Spring Scale Lab

Purpose: to determine the amount of force on an object when pulled up an inclined plane with and without friction.

Hypothesis: which object will be most affected by the addition of friction?

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Materials:

Three eye bolts of varying masses, scale, meter stick, aluminum foil, spring scale, four textbooks

Procedures:

1. Weigh each eye bolt and record each mass on the table below.
2. Attach each eye bolt to a spring scale and record the initial force in Newtons by hanging the object vertically.
3. Attach each bolt to the spring scale and slide the scale and bolt up an inclined meter stick recording the force needed on the table below.
4. Finally, cover the meter stick with aluminum foil and measure the force needed now that friction has been introduced. Attach each eye bolt to the spring scale, and slide the bolt and scale up an inclined meter stick recording the force needed on the table below.

	Mass in grams	Vertical Force in Newtons	Incline Force in Newtons	Incline Force with Friction in Newtons
Bolt #1				
Bolt #2				
Bolt #3				

Conclusion:

1. What happened to the force of gravity when an incline plane was introduced?

2. What happened to the force of gravity when friction was introduced?

3. Was your hypothesis correct? Explain.