Assignment description
For this assignment, you will be able to select a topic of your choice that is focused on herpetology, and you will carry out three tasks that are important to doing science: a literature search and bibliography, devising a new research direction that will build on past published studies, and a presentation on your topic. Your topic can be on anything that interests you, but it must relate to the topic of the course – herpetology. For example, you might be interested in sex determination in lizards, phylogenetics, physiology, functional morphology, conservation or any other aspect of the biology of amphibians and reptiles.

This assignment is intended to teach you many important skills. It will give you experience doing a literature search (finding information), reading scientific writing, writing about science, and synthesizing information. It will also teach you to identify next logical steps in the research that has been done by others. Near the end of the semester, you will give a short (~10 minute) presentation on your topic. All of these skills are important whether you plan on staying in academia as a career, or pursue more applied jobs. You will become an expert on your topic (and could potentially use this as a spring board to doing research on your topic).

Component deadlines
To help you stay on top of the parts of this assignment, there will be several due dates.

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<th>Component</th>
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<td>Topic Selection</td>
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<td>Bibliography</td>
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<td>Next Logical Step</td>
<td>50 pts.</td>
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<td>TOTAL</td>
<td>150 pts.</td>
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Formatting Instructions
Each written assignment should have a title page with your title, the name of the assignment, the course, number and name, the semester and year, and your name. The title should be in bold and centered and the other components of the title page should be in regular font and left justified. Use 1” margins and 12 point, Times New Roman font. Use page numbers on all pages except the title page. Italicize all species and genus names, but not names for higher taxa. Spell out the full genus and species at first mention. In subsequent instances, the genus can be abbreviated. Use metric measurements throughout (Imperial measures are unacceptable). Do not use footnotes. There are further formatting instructions that are specific to each assignment component, described below. Formatting is worth points, so please format your assignment correctly.
Component expectations

Topic Selection | 10 points | Due September 27
The first thing you should do is select a topic. What aspects of biology are you interested in (e.g. behavior, evolution, physiology, conservation, etc.)? What herp taxa are you most interested in? Has much research been done on your taxon, given your topic? It may be good to pick something, where there is already at least a little research done.

You will hand in a topic title, a 3-5 sentence description of the topic and why it is interesting (one sentence is not enough). This should amount to less than half a page (not including title page). You should select a topic that is not overly general. For example, a very general topic might be habitat use in reptiles, and a more specific topic might be how interspecific interactions such as predation, mutualism and competition influences habitat use in lizards. It is essential that you focus your topic in on something that is not too broad because you don't want to be overwhelmed by how much literature there is on your topic. You should submit this assignment by e-mail. See the rubric at the end of this document for a grade breakdown.

Bibliography | 40 points | November 1
The next step will be to gather literature on your topic and start reading it. As you find literature, think about what paper might be interesting for you to focus on for the Next Logical Step Assignment, described next. A bibliography is a listing of the relevant literature that you find. Use your topic as the title for this assignment (include title page). Then give a listing of the literature that you find, formatted following the examples given below. Although the amount of literature that you find will depend on your topic, you are expected to find at least 15 relevant references. At least one of these references should be a literature review on your topic, and at least 4 of the references should be published within the last five years. Identify the reference that is a literature review by putting “Review:” in front of the authors. You should read through the literature review and at least parts of the other references as soon as you can so that you can select an article for the Next Logical Step assignment. To help you, we will have a tutorial in lab on how to use library resources to locate the literature you will need. See the rubric at the end of this document for a grade breakdown.

Format your references in the following way:

- For a journal article:

- For a book chapter:

- For a book:

Notes on citations:
- Format your citations exactly as they are formatted in the examples above.
- List all of the authors, date, article/chapter title, journal/book title, volume, pages. For book chapters, include names of all editors.
- Do not abbreviate journal titles or publisher names. Do not include issue numbers.
- Do not include other extraneous material.
- Use a format consistent with the examples above for other sources you may want to cite.
- Your bibliography should be single spaced, but with a blank line between each reference.

**Next Logical Step Assignment | 50 points | December 6**

For this assignment, you will select one of the references in your bibliography, paraphrase it in your own words, and explain how you would conduct the next logical step in the research that the article you have selected is focused on. The reference you select must be published in the last **five years**, and it must be an **original research article**. This means that it cannot be a literature review, but must contain original data and analysis. Once you have selected the article that you want to use, read through it a few times and take detailed notes – you should understand what the authors did and what they found.

To do the assignment, start by paraphrasing what the article is about – this should be maximally one page double spaced. You may have noticed that the abstract of an article does just this, but it is important that you write this paraphrasing in your own words. Address what question the authors were trying to address, how they did it, and what they found. If there are important implications of their findings, you should mention these as well.

Science works by researchers building on the work of others that have published their work before. An important step in conducting research is to read the literature and identify areas that could be examined in more detail or that have been neglected, and then focusing on testing hypotheses about these neglected areas. Use up to 2-3 more double spaced pages to do this. You should have a separate section for this, entitled “Next Logical Step”. In this part of the assignment, explain what the article that you have chosen and paraphrased has not done, and what sort of research could be done to directly build on what the authors of your selected article did. Clearly write one hypothesis that you would test as the next logical step to building on your selected article. Briefly explain how you would test your hypothesis methodologically. Feel free to cite other references if you need them to support what you are writing. If you do this, include a **Literature Cited** section (that is in addition to the 4 pages allowed for this assignment). See the rubric at the end of this document for a grade breakdown.

**Presentation | 50 points | November 24, 26**

During our November 26 lab period, you will give short presentations about your topics. The presentation should incorporate information from multiple references from your bibliography and **is not** a restatement of your next logical step assignment (this is different). Presentations should not exceed 8 minutes long, which will leave a little time for questions. Presentations should be done using Microsoft Powerpoint. A good rule of thumb is to have one powerpoint slide per minute of presentation. You must email or deliver a copy of your Powerpoint file to the TA by **4:00 pm on November 26** (this is a Sunday, so plan accordingly). More information and tips on putting presentations together will be given as the time approaches. Be careful to adhere to the time limit – you will not be allowed to continue beyond your 10 minutes so that we stay on schedule. This may seem petty, but is incredibly important at conferences, where schedules are fixed and many talks happen simultaneously in different rooms. See the rubric at the end of this document for a grade breakdown.
Grading Rubric
Following are the grading rubrics that will be used for each component of the term paper project. The rubrics should help you consider how much emphasis the instructors will put on each part of each component.

**Topic Selection | 10 points | Due September 27**
- Topic specified in title | 4
- Topic description/justification | 4
- Correctly formatted | 2

**Bibliography | 40 points | November 1**
- Topic in title | 5
- At least 15 relevant references included | 15
- One literature review identified & included | 5
- At least four references from last 5 years | 5
- References formatted correctly | 10

**Next Logical Step | 50 points | December 6**
- Selected article is clearly identified with all citation info | 2
- Selected article is well paraphrased
  - Description of article’s question | 2
  - Description of article’s methods | 2
  - Description of article’s findings | 4
- Next logical step section
  - Description of the next logical step | 12
  - Explicit hypothesis relating to next logical step | 8
  - Methodology for testing hypothesis described | 10
- Assignment formatted correctly | 10

**Presentation | 50 points | November 26**
- Informative | 18
- Slides are clear and simple | 10
- Oral presentation clear and fluent | 10
- Answered questions from others well | 6
- Asked questions of others | 6