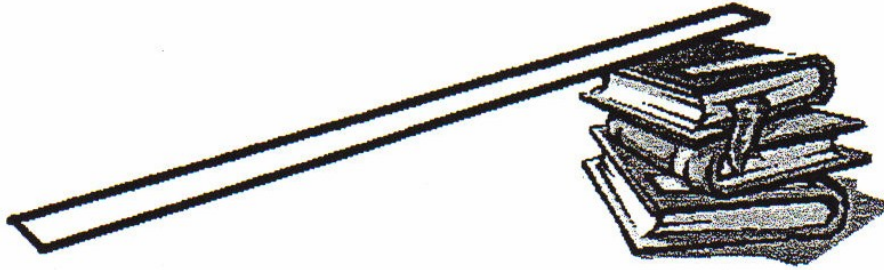


RICE UP!



Problem: How does an inclined plane (a flat sloping surface) make lifting an object easier?

Materials: scissors, large rubber band, ruler, masking tape, 3 books, yardstick or meter stick, 1 cup rice, sock, string

Procedure:

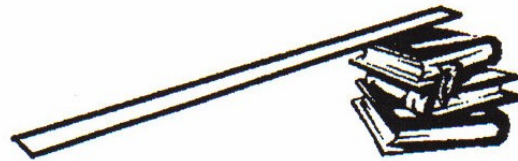
1. Make your own spring scale as follows:
 - Cut the rubber band to form one long rubber strip.
 - Place the rubber strip on the back side of the ruler, attaching it with tape over the edge of the ruler, allowing about 3 inches of the strip to hang down on the back.
2. Pour the rice into the sock and tie a knot so the rice won't spill.
3. Stack the 3 books on a table and make a ramp using the yardstick.
4. Cut a piece of string 12" long. Tie one end around the knot on the sock with the rice, and the other end to the end of the rubber strip on the ruler.

5. Resting the sock on the table, slowly lift the scale straight up until the bottom of the sock is at the height of the stacked books.
6. Mark on the ruler the distance the rubber strip stretches along the ruler.
7. Now place the sock on the bottom of the yardstick ramp. Holding the scale, slowly pull the sock to the top of the ramp.
8. Again, mark the distance the rubber strip stretched on the ruler.
9. Repeat test the complete test one more time.
10. Compare the markings of each test and complete table.
11. Write about which method of lifting the rice-filled sock required more work.

Name _____

Date _____

RICE UP!



	Test 1	Test 2
Lifting scale straight up		
Lifting scale on ramp		

Which method of lifting the rice-filled sock took more work?

Explain what happens when the inclined plane is used.

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