Presenting the results of a scientific study

The web page I've referred to gives guidelines for the style of your scientific poster so be sure to refer to it when making your poster; here I'll give suggestions on what should be included in the substance of your report.

I. Introduction, in which you let the reader know the problem you will consider in your investigation. Include:
- your question and your justification for the question – (what makes it interesting or important?)
- alternative hypotheses if your hypothesis testing
- any previous work done on the problem, i.e. any background information you have

II. Methods, in which you tell what you actually did in enough detail that somebody else could repeat the experiment. The results obtained using scientific methods must be repeatable by other investigators for scientists to have confidence in them.
- Recipes are good examples of protocols written with enough precision that they are repeatable. So think about them as a model for how to write your methods. However, your format should be different. Don’t write it as a series of instructions; rather write it in essay form. Write it in the past tense, since you are describing what you did. Use first person and active voice.
- Your ‘Methods’ section may include descriptions of or reference to:
  - independent variable and dependent variable
  - factors that must be held constant in all treatments
  - experimental and control treatments
  - predictions – what will happen in this specific experiment, if your hypothesis is true; what will happen if it’s false
  - assumptions
  - replicates
  - sample size

III. Results, which include the data and descriptions of data, but not interpretations. This section should include:
- Data and/or descriptive statistics (e.g. means, standard error)
- Graphs or tables that depict the data
- The results section must not contain only tables or graphs. You should write a paragraph about what you think is particularly interesting or noteworthy about the data. The reader should not have to scan through columns of figures (at least at the outset) to figure out some of your more interesting findings. Tell them.

IV. Conclusions and Discussion should include:
- Interpretations of data, i.e.,
  - Does the data help you answer your original question?
  - Does the data support or refute your hypothesis?
- Possible problems in your methods
- Possible problems with your conclusions – how much confidence do you have in them; what could you do that could increase your confidence in them?
- Direction of future research
- Application of this knowledge to other questions or to practical problems

V. Literature cited

You may cite literature within the body of the article by parenthesizing the authors and date of publication of a particular resource. Full bibliographic references for that cited literature should be included in a literature cited section.

I recommend using the formats of the Modern Language Association, just because it’s widely used. The library has handouts on it and there are websites that elucidate it as well. E.g., at: http://www2.gasou.edu/library/broch_ref/mla_citations.pdf

Here are some examples, starting with a reference to your textbook:


Note that references to web sources require more than just the URL. It requires the title, date of publication, the author, (which may be an organization), the date that you accessed the page (since they can disappear or be moved) and finally the URL.