

Chapter 29 Project

Scientific Presentation: Vertebrates

Project Goal + Timeline

In this project, you will be reviewing your knowledge of vertebrates by creating a short (approximately 15 minute) presentation focused on a specific vertebrate species. This project should be completed in a group of two students and should take approximately three hours to complete.

Directions

Part 1: Identify and Research Your Topic

Each group should try to select a different vertebrate phylum to present. You'll be taking a deep dive into a species of your choice for your presentation, so try to pick a species that's of interest to you!

Your presentation should include these components.

- **Introduction:** Briefly list and explain the topics to be covered. Introduce your species and the class it belongs to.
- **Class Characteristics:** Explain the major features that are common to all species of the class.
- **Class Phylogeny:** Explain the evolutionary history of the class to which your species belongs, including the organisms from which the class descended, the major traits that emerged prior to and throughout the evolution of the class, and any other important events in the history of the class (such as extinction events or rapid diversification events). Show a cladogram or phylogenetic tree of the class and highlight where your species fits in the cladogram.
- **Species Characteristics:** State and explain the defining physical characteristics of the species, including any sex differences in physical characteristics.
- **Species Information:** Describe its current range, recent events in range expansion or restriction, feeding behaviors, mating strategies, seasonal behaviors, conservation status, and any current threats to the species.
- **Conclusion:** Briefly highlight the major points made in your talk.
- **Questions:** Include a slide after the conclusion of your presentation to encourage the audience to ask questions.
- **Bibliography:** Include a slide at the end of your presentation that lists the references you've used.

Part 2: Design Your Presentation

Now that you've gathered your research, it's time to build your presentation. Keep the following additional tips in mind as you develop your presentation.

- Estimate approximately 1 minute per slide. With this in mind, make around 15 slides for a 15-minute presentation.
- Use descriptive titles for each slide. The title should orient the reader to what they'll be seeing and hearing about for the slide. For example, instead of "Phylogeny," a title like "*Ornithorhynchus anatinus* is one of the oldest living mammals" can be much more illustrative.
- Stick to three to five bullet points per slide at most. Bullet points should contain key words, not complete sentences.
- Make it readable. The general guidance for fonts is 28 to 40 point for headlines, 18 to 28 point for text, and 12 to 14 point for references. Make sure you have a strong contrast between the background and text, such as black text on a white background.
- Use images. A single image is often much more engaging, informative, and memorable than text.
- Include citations for any images and a bibliography slide at the end of your presentation.

Part 3: Practice and Present Your Talk

In designing a presentation, you've stuck to using short bullet points and images to show your key points. The bulk of the information needs to come from you and your partner explaining each slide.

It's helpful to run through your presentation at least two to three times before presenting. This will help you and your partner reinforce what you want to say for each slide, develop fluid transitions, and overall feel more comfortable when it is time to present. It also helps ensure your presentation fits the approximate time of 15 minutes. As you practice, focus on the key points you want to make (note them down if it helps) and improvise different ways of communicating them. Then, present to your classmates enthusiastically!

Project Materials

- Computer with internet access
- Presentation software

 Student Checklist

- ☐ Research and plan your presentation
- ☐ Design your presentation
- ☐ Practice your presentation
- ☐ Present your talk to other students