

**Lab 4: Friction**  
by Veronica Davis (Cornell University)

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Group Members:** \_\_\_\_\_

\_\_\_\_\_

**Objectives**

- Understand and define friction
- Observe the effects of friction on an object

**A. Pre Lab Questions**

1. What is friction?

The friction force opposes the motion of the object.

2. Name the types of friction and give examples of each.

Static: prevents objects from sliding. Example: tires on a car

Sliding: causes slipping to occur. Example: Ice

**B. Group Lab**

Refer back to Lab 1: Zoooooooooom! How Fast is Fast? Using the same materials and procedures, you will repeat the exercise in the parking lot and the side walk.

**Predicting**

1. Do you think the car will move faster or slower on the sidewalk than when you did the experiment on the floor? Why?

2. Do you think the car will move faster or slower in the parking lot than when you did the experiment on the floor? Why?

### C. Data Collection

#### **Parking Lot**

<b>Trial Number</b>	<b>Distance</b>	<b>Time</b>	<b>Average Speed</b>	<b>Average Velocity</b>
1				
2				
3				

#### **Sidewalk**

<b>Trial Number</b>	<b>Distance</b>	<b>Time</b>	<b>Average Speed</b>	<b>Average Velocity</b>
1				
2				
3				

### **D. Conclusion**

1. Looking at your results, which surface had the highest average velocity?
2. How does this compare to your predictions?