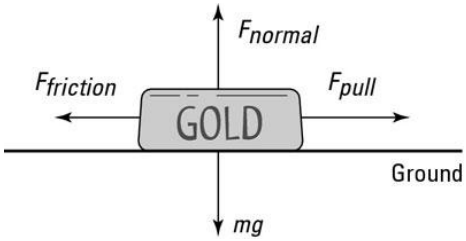


Name: _____

Date: _____

Pd: _____

Friction – What a Drag!

I. Purpose:

The purpose of this lab is to determine how surface texture and mass affect the friction of a moving object.

Hypothesis:

_____

_____

_____

II. Materials:

- 3 Wooden Blocks
- 1 Piece of Sandpaper
- 1 Set of Spring Scale
- 1 Lab paper
- 1 Writing utensil

III. Procedure:

1. Gather supplies
2. Attach spring scale to wood block
3. Practice dragging the wood block across the surface of your desk slowly, keeping the spring scale even by keeping the pull consistent for a distance of 30cm (0.3m)
4. Conduct the first trial using the wooden block dragged across the metal surface on your desk for 30cm. Read the spring scale to determine the force used.
5. Record the results on the data table.
6. Repeat step 4 two more times, for a total of three trials.
7. Place two blocks of wood on top of the first wooden block and repeat steps 4-6.
8. Using only one block, repeat steps 4-7, dragging the block across the sandpaper. (NOTE: you will have hold the sandpaper as you drag the wooden block)
9. Calculate the average force needed to move the block over three trials and record in your data table.
10. Calculate the work done on the block for each type of experiment using the formula:
    Work = force x distance (use the average force for "force" and 30cm for distance)

IV. Data

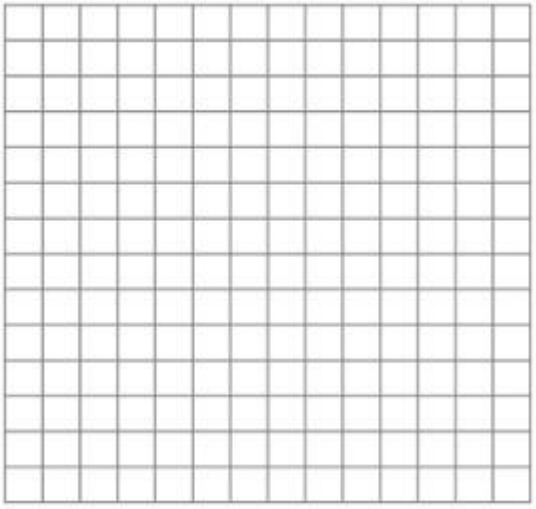
A. Diagram

B. Observations – n/a

C. Data Table

	Trial 1 Force	**Trial 2 Force**	**Trial 3 Force**	**Average Force**	**Work Done**
Single Block on Metal					
3 Stacked Blocks on Metal					
Single Block on Sandpaper					
3 Stacked Blocks on Sandpaper					

D. Graph



E. Analysis Questions

1. Was the force needed to pull the blocks greater or lesser when more blocks were added?

2. Which surface required a larger force to pull the blocks? (metal or sand paper)

3. Summarize two things you learned about friction in this lab.