

Testable question: How does the surface type affect the amount of static friction?

IV: (2 points) \_\_\_\_\_

DV: (2 points) \_\_\_\_\_

Which material do you think will cause there to be the most static friction? Explain your answer:

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Hypothesis: (3 points)

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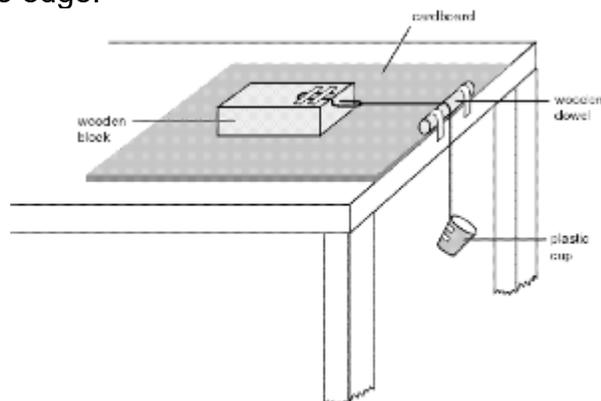
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### Materials

- 1 wooden block with hook
- 1 cup on string
- 1 friction board with 4 different surface (cardboard, cork, rubber, sandpaper)
- 1 pencil/plastic cylinder
- 1 bag of pennies (at least 50)
- 1 spring scale

### Procedure

- 1) Refer to the diagram below to set up the first 4 materials listed as shown. The block should be placed on the cardboard at the end of the friction board farthest away from the table edge.



- 2) Add pennies to the cup until it moves all the way to the end of the friction board.
- 3) Hang the cup of pennies on the spring scale and use it to determine the amount of force required to move the block. (This is the force required to overcome the static friction.)
- 4) Repeat steps 2-3 for each of the other surfaces.

What are 3 things that must remain constant? (3 points)

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