**Dropper Popper Inquiry Lab**

Instructions: Your job is to try dropping several items from a height of exactly 1 meter to come to some conclusions about energy. Drop each item three times, and using a meter stick, record how high the item bounces back up. Get an average value for each item.

**Part A: Dropping Objects**



Ping-pong ball-

Trial 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

Trial 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters Average: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

Trial 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters



Dropper Popper (looking like this)

Trial 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

Trial 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters Average: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

Trial 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters



Dropper Popper (looking like this)

Trial 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

Trial 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters Average: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

Trial 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ meters

(1) First, rate the order of how high the objects bounced from least to greatest. Next, discuss possible reasons for the differences in the heights you observed. Mention all three items in your explanation.

Highest to Lowest:

Explanation:

(2) Why do you think turning the Dropper Popper inside out changed its bounce height? Try to use the word ***energy*** in your answer.

(3) Did you hear any noise when the objects bounced? Where do you think the noise came from?

(4) Try to make some conclusions about what you’ve learned about energy so far. Use evidence to support your explanation. A) Do you think there are different types of energy? B) Can energy change from one type to another? C) Can energy be stored?

**Part B**:

Now try one more thing. Carefully place the ping-pong ball into the Dropper Popper like this, and then drop them together from exactly 1 meter. There’s no need to take height measurements here.

What did you notice?

Does this tell you anything else about energy? Explain.