Examining Inquiry Activities

At our next seminar (October 17th) we will continue to analyze what makes a good (or not so good) inquiry activity. Please answer the following questions and bring your notes to the seminar.

Read through the attached examples of inquiry activities. Using the questions below as a guide, pick one example that you think is a good inquiry activity, and one that is not so good. Take notes on what you think is missing, or maybe jot down some ideas for how you might improve on the activities you pick.

1. Is this an example of a good inquiry activity? Why or why not? What would help to strengthen the activity? Will students know what is expected of them? Will they know how to proceed?

2. What problem is being addressed in the assignment? Is it engaging? Does it require students to make and defend decisions or judgments? Is it a “real world” problem? What stake do students have in solving the problem? Why should they care? Explain.

3. What research strategies are recommended for locating and examining web-based resources? Is the search broad and open or targeted and structured? From what you know, is the strategy likely to be effective for this particular activity?

4. How do students demonstrate or “use” their learning in this activity? Does the end product fit with the problem? What kinds of academic and cognitive skills does it engage?

5. How would you improve upon this activity? What needs to be added? What could be rephrased? If you feel that the strategy used to guide students in the effective use of web resources is inadequate, what would you recommend?
1. **Science/Biology:** You are called to the scene of a gruesome murder in the primate house at the local zoo. An apprentice keeper has been strangled to death. The victim and your friend, the head primate keeper, were the only people in the locked building at the time of the murder. According to the policeman on the scene, your friend is the prime suspect. You find blood under the victim's fingernails and extract DNA from the blood. Though little intact DNA is present, you do get the following DNA sequence:

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gaaaaaat cgagtaagag accactgtg cagtgattgc acagaactgg aaacactgt
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Use the National Center for Biotechnology Information BLAST server to solve this mystery. Think about this carefully. Realize, the database has DNA sequences of various different species of organisms. It does not have DNA of specific individual organisms. Thus, it has DNA for humans, not DNA for Ralph, Jerry, Mary, Dr. Dave, etc. Now, here's the assignment:

1. Who is the killer?
2. Can this sequence data be used to determine the killer’s identity?
3. What was the hypothesis of the Police Department?
4. According to their hypothesis, what BLAST search results were predicted?
5. Do the data and prediction agree?
6. If not, "Who done it?" (Who do the data implicate?)

2. **Math:** Think of examples out of your own personal experience to illustrate the uses of vector algebra. You might consider such experiences as swimming in a river with a steady current, walking across the deck of a moving boat, crossing the wake while water-skiing, cutting diagonally across a vacant lot while friends walk around the lot, or watching a car trying to beat a moving train to a railroad crossing. Use one or more of these experiences to explain to a friend what vector algebra is all about. Use both words and diagrams.

3. **Nursing, OT, PT:** Examine the attached unsorted data about Mary Smith, a stroke patient who is soon to be transferred from an acute-care facility to a convalescent center. (The accompanying data include admitting information, history and physical data, progress notes, nursing notes, and a social service report.) Based on these data write a discharge summary for Mary Smith. Your audience is the nursing supervisor of the convalescent facility, and your purpose is to help the convalescent center provide the patient with optimal continuity of care.

4. **Nursing, OT, PT, Critical Thinking, Philosophy:** Mr. X, a patient at City Hospital, suffers from kidney failure and requires periodic and fairly frequent dialysis, which is funded by the government. He is one of a number of patients who use the dialysis machine, and there are many other similarly afflicted individuals who are on a waiting list for the use of the machine. Mr. X finds dialysis quite painful and sometimes says that he would rather just forget the treatment and let the disease run its natural course. Lately he has begun to miss some of his treatments and has been failing to control his diet properly. He has even become abusive with the hospital staff who operate the dialysis machine. His wife is quite worried about him, especially since his behavior has changed toward her and their five children. Mr. X continues his erratic routine, sometimes taking his treatment quietly, sometimes taking it but abusing the staff, sometimes failing to take it at all. Suddenly, he begins to miss all his
treatments. Two weeks later, he is rushed to the hospital in a coma. He must have immediate dialysis if he is to survive. Should the hospital perform the dialysis, or should Mr. X. be allowed to die?

**Initial roles:** An ethicist taking a utilitarian position; an ethicist taking a deontological position; Mr. X’s wife; a staff member; a representative of the people on the waiting list for the dialysis machine; a member of the Hemlock Society; members of the hospital board that will decide the case.

