GENERAL EDUCATION ASSESSMENT REPORT

I. Background Information

1. 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

2. Semester(s) assessment data was collected (check all that apply):
   - ☐ Fall 20_____
   - ☒ Winter 2014
   - ☐ Spring/Summer 20_____

3. Semester assessment report was prepared (check one):
   - ☐ Fall 20_____
   - ☐ Winter 20_____
   - ☒ Spring/Summer 2015

4. Assessment tool used for this assessment (check all tools that apply):

	Used for previous assessment?
☒ CAAP test	☒ yes ☐ no
☐ Survey	☐ yes ☐ no
☐ Prompt	☐ yes ☐ no
☐ Capstone course	☐ yes ☐ no
☐ Common final or test questions	☐ yes ☐ no
☐ Transfer data	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
☐ Other:	☐ yes ☐ no

PLEASE SEND A COPY OF THE TOOL(S) AND SCORING RUBRIC(S) USED ALONG WITH THIS REPORT.

Note that the CAAP is scored by an external agency based on an answer key. The test is proprietary and cannot be attached.

logged 6/19/15 sj

5. Please list the course(s) in which this tool was administered.

The science reasoning module of the CAAP test was taken by students in BIO 161, BIO 215, BIO 237, SCI 101, CEM 111, ENV 101 and PHY 100.

6. Describe the total population of students eligible to be assessed and how this group was selected for assessment.

Instructors teaching seven courses that meet the science general education requirement agreed to administer the CAAP to their students. Both sections of BIO 161, the only section of BIO 215, four of the seven sections of BIO 237, one of the four sections of SCI 100, two of the ten sections of CEM 111, one of the two sections of ENV 101, and one of the two sections of PHY 100. In any case where a student was enrolled in more than one of these sections, that student took the CAAP only once.

7. Indicate the number of students assessed.

A total of 205 students were assessed:

Course Title	# students assessed
BIO 161	41
BIO 215	15
BIO 237	63
SCI 101	11
CEM 111	47
ENV 101	19
PHY 100	10

II. Results

1. If applicable, briefly describe the changes that were implemented as a result of the previous assessment.

The standard of success was met in the previous assessment so no changes were implemented.

2. State the outcomes (verbatim) that were assessed for the General Education strand. (General Education Outcomes are available through the following link):
http://www.wccnet.edu/departments/curriculum/progdata.php?levelone=genedassessment

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.

3. Briefly describe assessment results based on data collected, demonstrating the extent to which students are achieving each of the learning outcome listed above. ***Please attach a summary of the data collected to the back of this document. DO NOT INCLUDE STUDENT NAMES, NUMBERS OR OTHER IDENTIFYING INFORMATION.***

Students taking the science reasoning module of the CAAP during the Winter 2014 semester were required to complete objective questions in science reasoning. The mean score of WCC students was 61.2, compared to the national mean of 59.2. Of the 205 students taking the CAAP, 134, or 65%, scored 60 or higher. If the national mean is rounded to the nearest whole number (59), then 152, or 74%, scored at the national mean or higher.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. ***Please attach the rubric/scoring guide used for the assessment to the back of this document***

   The standard of success is that 70% or more of the WCC students taking the CAAP will score at or above the national mean. Depending on how one chooses to treat the national mean of 59.2, the standard of success was either not met (65% of WCC students scored 60 or higher) or met (74% scored 59 or higher).

   The CAAP is scored by an external agency based on an answer key. No rubric or scoring guide is available to the public.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

   Strengths:
   Because the CAAP does not include an item analysis, it is not possible to identify particular strengths.

   Weaknesses:

   Because the CAAP does not include an item analysis, it is not possible to identify particular weaknesses.

III. Changes influenced by assessment results

1. If weaknesses were found (see II.5 above) or students did not meet expectations (see II.4 above), describe the action that will be taken to address these weaknesses.

   It is very hard to prescribe changes based on the results of the CAAP.

   One hypothesis to explain the lack of success is that of the 205 students taking the CAAP, 40, or about 20% were enrolled in courses with no science prerequisite. (These courses are: SCI 101, ENV 101, and PHY 100.) It is possible that proficient scientific reasoning develops over more than one class. If that is the case, we would predict that the scores in the no-science prerequisite classes brought down the overall WCC performance. However, the data is not available to test this hypothesis.

   A second hypothesis is that there are deficiencies in one or more of the assessed courses such that students taking these courses are inadequately schooled in scientific reasoning. Again, without section-by-section data it is not possible to test this hypothesis.

