

The Speedy Scavenger Hunt!

I. Purpose

To calculate the average speed of each group member while they find specific items on campus.

II. Materials (write this on your own, try to be as specific as possible).

III. Procedure (write this on your own, try to be as specific as possible).

IV. Data

Group Member	Time (min)	Distance (miles)	Item

Average Speed Prediction = _____

Time Prediction = _____

V. Processing the Data (show all calculations and work done).

1. Calculate your individual average speed in mph and m/s.

$$\text{average speed} = \frac{\text{distance}}{\text{time}}$$

To go from miles to meters, multiply your distance in miles by 1600.

To go from minutes to hours, divide your time in minutes by 60.

To go from minutes to seconds, multiply your times in minutes by 60.

2. Calculate your group's total distance and time in miles and minutes, respectively.

This should require no conversions.

3. Calculate your group's average speed in mph and m/s.
 - + Ask your group members for their speed calculations!
 - + Take all your group members' average speeds and calculate a group average in mph and m/s.
4. Calculate your percent error for your time in minutes and average speed.

VI. Conclusion (see your lab report notes)

VII. Discussion (at least 2, eight sentence paragraphs).

1. What is your displacement when you went to find your item and returned to class? Explain.
2. How did your average speed compare to what you thought it was going to be? What does that tell you?
3. Are you surprised at the distance you traveled? Explain.
4. Why did we only calculate average speed and not instantaneous speed? Could you have found your instantaneous speed? Explain.
5. If you had to do this lab again, what changes/improvements would you have made and why?
6. What did you learn while conducting this lab?
7. Tacos or burritos?