WASHTENAW COMMUNITY COLLEGE
GENERAL EDUCATION ASSESSMENT PLANNING FORM

General Education Strand Assessed (check one).

- ☐ **Writing**: Develop, organize, and express thoughts in writing using Standard English.
- ☐ **Speech**: Speak in an organized and effective manner and listen critically and with comprehension.
- ☐ **Mathematics**: Understand the applications and perform computations using the concepts of college-level mathematics.
- ☒ **Natural Sciences:** Understand principles and applications of modern science.
- ☐ **Social and Behavioral Science**: Understand principles and applications of social and behavioral science in exploring the dynamics of human behavior.
- ☐ **Arts and Humanities:** Understand and apply information related to the nature and variety of the human experience through personal and cultural enrichment.
- ☐ **Critical Thinking:** Demonstrate skill in analyzing, synthesizing and evaluating.
- ☐ **Computer and Information Literacy:** Demonstrate the skill to use computer information systems including using software and the ability to locate, retrieve, and evaluate networked information.

Descriptions of strands from WCC Board Policy #3045. http://www.wccnet.edu/trustees/policies/index.php?policy=3045

Assessment plan:

Learning outcomes to be assessed	Assessment tool	When assessment will take place *(Semester/Year and cycle of 1-3 years)*	Describe population to be assessed *(e.g. completing General Education course)*	Number of students to be assessed *(may be a number or percentage)*
Use the scientific method to propose and test hypotheses through interpretation of experimental data.	CAAP test	Winter 2007 and every 3 years thereafter	Any 100-level or higher, 3 credit or more course in the AST, BIO, CEM, GLG or PHY disciplines.	At least 100
Make inferences based on observations and results.	CAAP test	Winter 2007 and every 3 years thereafter	Any 100-level or higher, 3 credit or more course in the AST, BIO, CEM, GLG or PHY disciplines.	At least 100
Apply the fundamental concepts of one of the natural sciences to interpret observations and experimental data.	CAAP test	Winter 2007 and every 3 years thereafter	Any 100-level or higher, 3 credit or more course in the AST, BIO, CEM, GLG or PHY disciplines.	At least 100

Scoring and analysis of assessment:

1. Indicate how each of the above outcome(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, answer sheet, other). Attach the rubric/scoring guide.
   The CAAP will be scored and evaluated by the company that develops and distributes the exam.

2. Indicate the standard of success to be used for this assessment.
   70% of WCC students will score at or above the national mean.

3. Indicate who will score and analyze the data (data must be blind-scored).

4. Explain the process for using assessment data to improve the general education strand.

Submitted by:

Preparer:	_____	_____	**Date:**	_____
	Print	*Signature*		
Dept Chair:	_____	_____	**Date:**	_____
	Print	*Signature*		
Dean:	_____	_____	**Date:**	_____
	Print	*Signature*		
Vice President for Instruction	_____	_____	**Date:**	_____
	Print	*Signature*		

Please return completed form to the Office of Curriculum & Assessment, SC 247 and e-mail an electronic copy to sjohn@wccnet.edu

General Education Outcome Assessment Plan
Natural Science Strand
November 20, 2006
Breege Concannon, Amir Fayaz, Esta Grossman, Anne Heise, Rosemary Rader

Outcomes:

1. Use the scientific method to propose and test hypotheses through interpretation of experimental data.

2. Make inferences based on observations and results.

3. Apply the fundamental concepts of one of the natural sciences to interpret observations and experimental data.

Assessment tool:

CAAP test

Assessment plan and schedule:

Assessment will begin in Winter 2007. The CAAP will be administered in the 11th or 12th week of the semester. All three outcomes will be assessed.

In general, the sample population will be drawn from any course that satisfies the Natural Science Strand (with a few exceptions as noted in the WCC Bulletin). These courses are: "any 100-level or higher, 3 credit or more course in the following disciplines: AST, BIO, CEM, GLG, PHY." The total number of sections will be 7-8, with an anticipated total number students being at least 100. Any student who, in the end, does not pass his/her science class will have his/her CAAP score withheld from WCC internal analysis. This is because we are assessing how well these science courses are teaching science to students who pass the class.

As a pilot project in Winter 2007, at least 3 sections of an entry-level 100-level course from the following disciplines will be assessed: BIO, CEM, GLG, and PHY. In addition, at least 3 sections each of a second-level CEM, second-level PHY, and second-level BIO course will be given the CAAP. We will then compare the scores from the entry-level courses to those from the second-level courses to see if the entry-level population is prepared for the CAAP after only 11 or 12 weeks of their science class.

The CAAP will be scored and evaluated by the company that develops and distributes the exam.

The standard of success will be that 70% of WCC students will score at or above the national mean.

The WCC person who coordinates CAAP administration will report the results to the departments of Biology, Chemistry, Geology, and Physical Science. This person will also re-analyze results by removing failing students as described above.

If students do not achieve success, the following measures may be taken by departments:

- If an item analysis becomes available, we can use it to see if a particular set of questions was especially problematic for our students. If so, we can further consider whether such questions appear to test reading and math skills more than scientific reasoning. If they do, use of the CAAP may have to be reconsidered.
- Modify instruction to incorporate more examples of scientific inference and data interpretation.