

# Bio 100 Project: Research or Organism?

You may choose between a research or organism project. This project is worth 150 points. The due date for the completed project is December 3, 2002, but parts of the project will be due at various dates before completion.

All of the documents you need can be downloaded from my website: [dwilson@mail.mc.maricopa.edu](mailto:dwilson@mail.mc.maricopa.edu), then click on the link to "Research Projects".

## 1) Research Project.

This can be almost anything of your choosing within the following guidelines:

- It must be on a biology related topic and focus on biology, although not necessarily a topic we have covered in class.
- It can be a small research project that follows and uses the scientific method. Students in the past have performed lab or field based experiments. It must be a well-designed experiment with appropriate experimental controls and adequate replication.
- Other possibilities include: constructing an information poster or web site, making a short movie, developing a presentation (e.g., using PowerPoint), writing and performing a song, drawing a cartoon series or just about anything of your choosing as long as it focuses on a biological concept or process.

## Logistics.

1. Write a proposal outlining your project. Due on Oct 29 and worth 50 points.
  - a. If an experiment or field based project, you must present the question you intend to address, followed by the hypotheses you will test, and the proposed methods you will use. Use the "Research Project" sheet provided.
  - b. If you choose a non-experimental project, you will need to write a proposal that outlines exactly what you intend to do, and the biological issue(s) you will address. Use the "Alternate Research Project" sheet provided.
2. Once your proposal has been approved. You can proceed with your project. You will need to provide a half page progress report on Nov 14 (worth 10 points) and have the project completed on Nov 26. Your final materials will be due Dec 3.
3. For your experimental write-up, you must follow the exact format as outlined in a separate sheet. This will include an introduction, aims (includes question and hypotheses), methods, results, and conclusions.
4. The length will vary depending on the nature of your project. Generally a written research project will be 5 sides.

## 2) Organism Project.

This will be a traditional report or paper that focuses on an organism that lives in Arizona. You will be provided with a list of scientific names, and randomly assigned to one of the organisms.

- Ask questions about your organism. Develop a list of at least 5 meaningful questions. You should brainstorm before writing your final list.
- If you are not familiar with the scientific name of your organism, you will first need to find out what it is and research its taxonomy. You should use the taxonomy and question sheet provided.
- Ask 5 more meaningful questions about your organism. From these 10 questions, select 4 (2 of which must be from the first list). Researching and reporting on the answers to these 4 questions will form the basis of your report.
- References and sources of materials: You will need to provide a list of 15 references or sources of information, 3 for each question and 3 for the taxonomy. You may cite no more than 6 Internet references, and you must include at least 2 from interviews with an expert. Citations should follow this format: Name of author or person you interviewed, date of publication or interview, title of publication (and title of chapter if appropriate), the web site URL, or specifics of the interview (with contact phone number).
- You should provide at least one good quality photograph or digital image of your organism.
- Grading: each question and the taxonomy will be worth 30 points. The taxonomy sheet with your 10 questions, and the 4 questions you will answer will be due on Oct 29 (worth 30 points). Outlines (quarter page summary followed by the citations) for one of the 4 questions will be due Nov 5, 12, 19, 26, and the finished set due December 3.
- Length of your project. This will vary depending on the organism and your questions. You should plan on about one side double spaced for each question. You may include photographs or digital images.

You will have the option of making a poster of your organism project, or designing as a web site.

- If you select the web site option, you must prepare the site as follows:
  - Include a front or “home page” that includes an image of the organism, its name, taxonomy, a brief introduction, and your 4 questions.
  - Include 4 other pages, one for each question that link from the front page questions. Each of these pages should contain at least one other image.
- If you select the poster option, you must use either one, or two 20x30 inch pieces of white foamboard as your poster base. You will need to condense the written parts, include more than one image and arrange the poster so it has a professional look. All text **MUST** be printed. Your poster title will be the organism name, both common and scientific. This is an example of a possible poster layout. You should include each of your 4 questions and the taxonomy as the basis of your content.