   It is regrettable that item analysis is not available. Perhaps there is a particular type of graph or data set that we are not giving our students enough practice with.

2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Describe changes and give rationale for change.

- ☐ Master syllabi
  Rationale:
- ☐ Curriculum
  Rationale:
- ☐ Course syllabi
  Rationale:
- ☐ Course assignments
  Rationale:
- ☐ Teaching methodology
  Rationale:
- ☐ Other:
  Rationale:

3. What is the timeline for implementing the actions identified in III.1 and III.2 above?

There is no answer to this question because there is no clear prescription for change.

IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this general education strand.

The strength of using the CAAP is that it is a nationally normed test, and presumably we can be confident that it assesses scientific reasoning. If we were to create our own assessment, we would have no way to prove it accurately assesses scientific reasoning.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

There are four weaknesses to this assessment approach.

First, the CAAP lacks item analysis. This really limits what you can do from a curricular standpoint when WCC students do not meet the standard of success.

Second, no DL or MM classes were assessed. This is because the CAAP is a paper test that must be administered in a proctored classroom. Thus, whatever picture we develop of WCC's performance teaching scientific reasoning is necessarily incomplete.

Third, an entire class period is needed to administer the CAAP. This requirement severely limits the number of instructors who are willing to volunteer their classes for the CAAP. Out of 61 eligible sections in the Physical Sciences and Life Sciences department, only 9 participated.

Fourth, we assessed a lot of students who may have been in their first college-level science class. The CAAP was apparently intended for sophomore level students yet 20% of our study population was taking 100-level no-prerequisite classes.

Nevertheless, we will probably continue with the CAAP because there is no known acceptable alternative.

Submitted by:

Preparer:	**Anne Heise** *Print*	Anne Heise *Signature*	**Date:**	6/15/15
Dept Chair:	**Anne Heise & Kathleen Butcher** *Print*	Anne Heise *Signature*	**Date:**	6/15/15
Dean:	**Kristin Good** *Print*	Kristin A Good *Signature*	**Date:**	6/15/15

Please return completed form and attachments to the Office of Curriculum & Assessment, SC 257.

Reviewed and approved by Assessment Committee 9/3/15

GENERAL EDUCATION ASSESSMENT REPORT

I. Background Information

1. 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

2. Semester(s) assessment data was collected (check all that apply):
   - ☒ Fall 2010
   - ☐ Winter 20_____
   - ☐ Spring/Summer 20_____

3. Semester assessment report was prepared (check one):
   - ☐ Fall 20_____
   - ☐ Winter 20_____
   - ☒ Spring/Summer 2011

4. Assessment tool used for this assessment (check all tools that apply):

	Used for previous assessment?
☒ CAAP test	☒ yes ☐ no
☐ Survey	☐ yes ☐ no
☐ Prompt	☐ yes ☐ no
☐ Capstone course	☐ yes ☐ no
☐ Common final or test questions	☐ yes ☐ no
☐ Transfer data	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
PLEASE SEND A COPY OF THE TOOL(S) AND SCORING RUBRIC(S) USED ALONG WITH THIS REPORT.	

logged 4/27/12 sjf

5. Please list the course(s) in which this tool was administered.
The science-reasoning module of the CAAP test was taken by students in BIO 111, BIO 228, CEM 111, CEM 122, CEM 140, CEM 211, GLG 104, GLG 114, and PHY 122.

6. Describe the total population of students eligible to be assessed and how this group was selected for assessment.

Instructors teaching nine courses that meet the science general education requirement agreed to administer the CAAP test to their students. One of 19 sections of BIO 111, the only section of BIO 228, two of ten sections of CEM 111, all three sections of CEM 122, two of four sections of CEM 140, two of three sections of CEM 211, one of three sections of GLG 104, the only section of GLG 114, and the only section of PHY 222 were assessed. All students in these sections were assessed. There were seven students who were enrolled in more than one of the assessed courses. Each of these students took the test only one time.

7. Indicate the number of students assessed.
A total of 215 students were assessed:

17 in BIO 111	**9 in BIO 228**	**34 in CEM 111**
51 in CEM 122	**31 in CEM 140**	**28 in CEM 211**
8 in GLG 104	**18 in GLG 114**	**19 in PHY 122**

II. Results

1. If applicable, briefly describe the changes that were implemented as a result of the previous assessment.

The standard of success was met in the previous assessment so no changes were implemented.