**Conducting the simulation:** Students discuss the case, taking their assigned roles. **Writing assignment:** After hearing all the arguments presented by characters in the role-play, assume that you are a member of the hospital board that will decide the case, and write a three- to four page argument supporting your position on the issue.

5. **English, Critical Thinking, Reading:** Write a dialogue in which you interview Art Spiegelman, author of *Maus*. Try playing the devil’s advocate, arguing against Spiegelman’s views, and inventing his responses. Later, you’ll participate in a mock panel discussion in which one group member plays Spiegelman, and the other members of your group play other characters: Spiegelman’s father, Spiegelman’s daughter, an aging Nazi, an American World War II veteran, etc.

6. **History:** Work with your group to produce a PowerPoint or video in which you explore how people lived during one of the periods in American history listed below. Each member of the group is responsible for five minutes of the presentation. Use Google or another search engine to find information about the period you select. Make sure you properly cite any information you retrieve from the information. The final product should reveal details of social and political organization and economic foundation. You have one week to complete the project.
   a. Pre-colonial Native America
   b. Colonial America
   c. Revolutionary War America

7. **CIS, Math or Human Services:** You and your partner work in a social services agency. One of your clients has just told you that her husband has lost his job. The client has some savings, but now has no medical insurance. How will you help your client to develop a budget and find alternative sources for medical care? What steps will you take to ensure that the budget is viable and realistic? Use the Internet to locate alternative sources of medical care. Write down, and be able to explain, the process you use to devise the budget. The budget should be presented in an Excel spreadsheet format, and provide capability for running totals so the client will be able to accurately measure expenses against the budget goals. For extra credit, create a pie chart indicating how money is to be allocated. You might find these documents helpful:
   - [http://www.health.state.ny.us/nysdoh/medicaid/mainmedicaid.htm](http://www.health.state.ny.us/nysdoh/medicaid/mainmedicaid.htm)
   - [http://www.cbpp.org/9-30-03health.htm](http://www.cbpp.org/9-30-03health.htm)

8. **ESL:** Working with your team-mates, locate a web site that will help you to understand
   - Group 1: subject/verb agreement
   - Group 2: use of the past participle
   - Group 3: active vs passive adjectives
   - Group 4: formulating conditional statements
   - Group 5: using the past perfect tense
Group 6: forming and using the past tense and the present perfect tense
Do the exercises that you find on the website, and work with each other to make sure you understand the concepts. Then, write a skit in which one of you has to teach the grammar point to the other members of the group. Each group will have 15 minutes in which to perform the skit for the other members of the class. Here are some sites that might be helpful:
http://www.better-english.com/exerciselist.html
http://www.eslcafe.com/
http://www.writesite.cuny.edu/

9. History, Philosophy: Hobbes said that we are obliged to obey the state only so long as it guarantees our security. How would he react to compulsory military service in time of war? Assume the role of Hobbes, and write a three page program indicating the position he would take, and explaining why.

10. Literature: You fall suddenly into a weird time warp and find yourself in a tavern with Aristotle, Hegel, Arthur Miller, and literary critic Robert Heilman, all of whom have distinctive views on what constitutes a tragedy. They are arguing vociferously about Miller’s Death of a Salesman: Is it a tragedy? Luckily, you have just studied Miller’s play in your literature class and have strong feelings yourself on this matter. Write a mini-play in which you, Aristotle, Hegel, Miller, and Heilman express views on this question.

11. Art, Language Development, History: We're going to explore the life and work of African-American artist Romare Bearden. Read Bearden's biography. Read about Bearden's memories of Harlem. I will put you in groups of 2-3 people and as a group you will read another section of the website. You will examine either his life as a Leader in the art Community, the influence of music, or artistic and literary sources for his work. I'll let you know your group and the assigned pages of the website. As a group, you will look at your assigned pages and use the information to create ONE POWERPOINT SLIDE. You can only do one slide so you can put in lots of notes, but they must be short and concise. It's a challenge!

12. ESL: Working with your group, formulate a list of the problems you have with learning English. What makes learning English difficult? What are some of the solutions that you've found to these problems? What problems are still unsolved? When you are finished, pick a representative from your group to present your results to the rest of the class. Consider creating a PowerPoint to complement your group’s presentation. When all the groups have finished presenting, we will compare the results to see if there are any problems still unsolved, then work as a whole group to see if we can come up with a solution.

http://www.better-english.com/exerciselist.html
http://www.eslcafe.com/
http://www.writesite.cuny.edu/