Bowling Lab Report

- Purpose – make it sound scientific and brief.
  - Calculate your bowling power.
  - Relationship between swing time and number of pins knocked down.
  - Relationship between bowling power and number of pins knocked down.
- Predictions – see prediction sheet.
- Materials – list what's used only to take data.
- Procedure – Number and list the steps followed to gather data (please don't include your equations in this section!).
- Data – make a nice, neat data sheet (yaaayah, that rhymed) with the following headings: ***name, attempt (only 2), weight of ball, swing distance, swing time, roll distance, roll time, # of pins knocked down, and power.***
- Processing data
  - Set up 2 of your power calculations (so you don't have to do it at the bowling alley).
    - Make sure to include each equation, work shown, and answer.
    - Every # has to have a unit!
      - **Example →** $P = \frac{W}{swing\ time} = \frac{(\quad J)}{(\quad s)} = \quad Watts$
    - Make 2 scatter plots
      - # pins vs. swing time.
      - # pins vs. power.
- Conclusion – Keep it succinct (that means short), but be sure to address all parts of the purpose and prediction. Make sure your conclusion is backed up by your results in your scatter plot.

- Discussion Questions.
  - Was your power what you expected? Explain.
  - Who in your group had the most power? Why do you think they did?
  - Did your scatter plots look like what you expected? Explain.
  - Why was it possible for you to use v_{roll} for v_f? (Perhaps you should consult the first law of Newton…)
  - Were there any unexpected factors that came up in the lab that affected the results?
  - Think back to the running-up-stairs-power lab, which power was greater (bowling or stairs)? Why?
  - What three things did you learn from this lab experiment?
  - Discuss the best aspects of this overall experience.