Assessment: Assessment Unit Four Column

FALL 2015

El Camino: PLOs (NSC) - Earth Sciences (Geography, Geology, Oceanography)

PLOs	*Assessment Method Description*	*Results*	*Actions*
PLO #2 Relationship with Environment - Students recognize and can accurately articulate how their environment (including the Earth, the atmosphere, ocean, and biosphere) affects humans' lives and how human activities affect their environment. **PLO Status:** Active **PLO Assessment Cycle:** 2015-16 (Fall 2015) **Input Date:** 11/12/2014	**Exam/Test/Quiz -** Students were given a lists of multiple-choice questions about relationships between the humans and their environment. Different assessments were used in different programs. The students also answered one or more essay question asking them to discuss specific relationships between humans and their environment. Students also answered two survey questions. The assessments were given at the end of the semester (week 15 or 16). **Standard and Rubric:** 50% of the students will achieve a score of 70% or higher on the assessment. 80% of students will achieve a score of 50% or higher on the assessment.	**Semester of Current Assessment:** 2015-16 (Fall 2015) **Standard Met:** Standard Not Met Student data was broken into 3 categories describing the amount of experience students have in our programs: students who are taking an earth science or geography class for the first time, students who have taken 2 or more of our classes, and majors. The oceanography (80% first timers), geology (70% first timers), physical geography (80% first timers), and cultural geography (60% first timers) programs were examined individually. Overall, more experienced students got a higher overall score on the assessments, by about 1 point on average, across all programs. More experienced students showed little or no improvement on some individual questions. Questions where improvement is possible and particularly desirable include: Sources of drinking water: Oceanography, question #3, and Geology, question #3 Causes of harmful blooms of algae and bacteria: Oceanography, questions #4 and #5 Urban heat island effect: Physical Geography, question #2 Replenishment of aquifers: Physical Geography, question #3	**Action:** New Activity: Develop a worksheet in which students contrast and compare the causes and effects of harmful blooms (beach closures, "red tides", "dead zones"). The activity could also be part of the Primary Productivity (phytoplankton) lab. New Activity: Use IR thermometers outdoors with students to show the contrast of surface temperatures between natural (e.g. grass) and false surfaces (e.g. pavement) as a way to demonstrate the Urban Heat Island effect concept. New Activity: Explain/point out subsidence when using the groundwater model to help students grasp the relationship between aquifers and nonrenewability. New Activity: Develop a worksheet diagraming major migration movements on a world map with the main reason for

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		Causes of human migration: Cultural Geography, question #3 Student data was also broken into 3 categories describing students' proficiency in reading and writing: students who have not passed English 84 or English A yet, students who have passed English 84 or English A, and students who have passed English 1A. On previous assessments, we speculated that some poor results may be related to students' poor reading comprehension. We used this question as a proxy for students' reading comprehension to see to what degree it might be affecting our results. The oceanography (80% passed English 1A), geology (85% passed English 1A), physical geography (80% passed English 1A), and cultural geography (80% passed English 1A) programs were examined individually. In the oceanography and geology programs, students who have passed English 1A did not show significantly better overall performance on the assessments or on individual questions. In the geography programs, students who have passed English 1A did perform better overall (by 2 points on the physical geography assessments). Performance on individual questions did not help us identify questions where the wording of questions and answers could be improved (e.g., confusing language or jargon). The improved performance may be related mainly to students having spent more time at El Camino College (e.g., better study habits) and/or more experience in our programs (about 90% of students who have taken two or more earth science or geography classes have also passed English 1A). (02/05/2016) **Faculty Assessment Leader:** Thomas James Noyes **Faculty Contributing to Assessment:** ulienne Gard, Ilya Neyman, Patricia Neumann, Rebecca Donegan, Matt Ebiner, Carla Weaver, Chuck Herzig, Bryan Murray, Joe Holliday, Sara Di Fiori, Charles Dong, Robin Bouse **Courses Associated with PLO Assessment:** Geog-1, Geog-2, Geog-5, Geog-6, Geog-7, Geog-8, Geog-9, Geol-1, Geol-2, Geol-3, Geol-4, Geol-6, Geol-15, Ocea-10 **Related Documents:** Geography-Cultural.txt	those movements, or a student's family migration history within the USA, Southern California, or world with the main reasons for those movements. (05/12/2017) **Action Category:** Teaching Strategies

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		Geography-Cultural-Earth_Science_Experience.txt Geography-Cultural-English_Experience.txt Geography-Physical.txt Geography-Physical-Earth_Science_Experience.txt Geography-Physical-English_Experience.txt Geology.txt Geology-Earth_Science_Experience.txt Geology-English_Experience.txt Oceanography.txt Oceanography-Earth_Science_Experience.txt Oceanography-English_Experience.txt	