

## **Guide to presenting your hypothesis**

The goal of the presentation is to review a major hypothesis to explain latitudinal variation in diversity, and critically assess predictions, evidence, and tests from the perspective of a scientist. A second goal of the presentation is to give you experience summarizing complex information in an oral and visual format, conveying this information effectively to others, and working with others to critically evaluate science (including leading a discussion).

**Part I.** In your presentation, please include the following:

(1) A succinct, crystal clear explanation of the hypothesis and how it could create latitudinal variation in diversity (create a figure, flow chart, or model if you like - be creative).

(2) A discussion of what makes this hypothesis different from other similar hypotheses to explain latitudinal variation in diversity.

(3) A history of the hypothesis — who first proposed it, who has studied it.

(4) A clear list of predictions of the hypothesis, especially highlighting predictions that are unique to the hypothesis. By unique, I mean predictions that no other hypothesis would make (for example, many hypotheses predict higher tropical speciation rates, and thus this prediction is not unique to one hypothesis).

**Part II.** Please work with your partner to include the following:

(1) A critical review of your predictions, tests, and evidence related to the hypothesis. Has anyone adequately tested the predictions of your hypothesis? If you can find very little evidence to bear on your hypothesis, then together, focus on key tests.

(2) Succinctly identify the key study or studies that need to be done (in your opinions) to convincingly reject your hypothesis. Each person should give their opinion on the plausibility of the hypothesis. Feel free to express different opinions than your partner.

**Part III.** Open discussion of the focal paper(s) & hypothesis

(1) All students in the class will have read 1 or 2 papers related to your hypothesis. Please lead a discussion of the paper(s) and your hypothesis with your peers.

Presentations should last about 30-40 minutes, followed by 15-20 minutes of co-presenting a critical evaluation of your hypothesis, followed by open discussion for the remaining time. When co-presenting, be sure to provide a critical review from the perspective of a scientist, and include your own opinions. Powerpoint, or some other presentation format (e.g., pdf) is required, but may be supplemented with other materials if you wish (not necessary).

Throughout your presentation, carefully consider evidence and ideas that you may or may not agree with. Don't be afraid to include anything that you did not understand or aspects of your hypothesis that, in your opinion, don't make sense.

(note: your presentation will mirror your written paper if you choose to write on the same hypothesis)

Your presentation will be worth 30% of your final mark.

## **Rubric**

**Clarity.** Did you clearly and succinctly describe your hypothesis, and other information, so that your audience could understand? (/4 points)

**Accuracy and Relevance.** Did you accurately present information about your hypothesis? Did you stay focused? (/4 points)

**Coverage and Depth.** Did you adequately cover the important information about your hypothesis? Did you review the material as a scientist, with careful consideration of ideas and evidence? (/4 points)

**Presentation.** Were your slides simple, informative, and effective? Were slides captivating and able to hold interest? Did they all make sense? Could you read and understand all of the text or other material? (/4 points)

**Quality of Speaking/Presenting.** Were you poised, clear, and audible? (/3 points)

**Flow and Organization.** Did your presentation flow and make sense without unnecessary distractions? Were you organized? (/4 points)

**Enthusiasm.** Did you convey enthusiasm for your subject matter? Did you highlight aspects of your hypothesis that were particularly interesting to you? Did you encourage discussion? (/3 points)

**Professionalism.** Was your presentation professional? Were you on time? Were there spelling or grammatical errors in the presentation? (/4 points)