

GENETICS 2005 FINAL PRESENTATION, PORTFOLIO AND EVALUATION WORK

1. RESEARCH AND PREPARATION FOR SPECIAL TOPIC

Your research on your topic should include, but is not limited to:

- A clear formulation of the problem you are addressing - and any controversies.
- A focus on the actual GENETIC issues and mechanisms - use what you have learned.
- Consideration of the societal issues that are raised.

You should use the literature as well as, possibly, internet sites as resources, including at least 2 articles from peer-reviewed journals and some sort of reviews. You will need to turn in an annotated bibliography and a short research paper. [Info below]

2. PRESENTATIONS

Take some time to strategize on teaching approaches and skills. How will you work together to present the key points of this topic to the class? What visual aids will be most effective?

(You may use PowerPoint, the document camera or any other appropriate tools here.)

You will have 12 min/group member for the actual presentation - and be cut off at that point, to be fair to others - plus a few minutes for questions at the end of the group's presentation. You may go one after the other, function as a sort of panel, or go back and forth on topics, in pre-planned fashion - as seems most effective for your topic and your collaboration.

PREPARE AN ABSTRACT AND BIBLIOGRAPHY THAT YOU CAN HAND OUT TO THE CLASS AT THE TIME OF YOUR TALK. (IF YOU EMAIL IT TO ME IN ADVANCE, WE CAN RUN IT OFF FOR YOU.)

- Each member of the team needs to annotate at least 5 of the references in your bibliography that you consider most important;
- Remember that at least 2 sources need to be from peer reviewed professional journals.

3. WRITINGS ON YOUR RESEARCH PROJECT (DUE THE WEDNESDAY OF WEEK 10)

- a. Evaluate and discuss a major article that you used in preparing for this presentation. -- Fully cite the authors, source and date, and include a copy of the article. (i) What was the main goal and perspective of the authors of this article? Are they trying to approach the topic broadly, to push a particular viewpoint? Who was their chosen audience? (ii) What kinds of evidence are they using to establish their points? Do they cite actual data and/or refereed publications on the topic? (iii) Why did you choose this particular reference, and how useful was it to you? (iv) Write a brief summary of the main points you understood, and phrase several questions as sophisticatedly as you can about points that you did not understand. *[Remember that it is perfectly appropriate to not understand everything in an article - and it is very important to work on differentiating between what you do and don't understand. Too often, traditional testing encourages students to try to convince teachers they understand things they don't - a terrible trait for a doctor, a scientist, a consumer using information. Also, what you don't understand may be as much a consequence of the author's lack of clarity and precision (or even intentional misleading or vagueness) as of your own lack of knowledge in the field.. One of the most important outcomes of the class should be a new sense of empowerment to read articles on subjects of interest and importance to*

you - related to your own health, environmental issues, choices that you or those close to you need to make. Thus, you are strongly encouraged to get into the habit of critically browsing - in popular magazines, the New York Times Tuesday science page, Scientific American, primary journals, at whatever level feels reasonably comfortable.]

- b. Write up a reflection on your own research process for the presentation
- (i) How did you go about exploring your topic? Did you enjoy becoming an expert on a particular subject like this - and how did that help your general learning in genetics?
 - (ii) How did your collaboration work out - and how might you make that more effective next time? Will what you learned have any impact on your own choices or future explorations?
 - (iii) What sources and ways of tracking down information worked best for you, and what might you do differently next time you had to become an expert on a genetic or other such topic? Would you use different sources of information?

4. End of quarter evaluative work:

Turn in a portfolio that includes your returned integration papers (with added comments where that seems appropriate) and anything else that helps us both have a better understanding of what you have been doing this quarter - and help me in preparing for next year.

Answer the following questions - in an email to me, preferably, with a copy in your portfolio:

1. What topics in genetics seemed most interesting and relevant to you?
2. How do you expect your new understanding of them to be useful to you in the future?
3. What chapters did you read in Watson, and how interesting and useful did you find the book? What did you like best about it?
4. What pages did you read quite carefully in Hartwell? What others did you at least skim? How useful did the book seem to you, and how are you likely to use it in the future?
5. What other books or readings did you use to help you understand the class topics?
6. Talk about some of the class videos and other visual aids and how they helped clarify your understanding of various topics.
7. How did writing integration papers, support groups, etc. help your understanding?
8. How did your class presentation(s) go --- and how did the class respond to what you were teaching them? What were some of the interesting questions that came up?
9. How do you feel about where you ended up in your understanding of genetics relative to where you started? Do you find this making a difference in conversations with others, in your choice of what you read in technical or more popular literature, in your ways of thinking about topics like genetic counseling, gene therapy possibilities, genetically modified foods, biochemical individuality, etc.?
10. Which classes did you miss, and why? What did you do about it?
11. For those of you who started with relatively little background and have come so far up the spiral, do you feel ready to be held responsible for genetics at an upper-division level as you move on, or does lower division science still feel more appropriate?