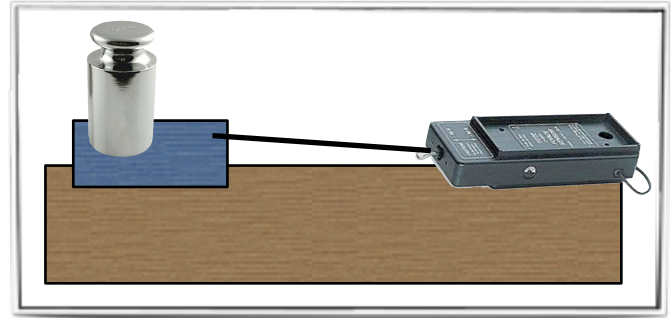


Friction

Name _____ Date _____

Introduction

For this lab, it is very important that all speeds are constant, and that the line between the sensor and the block is always straight.



Weight of the block _____

$$F = \mu N$$

Force of Friction (N) = coefficient of friction (no units) x Normal Force (N)

Part 1. Surfaces

Trial	Sliding Material	Surface Material	Measured Friction
1			
2			
3			
4			

Questions

Did the results make sense? Why or why not.

Discuss one example of a “real world” reason for testing the friction between surfaces.

Grade

Friction

Name _____ Date _____

2. Speed

Trial	Relative Speed	Measured Friction
1	slow	
2	medium	
3	fast	

Questions

Did the results make sense or were you surprised by your answers?

Many students feel that this section could be improved. How would you change the procedure to make the results better?

3. Area

Trial	Area	Measured Friction
1	The large "face"	
2	A side "edge"	
3	The small "end"	

Questions

Did the results make sense or were you surprised by your answers?

Many students feel that this section could be improved. How would you change the procedure to make the results better?

Grade

Friction

Name _____ Date _____

4. Normal Force

Total weight of the block and an additional .5 kg mass _____

Trial	Additional Mass	Normal Force	Measured Friction
1	0.000 kg		
2	0.100 kg		
3	0.200 kg		
4	0.300 kg		
5	0.400 kg		
6	0.500 kg		

Calculations

Create a graph including a straight line through the points you found.

Calculate the slope of the line by picking two **new** points.

(one near the top, and one near the bottom)

What does this slope **define**?

