

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

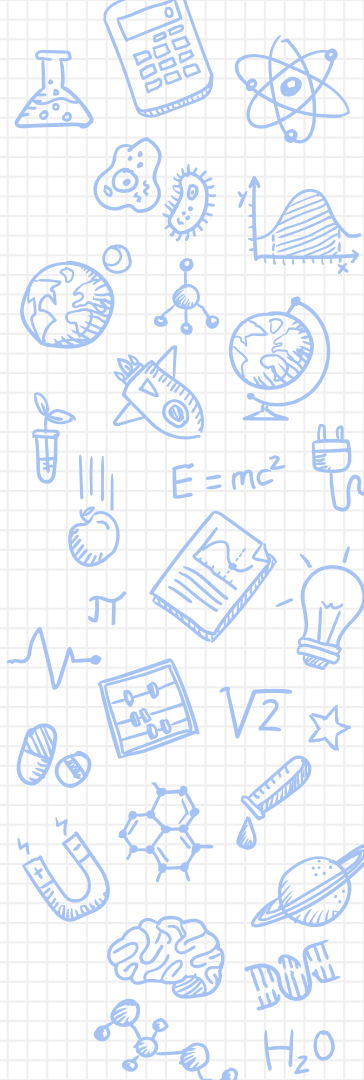
- Draw the situation and label the following
 - Max Potential Energy
 - Min Potential Energy
 - Max Kinetic Energy
 - Min Kinetic Energy
- If the total energy at Point 1 is 450 J, what is the total energy



Flipped Lesson Review



White Board Practice



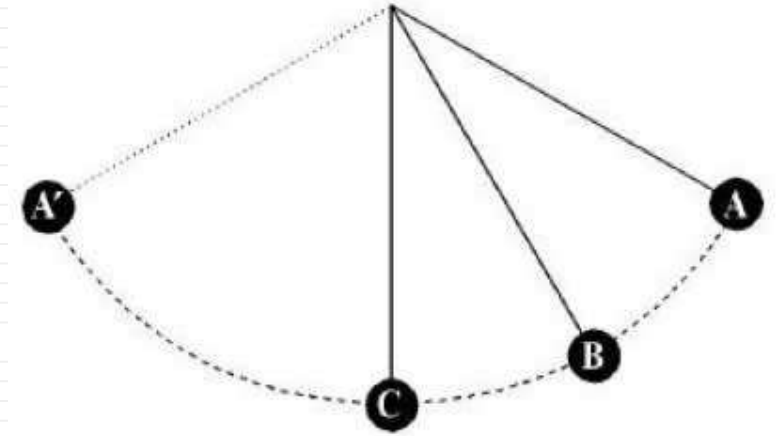
If I double the mass of an object, what will happen to the potential energy?

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?

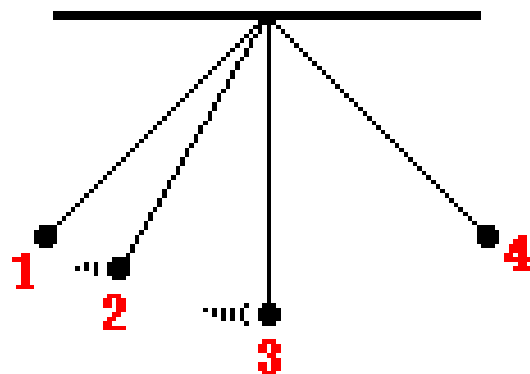
The person on Mount Everest makes their way down so they are at sea level. What is their energy now?

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 if it 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**

$$PE = 6 \text{ J}$$

$$KE = 0 \text{ J}$$

$$h = \underline{\text{A}} \text{ m}$$

$$v = 0 \text{ m/s}$$

Position **2**

$$PE = 3 \text{ J}$$

$$KE = 3 \text{ J}$$

$$h = \underline{\text{B}} \text{ m}$$

$$v = \underline{\text{C}} \text{ m/s}$$

Position **3**

$$PE = 0 \text{ J}$$

$$KE = 6 \text{ J}$$

$$h = \underline{\text{D}} \text{ m}$$

$$v = \underline{\text{E}} \text{ m/s}$$

Position **4**

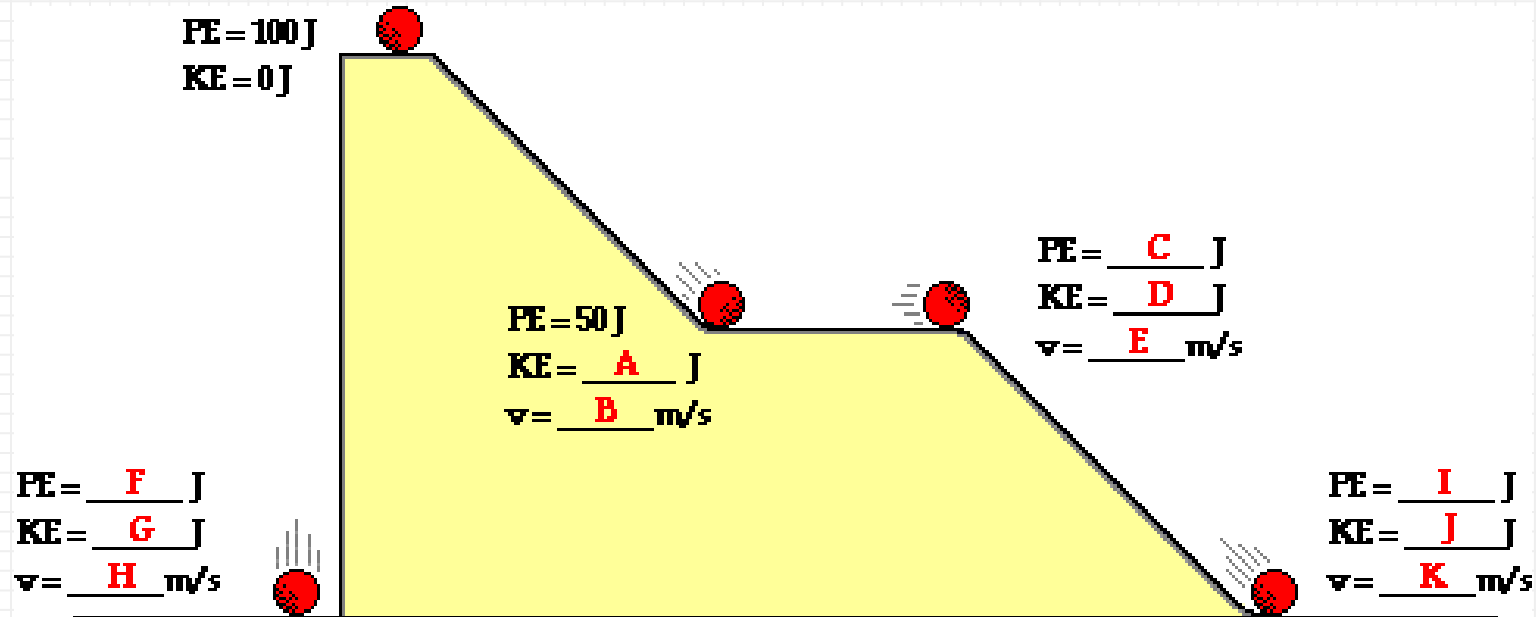
$$PE = 6 \text{ J}$$

$$KE = 0 \text{ J}$$

$$h = \underline{\text{F}} \text{ m}$$

$$v = 0 \text{ m/s}$$

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.

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

- 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



Using the equations...

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