Writing a scientific paper:

1. Choose a topic: Pick a genetic disease for which the responsible gene has been cloned. You can find lists of these diseases at the following Yahoo site:
   http://dir.yahoo.com/Health/Diseases_and_Conditions/Genetic_Disorders/
   The OMIM database is also a useful place to get information to start.

Please do not choose Cystic Fibrosis or Fibrodysplasia ossificans progressiva.

2. Collect papers
3. Define the problem you want to present
   a. Make a title – active statements work well eg. Grant's disease is caused by a defective potassium pump
4. make an outline
   a. Define a title for each section – even each paragraph. Use active statements again.
   b. Eg. Grant's disease is a genetic disease that affects breathing
      The Grant's disease mutation is on Chromosome 7
      A mutation in a potassium pump is linked to Grant's disease
      Expression of wild type potassium pump reverts Grant's disease effects in cultured cells
      Grant's potassium pump message is expressed in lung cells
      Treatment of patients with potassium pump blockers has no effect on progress of disease.
      Microarray analysis suggests potential treatment.

      These can be used as section titles or as topic sentences (see below)

5. choose figures and make them.
   a. You can copy figures from one of the papers you read. If so cite them properly eg (from Smith et al., 1987). The figure with its figure legend should be comprehensible without reading the text.
6. write paragraphs
   a. First sentence is a topic sentence
   b. Last sentence is a concluding sentence
   c. active voice
   d. don't try to sound academic
   e. define your terms
   f. if referring to a figure, define the figure but do not duplicate the figure legend.
   g. Maintain the same tense, either past or present.
7. Make an abstract to put at the beginning of the paper summarizing the experiments you will describe, the results and the conclusions.

8. Citations: When you discuss published work, cite the paper. Do the citation in the first sentence in which the study is mentioned. Eg. Seven large families with a high incidence of cystic fibrosis were surveyed for DNA markers linked to the disease (Smith et al., 1987).
9. References: at the end of the section: in alphabetical order
   Smith J, Jones, P.A. and White, K. 1987 Family studies map cystic fibrosis to Chromosome 7 Genetics 130: 147-156. Use the journal “Cell” as an example of how to format the paper, the citations and the references

There are several nice reference managers available. We use EndNote for making bibliographies and storing references.