Working Group Meeting (2/28/14)

Present: John Caraher (Physics), Bridget Gourley (Chemistry), Wade Hazel (Biology), Jeane Pope (Geoscience), Pam Propsom (Psychology), Jackie Roberts (Biochemistry & Chemistry), Michael Roberts (Psychology), Naima Shifa (Math), Khadija Stewart (Computer Science), Brian Wright (Kinesiology)

What would we want a DePauw non-science major to know about science and math 5 years after his or her graduation?

 --Assess the reasonableness of science presented in the news.

 --Critically evaluate scientific claims.

 --Interpret graphical representations of data.

 --Understand basic statistics (mean, ratio, etc.).

 --Have a skeptical bent, not cynicism.

 --The nature of uncertainty, tentative nature of science.

 --How to go about finding an answer to a science-related question. Being able to find information and research in databases, find an answer, discern a valid source, evaluate the evidence.

 --Understand how scientists really work (e.g., how is science funded, conflict of interests).

 --Enthusiasm for science or at least not a fear of it, curiosity and confidence about science.

 --Science as a particular way of knowing or behavior that is different from other ways of knowing.

 --Preponderance of evidence, converging evidence, replication.

 --Theory, hypotheses, etc. (do we have a common language of science? Some awareness of how scientists may use terms differently).

 --Strengths and weaknesses of different methodologies.

 --Meaning of “significance.”

 --Recognize the value and application of science in their lives.

We want “transfer” and transfer is notoriously hard to achieve. We do not want these things to be context-specific. Look at transfer literature.

Jeane would like to look at the literature on scientific literacy and see how others define it.

Inevitable discussion regarding overlap with Q requirement. Is there a Q Steering Committee? We will need to discuss with them.

What about a lab requirement?

Can any one disciplinary course do all of these things? Cover a high enough percentage of them? Content trade-off.

Courses for majors versus non-majors, those who think they’re going to be majors and then drop after an introductory majors course.

Are we talking about a “science first-year seminar?” Lots of potential models: common course, incorporating these things into our own disciplinary intro courses, team-taught courses.

We are striving for transparency, so please talk about these goals and ideas with your departmental colleagues and get their feedback.

Bess Evans (DPU grad, Comm major who is now a science advisor for the Obama administration)—could someone in Comm. contact her to find out what she needs to do her job, what science and math info she has (or lacked) that would be helpful or necessary?

Share the Gormally et al. paper and the assessment tool for next Working Group meeting.