2. State the outcomes (verbatim) that were assessed for the General Education strand. (General Education Outcomes are available through the following link):
http://www.wccnet.edu/departments/curriculum/progdata.php?levelone=genedassessment

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.**

3. Briefly describe assessment results based on data collected, demonstrating the extent to which students are achieving each of the learning outcome listed above. ***Please attach a summary of the data collected to the back of this document. DO NOT INCLUDE STUDENT NAMES, NUMBERS OR OTHER IDENTIFYING INFORMATION.***

Students taking the science-reasoning module of the CAAP test during the Fall 2010 semester were required to complete objective questions in science reasoning. The mean score of WCC students was 62.5, compared to the national mean score of 59.1. Of the 215 WCC students taking the test, 168 of them, or 78%, scored 59 or higher on the test, which is at or above the national mean of 59.1.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. ***Please attach the rubric/scoring guide used for the assessment to the back of this document***

The standard of success is that 70% or more of the WCC students taking the CAAP test will score at or above the national mean.

The national average on the science-reasoning module of the CAAP test is based on the performance of 17,133 sophomore-level students from two-year institutions similar to Washtenaw Community College. Since 168 of the 215 WCC students taking the CAAP test, or 78%, scored 59 or higher on the test, i.e. at or above the national mean of 59.1, the standard of success has clearly been met.

The CAAP test is proprietary and is scored by an external agency based on an answer key.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths: **Because the CAAP test results do not include an item analysis, it is not possible to identify particular strengths.**

However, WCC students taking the science-reasoning module of the CAAP test performed well when compared to the national average. Our students scored an average of 62.5 on the test, compared to the national average of 59.1. This is especially notable since many of the WCC students who took the test are freshman, and the national norm is based on the performance of sophomore-level students.

It is reasonable to expect that the performance of students on the science-reasoning module of the CAAP should improve as students complete more science courses. Indeed, when the data is split into groups comprising students taking a course having no WCC science course pre-requisite (Group A), and those taking a science course that does have a WCC science course pre-requisite (Group B), the performance of students in Group B is higher of those in Group A. than

Group A consisted of 77 students who took the CAAP test while enrolled in the following courses:

17 in BIO 111 34 in CEM 111 8 in GLG 104 18 in GLG 114

Group B consisted of 138 students who took the CAAP test while enrolled in the following courses:

9 in BIO 228 51 in CEM 122 31 in CEM 140 28 in CEM 211

19 in PHY 122

Students in Group A had an average score of 61.6 and 55/77 students, 71.4%, scored 59 or higher on the CAAP test. Students in Group B had an average score of 63.0 and 113/138 students, 81.9%, scored 59 or higher. Clearly, students are improving in their science reasoning ability as they progress through additional science courses at WCC.

Weaknesses: **Because the CAAP test results do not include an item analysis, it is not possible to identify particular weaknesses.**

III. Changes influenced by assessment results

1. If weaknesses were found (see II.5 above) or students did not meet expectations (see II.4 above), describe the action that will be taken to address these weaknesses.
   Since our students met expectations, no action will be taken.

2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Describe changes and give rationale for change.
   Since our students met expectations, no changes will be made at this time.

   ☐ Master syllabi
   Rationale:

   ☐ Curriculum
   Rationale:

   ☐ Course syllabi
   Rationale:

   ☐ Course assignments
   Rationale:

   ☐ Teaching methodology
   Rationale:

   ☐ Other:
   Rationale:

3. What is the timeline for implementing the actions identified in III.1 and III.2 above?
   N/A

IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this general education strand.

   The CAAP test is an effective tool to measure how WCC students compare to a nationwide peer group of students in their use of science reasoning. There are, however, several concerns to be noted about using the CAAP test to measure student achievement of the general education natural science strand.

   1. **Since the CAAP test is a proctored exam given during a scheduled class meeting, and not available on-line, there is currently no way to assess students enrolled in science courses taught completely on-line (DL courses). At the present time this is only an issue for a limited number of courses: BIO 104, BIO 212, and GLG 104, but these DL sections will have to be assessed in the future. The number of DL sections will likely continue to grow so some plan must be made to assess whether or not the students in these classes meet the science reasoning general education requirement.**

2. **Another concern about the CAAP test is that its reading level might make it difficult for non-native English language speakers to do well in a timed test setting. The data showed that 18 (8%) students taking the CAAP test self-reported that they are ESL students. Ten of these 18 students (56%) had scores at or above the national mean score, which is a much lower performance compared to the 78% of all students taking the test who scored at or above the national mean.**
3. **No item analysis is provided for the CAAP exam, so it is not possible to determine specific areas in which our students have strengths and weaknesses. In spite of this, we continue to use the CAAP test because it allows us to evaluate the performance of WCC students against a national norm.**

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

No changes in the assessment tool will be made at this time. However, if options for more data analysis become available from the testing agency, we will explore purchasing them when we do the next assessment of science reasoning.

