

## Car Crash Lab

### Premise:

You are an accident investigator called to the scene of a crash. Two cars crashed at the intersection of Knapheide Avenue and Marks St. One car has already been towed away, but the other car remains.

### Basic Facts:

- There is friction involved in the accident ... hence the skid marks.
- Assume the Chrysler Voyager and the missing car came to a stop at the lamppost but the lamppost was not involved in the accident.
- Note: There are no uncertainty calculations needed for this lab.

### Goals:

- Based on the [scale drawing](#) provided, what happened?
  - Which direction was each car initially driving?
  - What were the initial speeds of the cars?
  - Who was at fault?
  - How did you come to this conclusion?
- Utilize LabWrite for results section in order to continue to develop scientific writing skills
- Further develop Google Sheet skills

### Outline of activity:

- Use the scale diagram to analyze the crash.
- Do internet research as needed.
- Determine who was at fault and why.

### Deliverables:

Note: Entire report is written individually in Google Docs.

The report should have 3 sections, as described here:

- Assumptions - can be shared by all group members
  - List all assumptions being made.
- [Results section](#)
  - Display measured and researched data.
    - Note: provide references for any data pulled from the internet or other sources (you can just link the URL)
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  - Show detailed step-by-step calculations including an exploration of all possible scenarios for your unknowns

- Display neatly tabulated (or graphed) numerical results with units ("real world" units are better so that you have a sense of what really happened - i.e. mph or km/h depending on what you're more familiar with)
- Final paragraph of results section should describe who was at fault and how you came to this conclusion based on your data
- Analysis of the Accident / Story
  - A reasonable "real life" scenario that could have caused such a crash, but feel free to let your creative side out!
  - This is not a formal discussion section.
  - The story **MUST** be based on your data from your Results section and should be as specific as possible. Include speeds, road conditions, who was in the car, etc.

Rubrics & Grading:

- [Written lab report](#)

Submission Info:

- Please name the file CarCrashLab\_LastName and be sure it is in your Science Folder in Google Drive.