Project: Vaccination Debate

"Science is about observation, right?" Lisa Rudley, a mother who has filed a claim in "Vaccine Court" asserting that shots caused her son's autism, told New York's The Journal News. "Well, I watched my son descend into illness. I think a mother's observation of her child is valuable." 

Assignment: You will be creating a media piece to convince the public either to use or avoid one vaccine that is currently available. Your media piece could be a flyer, video, or audio podcast. You can focus on any issue that thing will help inform and convince the public of your claim. If you claim that the vaccine is effective and your media piece advocates its use, then you must present and defend the data showing that this vaccine is effective compared to not having the vaccine. If your claim is the vaccine is not necessary you must present an argument outlining the reasons why people should refuse the vaccine including the same data for scientific justification behind this argument.

Step 1: Where to start:
1. Pick a vaccine: Which vaccine would you consider interesting? What are the ones that you are required to take in order to get into middle school, high school, college? Why are these vaccinations required and why is it so important that the majority of people get vaccinated? What do you know, or think you know about that topic? Find some research and data pertaining to your vaccine of interest that helps you decide the biological relevance of the vaccine, social implication of it, and how that would affect your decision about getting the vaccination. Be able to persuade the general public that your decision is the best one concerning this vaccine.

Step 2: Find some evidence
1. You MUST include information on one of the following content issues to address the biggest reason for the distinction between recommending or not-recommending the vaccine: (1) Type of vaccine you are describing including how this could contribute to side effects; (2) Rates of infection compared to rates of complications/side effects and herd immunity; (3) Some indication of statistical evidence and the significance of that evidence in supporting your claim.
2. Great Internet sites where you can get information:
   • Center for Disease Control (CDC) (<www.cdc.gov>; <www.cdc.gov/vaccines/>; or <www.cdc.gov/vaccines/programs/global/default.htm>)
   • Federal Drug Administration (FDA) <www.fda.gov/BiologicsBloodVaccines/Vaccines/default.htm>
   • World Health Organization (WHO) <www.who.int/topics/vaccines/en/>
   • National Vaccine Information Center (NVIC) <www.nvic.org/>
   • The Vaccine Page (use links...think CRAP test) www.vaccines.org/
   • Of course, scientific studies can also be directly searched via Google Scholar (www.scholar.google.com), Web of Science (available via Galileo on UGA Libraries), or through PubMed (http://www.ncbi.nlm.nih.gov/pubmed/).

Step 3: Create a rough draft of your graphic with a figure legend: Your media piece could be a word or pdf document with graphics, or a video or audio clip. It’s your choice but whatever you pick it must include a graph with data to convince the public of the efficacy of the data that back up your argument as well as a descriptive figure legend. You are allowed to use a graph you find online as long as you make additions to ensure your graphs and figures are complete with titles, axis titles,
etc. As you use images from online, be sure to mention what you changed from the originally posted graphic and why you did so in your discussion of the graphic. Remember, you must include a figure legend that provides your claim and interprets the evidence described (i.e. your reasoning through a valid scientific argument to explain whether the evidence supports the claim.) You also need to provide a warrant statement that describes if the data and methodology used are appropriate for your claim, and whether the source is reliable. You also need to make a recommendation or conclusion based on your reasoning.

- Divide up the labor: Does one member of your team have good artistic skills? Does one member have better writing skills, organizing skills, or researching/math/graphing skills? These are four different roles that you could choose to assign each or your teammates to do. Once you have divided up the jobs, you’ve got your Acknowledgements section started, so you can move on to the next step. Be sure to get reflections from each member at the end of the project and compile them together into a single statement. Use the rubric as a guide to insure you have all the components covered (see step 4 below for complete rubric).
- Make a plan: What will you have accomplished by the next class? How will you get your materials to each member of your group so that they are reviewed by all and finally posted by the deadline indicated?
- Include your Graphic with a figure legend: Be sure to include and reference images, graphs, or data you find online. If you need help, be sure to post to the discussion forums, there may be someone who can help answer your question. If there is any missing data, titles, axis titles, etc., on the figures and graphs that you find, then feel free to add them in using Microsoft Word or another word processor. Be sure to mention what you changed from the originally posted graphic and why you did so in your discussion of the graphic. Remember, you must include a figure legend that provides your warrant (i.e. your reasoning through a valid scientific argument to explain whether the evidence supports the claim.) You also need to make a recommendation or conclusion based on your reasoning.
- Compile and Post: All members of the group MUST review the rough draft before it is posted using the rubric as a guide.

Step 4: Final Drafts Comments on your rough drafts will be posted to the class website. You have class time to revise. Be sure that your drafts are posted in an easy-to-read format (Microsoft Word (.doc, or .docx), PowerPoint (.ppt or .pptx), or Adobe (.pdf)).

Step 5: Peer Review Your grade on the project will be determined by peer-review from the other students in the class. Be constructive in your comments and bear in mind the components of the rubric.

Rubric for Review of Projects: (50 points)

- **Project Title:** Expressed a clearly stated claim that is evaluated in the project. Title is written as a statement, not a question, which clearly expresses a claim. (2 points)
- **Understanding and Relevance:** Scientific concepts and terminology are concisely defined; enough detail and background are provided. Content should be targeted to your peers as an audience. It should be meaningful, relevant, and presented in the context of larger community issues and societal ethics (e.g., harmful or beneficial to humans). (10 points)
- **Evidence: Figures/graphs and references:** Evidence to support the claim is described/provided. Figures and graphs are used to educate and persuade. Figure displays biological process. Graph choice is appropriate for data type; components are accurate and complete (e.g., axes; title; scale).
Quality and validity of scientific information sources are evaluated (CRAP test). Be sure to annotate the importance of each reference as it supports your argument as well as describing its passing/failing of the CRAP test. You must reference your sources such as literature citations (http://library.osu.edu/help/research-strategies/how-do-i-cite-references/cse-citation-guide/), pictures, and help from peers. (20 points)

- **Synthesis**: Figure legend provides reasoning through a valid scientific argument to explain whether the evidence supports the claim. Make a recommendation or conclusion based on your reasoning. (10 points).

- **Team Reflection**: Answers the following questions:
  1. What issues did you encounter through the process of creating this project, e.g., while making graphs and finding resources?
  2. How did you weigh opposing evidence when developing your recommendation?
  3. How do you anticipate using the skills you mastered doing this project in your life? (6 points).

- **Acknowledgements**: Describes team members’ contributions in terms of project components and activities required to complete the project. (2 points)