This assignment is designed to follow up on evaluating information. You will answer the question we posed at the end of the lecture on the qualifications of the scientists listed in the Petition Project. The site is at http://www.petitionproject.org

It has the look and feel of real science and the chief organizers are real scientists. Still, something does not smell quite right. It seems to inject politics into the scientific debate right from the beginning and its form of petition circulation (send on a post card) seems open to abuse (and in fact you should find a number of people who signed more than once!). You will use the Science Citation Index to evaluate the level of competence of the research done by the signers and whether their specialties are really directly relevant to the question of climate change. These assessments will let you decide if the statement about their “educations” on the site is correct.

You will investigate the Arizona list of PhDs. We will apply the following criteria. First, we want to test if the person was an active scientist at the time they sent in their post cards to “sign” the petition. The petition was circulated in 2001 and 2007, so we will compromise and ask if the signer published any scientific papers after 1995, roughly within ten years of their signing. Second, we want to know if the person’s published work was any good. We can test by asking how many times it has been cited by other scientists, a rough measure of its influence (a citation means the work was used in some other scientific effort and is listed in its bibliography). A minimally active good scientist would be expected to have had his/her work cited at least 200 times in other works. Finally, we need to assess if the person’s work is directly relevant to understanding long-term climate. Climate prediction is fiendishly complicated and people in other fields of science, like astronomy, are no more likely to be able to do it than randomly selected Australian aborigines (actually, I expect aborigines to be a lot better at it than astronomers). How are you going to get this information? From the Science Citation Index. To have access to it you must be within the University of Arizona internet system (since you have to subscribe and the UA does). If you are, proceed as follows:

Bring up Google
Search for “university arizona libraries”
Click on “Search and Find”
Click on “article and database searching”
Click on “S”
Click on “Science Citation Index”
Change top slider to “author”
Enter the author in the right format, e.g., Rieke G* for one of us (George H. Rieke) [most scientists use initials for their given names professionally, but not always all their initials. Using the analyze function as illustrated in class you can narrow down to the right person. If that proves difficult, you can use the initials, so Rieke GH is an alternative, but it might leave out a few papers]
Click on “search”
Click on “analyze results”
   [this option lets you sort through the returns and increase the probability of just getting the right person. For example, there are a lot of “Smith J”s – how do you get just the right one?]
Select on the slider “Institution Name”
Click on “analyze”
Check the boxes for all Arizona institutions
Click on “view records”

Now you have a list of the publications of the person that also originate from Arizona institutions. This is our raw material, since all of these people were supposed to be Arizona scientists.

Look at latest publication date. If it is before 1995, then classify the person as no longer being active when they signed the petition. If the listing of institutions worked (there is a real list) but there are none from Arizona, assume the person retired here after working elsewhere and is therefore also inactive. Analyze the list for “subject area” and see if the person wrote papers on environment issues.

Finally, click on “create citation report”
Look at total citations, see if it is more than 200. If so, and if there are publications after 1995, then the person was both active and probably competent as a researcher. By the way, you will also get a graph showing the time sequence of publications to check for any after 1995.

With all this information, you should be able to tell if the person was
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

Each person should fall into one and only one of these categories (if the person seems to bridge, pick the closest). You should identify each person on the computer form you have been given – use a soft pencil to fill in the oval for the answer you have selected. At the end, there are a few more questions to answer in the same way. Be sure to put your name on the computer form, since you are going to hand it in to complete the homework assignment, and we will grade you based on how well you have rated the signers.

I have selected the signers indicated to have Ph.D.s. The others, either with no degree indicated, or with MDs, are far less likely to have been involved in research. Therefore, we are giving the petition circulators the benefit of the doubt in evaluating their claims. I have skipped people with names that the Science Citation Index might have trouble evaluating, and also skipped those who signed more than once, since I think they do not deserve our attention. Remember just to enter the last name followed by one or two initials in the citation index.
Here we go. Remember, no publications after 1995, no Arizona publications, or less than 200 citations comes out “inactive”. Reserve the “worked in a field directly relevant to climate change” for those where this is clearly justified.

1. Larry Delmar Agenbroad
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

2. Lee Amoroso
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

3. A. Amr
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

4. Arthur G. Anderson
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

5. John Allen Anthes
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

6. Ara Arabyan
A  inactive
B  worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.
7. Frank G. Arcella
   A inactive
   B worked in biological sciences
   C worked in physical sciences
   D worked in some other field not related to climate change
   E worked in a field directly relevant to climate change.

8. Andrew T. Bahill
   A inactive
   B worked in biological sciences
   C worked in physical sciences
   D worked in some other field not related to climate change
   E worked in a field directly relevant to climate change.

9. Roy Jean Barker
   A inactive
   B worked in biological sciences
   C worked in physical sciences
   D worked in some other field not related to climate change
   E worked in a field directly relevant to climate change.

10. John E. Barkley
    A inactive
    B worked in biological sciences
    C worked in physical sciences
    D worked in some other field not related to climate change
    E worked in a field directly relevant to climate change.

11. Charles Carpenter Bates
    A inactive
    B worked in biological sciences
    C worked in physical sciences
    D worked in some other field not related to climate change
    E worked in a field directly relevant to climate change.

12. Arne K. Bergh
    A inactive
    B worked in biological sciences
    C worked in physical sciences
    D worked in some other field not related to climate change
    E worked in a field directly relevant to climate change.
13. James Wesley Berry
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

14. Stanley Beus
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

15. William S. Bickel
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

16. E. Allan Blair
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

17. W. Newman Bradshaw
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

18. Edward J. Breyere
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.
19. Albert Lyle Broadfoot
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

20. Theodore Eugene Bunch
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

If we count all the listed signers, PhD or not, up to Theodore Bunch, there are about 82. Assume none of those without PhDs would have passed our tests above. Count the number that did (the ones with E selected). Answer the following question:

21. The percentage of petition signers with good research credentials in a field directly relevant to climate change was (number of E’s divided by 82 times 100 to get percentage):
A Less than 2%
B 2% to 5%
C 5% to 10%
D 10% to 50%
E Virtually all, as stated in the petition

A review article is generally written by invitation to people who are outstanding authorities in the field to be reviewed, in this case climate change. It is then peer-reviewed for accuracy before being published. Use the same methods to evaluate the qualifications of the authors of the “review article” on the petition project web site.

22. Is Arthur B. Robinson
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.

23. Is Noah E. Robinson
A inactive
B worked in biological sciences
C worked in physical sciences
D worked in some other field not related to climate change
E worked in a field directly relevant to climate change.
24. Is Willie Soon
   A  inactive
   B  worked in biological sciences
   C worked in physical sciences
   D worked in some other field not related to climate change
   E worked in a field directly relevant to climate change.

25. Based on all of this research, is the petition project web site
   A Good science
   B Pseudo-science