Part I – Program SLO Assessment Report for 2012-13

1. **Student Learning Outcome:**
   SLO being assessed; demonstrate an understanding of various methods of science inquiry.

2. **Overall evaluation of progress on outcome:** Indicate whether or not the SLO has been met, and if met, to what level.
   - _____SLO is met after changes resulting from ongoing assessments, referencing assessment results from the previous year to highlight revisions;
   - _____SLO is met, but with changes forthcoming;
   - __X___SLO met without change required

3. **Strategies and methods:** Description of assessment method and choices, why they were used and how they were implemented.
   i) An assignment within GEOL 390 is used to assess the SLO, since this class only enrolls students who will be teaching Earth and Space Science; the course is taken during the senior year. Students are required to develop a 5-E lesson that incorporates an inquiry activity that they are to write up and present to their peers. The lesson plan is graded independently from their presentation. The data from both assessments are used since they assess different aspects of inquiry. The 5-E lesson activity assesses (1) their inquiry design and incorporation of inquiry in the entire lesson and (2) the presentation assesses whether they are actively engaging students in inquiry.

   ii) Students are also assessed on this learning outcome through Task 2 in the Teacher Preparation Assessment (TPA). Task 2 asks students to “review and identify lessons where you are engaging your students in a scientific inquiry where they are collecting scientific data and sharing interpretations to explain a phenomenon”.

4. **Observations gathered from data:** Include findings and analyses based on the strategies and methods identified in item #3.
   a. Findings
      i) From the 14 students in class, the average grade for the 5-E inquiry lesson was 85.8%. The average for the inquiry presentation was 95%. All
students are meeting the learning outcome, based on these two assessments.

ii) Only data from the winter quarter and spring 2013 quarter were available for the TPA. Of the two students who completed student teaching those quarters, both received 3 or above for the Tasks involving science inquiry, which means they are meeting or exceeding the requirements.

b. Analysis of findings:
   Based on these three assessments, all students are meeting the learning outcome.

5. What program changes will be made based on the assessment results?

   a) Describe plans to improve student learning based on assessment findings (e.g., course content, course sequencing, curriculum revision, learning environment or student advising).
      None required at this time.

   b) Provide a broad timeline of how and when identified changes will be addressed in the upcoming year.
      N/A

6. Description of revisions to the assessment process the results suggest are needed and an evaluation of the assessment plan/process itself.

   i) In future assessment of these assignments in GEOL 390, the instructor plans to separate out the inquiry piece of the assessment from other components being assessed in both the 5-E lesson and their inquiry presentation to allow one to zoom in specifically on this outcome alone.

   ii) How data will be released in future from the education TPA is unclear and will be determined by Pearson, who administers the exam.

   iii) Inquiry is also assessed in the West-E, but due to a limited number of students and current lack of access to this data it was not used in this year’s evaluation. The plan is to be able to access this data in addition to the above assessments for future evaluation.
NEW: PART II – CLOSING THE LOOP
FOLLOW-UP FROM THE 2011-12 PROGRAM ASSESSMENT REPORT

In response to the university’s accrediting body, the Northwest Commission on Colleges and Universities, this section has been added. This should be viewed as a follow up to the previous year’s findings. In other words, begin with findings from 2011-12, and then describe actions taken during 2012-13 to improve student learning along, provide a brief summary of findings, and describe possible next steps.

Working definition for closing the loop: Using assessment results to improve student learning as well as pedagogical practices. This is an essential step in the continuous cycle of assessing student learning. It is the collaborative process through which programs use evidence of student learning to gauge the efficacy of collective educational practices, and to identify and implement strategies for improving student learning.” Adapted 8.21.13 from http://www.hamline.edu/learning-outcomes/closing-loop.html.

1. Student Learning Outcome(s) assessed for 2011-12
   All the SLO’s were assessed through use of all the Common Core OSPI Standards for Earth and Space Science.

2. Strategies implemented during 2012-13 to improve student learning, based on findings of the 2011-12 assessment activities.
   The weak area for our students was in the Universe and the Solar system portion of the West-E. There is only one class in the program that focuses on these core concepts. Due to the limited data that at that time had to be aggregated over the previous 3 years we decided more data would be required before any program changes were warranted. The loss of the Department of Education Assessment Coordinator means I am currently unable to access any new data for more than Fall 2012. As a result no changes have been implemented.

3. Summary of results (may include comparative data or narrative; description of changes made to curriculum, pedagogy, mode of delivery, etc.): Describe the effect of the changes towards improving student learning and/or the learning environment.
   N/A

4. What further changes to curriculum, pedagogy, mode of delivery, etc. are projected based on closing-the-loop data, findings and analysis?
   PHYS 121 (Descriptive Astronomy) is offered at Eastern Washington University only once per year. As a consequence, a number of students are known to take an online class alternative offered by SFCC. We will assess how many of our students are currently taking the Eastern Washington University compared to the SFCC class equivalent and we will determine if there is any difference in their success on that portion of the WEST-E. This will be done in case further data from the West-E reflects a weakness in the Universe and the Solar System content as presented at EWU.