

Handout

Questions:

1. If you drop the pendulum without pushing, does it ever get any higher than when you dropped it?
2. Where in its swing is the pendulum the fastest?
3. Where in its swing is the pendulum the slowest?
4. When does it have the most potential energy?
5. When does it have the most kinetic energy?
6. How many swings does it take for the pendulum to stop moving?
7. Try again with the heavier object. Does it move any faster when you drop it from the same height?
8. How many swings does it take for the heavier pendulum to stop moving?
9. Which do you think had more energy to start, the heavier or the lighter pendulum?
10. Where do you think the energy went? Can you think of a way to test that? Describe an experiment that could test your hypothesis.

BONUS: Try the experiment again with a water bottle, filled to be as heavy as your heaviest object. How many swings does the bottle take to stop moving?

BONUS 2: What do you think the water is doing in the bottle that could take away kinetic energy and slow down the pendulum?