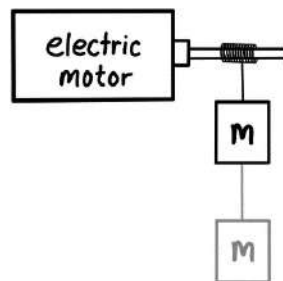



NAME _____

DATE _____

Scenario

Angela has a battery and an electric motor that can be used to raise boxes up from the ground to a height h . She wishes to determine if the amount of electrical energy delivered by the battery is the same as the amount of gravitational potential energy gained by the box-Earth system.

EMF **PART A:**

- i. What measurements must be made to answer this question?

- ii. What equipment will be used to make these measurements?

- iii. In the diagram above, draw in wires along with each piece of equipment listed to show how measurements would be made.

PART B: Explain how the measurements would be used to answer the question.

PART C: Angela finds that after several trials, the energy delivered by the battery is always noticeably greater than the gravitational potential energy gained by the box-earth system. Give a physical reason for this.
