

# A Statistical Analysis of the Behavior of Drivers on the ETSU Campus at 4-Way Stops

Great Ideas in Science Lab (BIOS 3038)

Lab 1, September 19, 2006

Design an (observational) experiment which concerns how drivers deal with 4-way stops on the ETSU campus. Formulate a hypothesis to test (before collecting data) such as “At least half of the drivers do not use a their turning signal when turning at a 4-way stop.”

Describe how you want to collect the data and any problems that you foresee in the data collection (is it biased by time of day the data is collected, subjectivity of the observer in determining whether a complete stop has been achieved or not, the presence of pedestrian, etc.?). Should you collect the data based on an amount of time or the number of cars which pass through the intersection? Once you have the data, are there other statistical comparisons you can make? Is there background material which you should review? Are you clear on the rules of the 4-way stop?

I want you to divide into two teams and collect the data with both members of a team present. I suggest doing this at different times of the day and at different intersections.