

Name _____

Date _____

Friction

Pre-Lab:

Friction-

Coefficient of friction-

Lab Procedure:

Materials:

Rubber band
Small container (any box or shoe)
Ruler
Smooth surface
Plastic soda/juice bottle
Rice (enough to fill the bottle)
One wooden chopstick

Procedure:

1. Place the small container onto a smooth surface.
2. Cut the rubber band and securely tie one end to the container.
3. Gently pull the rubber band until the container starts to slowly slide across the surface.
4. Have one of your classmates measure the length of the rubber band as the container is slowly sliding and record this value on your worksheet.
5. Now stop the container and place some weight (such as a cup of water or a few pencils) inside.
6. Again gently pull the rubber band until the container starts to slowly slide and have one of your classmates measure the length using the ruler.

7. Record this value on your worksheet and compare it to the one from step 4!
8. Now take the empty soda/juice bottle and fill it completely with rice.
9. Now stick one chopstick into the rice.
10. Pull the chopstick up and observe what happens.
11. Now tap the bottle gently against a tabletop. This will pack the rice tightly around the chopstick.
12. Pull the chopstick again and observe what happens.

Observations:

	<i>With No Weight</i>	<i>With Weight</i>
<u>Length of Rubber Band:</u>		

Conclusions

1. Why did the rubber band stretch more when weight was placed in the container?

2. Why was the chopstick able to pull up the bottle after being tapped?

Bonus

3. What do you think would happen if the wooden chopstick was replaced with a plastic chopstick?