Submitted by:

Preparer:	**Rosemary Rader** *Print*	Rosemary Rader *Signature*	**Date:**	6-25-12
Dept Chair:	**Kathleen Butcher** *Print*	Kathleen Butcher *Signature*	**Date:**	6/26/12
Dean:	**Martha Showalter** *Print*	Martha Showalter *Signature*	**Date:**	6/27/12

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

GENERAL EDUCATION ASSESSMENT REPORT

I. Background Information

1. 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

2. Semester(s) assessment data was collected (check all that apply):
   - ☐ Fall 20_____
   - ☒ **Winter 2007**
   - ☐ Spring/Summer 20_____

3. Semester assessment report was prepared (check one):
   - ☒ **Fall 2008**
   - ☐ Winter 20_____
   - ☐ Spring/Summer 20_____

4. Assessment tool used for this assessment (check all tools that apply):

	Used for previous assessment?
☒ CAAP test	☒ yes ☐ no
☐ Survey	☐ yes ☐ no
☐ Prompt	☐ yes ☐ no
☐ Capstone course	☐ yes ☐ no
☐ Common final or test questions	☐ yes ☐ no
☐ Transfer data	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
☐ Other:	☐ yes ☐ no
PLEASE SEND A COPY OF THE TOOL(S) AND SCORING RUBRIC(S) USED ALONG WITH THIS REPORT.	

Note that the CAAP test is scored by an external agency based on an answer key. The test is proprietary and cannot be attached.

5. Please list the course(s) in which this tool was administered.

Students enrolled in BIO 101, BIO 227, CEM 122, and PHY 222 took the science module of the Collegiate Assessment of Academic Proficiency test during the Winter 2007 semester.

6. Describe the total population of students eligible to be assessed and how this group was selected for assessment.

Instructors teaching four courses that meet the science general education requirement agreed to administer the CAAP test to their students. Three of 23 sections of BIO 101, the only section of BIO 227, all three sections of CEM 122 and both sections of PHY 222 were assessed. All students in these sections were assessed. There were two students who were enrolled in more than one of the assessed courses. These students only took the test one time.

7. Indicate the number of students assessed.

143

II. Results

1. If applicable, briefly describe the changes that were implemented as a result of the previous assessment.

The standard of success was met in the previous assessment so no changes were implemented.

2. State the outcomes (verbatim) that were assessed for the General Education strand. (General Education Outcomes are available through the following link):
http://www.wccnet.edu/departments/curriculum/progdata.php?levelone=genedassessment

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.**

3. Briefly describe assessment results based on data collected, demonstrating the extent to which students are achieving each of the learning outcome listed above. ***Please attach a summary of the data collected to the back of this document. DO NOT INCLUDE STUDENT NAMES, NUMBERS OR OTHER IDENTIFYING INFORMATION.***

Students taking the science reasoning module of the CAAP test during the Winter 2007 semester were required to complete objective questions in science reasoning. The mean score of WCC students was 62.5, compared to the national mean score of 59.1. Of the 143 WCC students taking the test, 100 of them, or 70%, scored 60 or higher on the test, which is at or above the national mean of 59.1.

Additionally, there were 9 students who scored 59 on the CAAP test, just slightly below the 59.1 national mean. If the national mean is rounded to the nearest whole number of 59 and these students are added to those meeting the national average, then 76.2% of the WCC students taking the science reasoning portion of the CAAP test were at or above the national mean score.

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. ***Please attach the rubric/scoring guide used for the assessment to the back of this document***

   The standard of success is that 70% or more of the WCC students taking the CAAP test will score at or above the national mean.

   Of the students taking the CAAP test, 70%, scored 60 or higher on the test, which is at or above the national mean of 59.1. The standard of success has been met.

   If the 9 students who scored 59 on the test are counted as meeting the national mean of 59.1, then 76.2 % of the WCC students taking the science reasoning portion of the CAAP test were at or above the national mean score. In this case, the standard of success has been met to a greater degree.

   The CAAP test is scored by an external agency based on an answer key.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

   Strengths: The national average on the science reasoning module of the CAAP test is based on the performance of 17,875 sophomore-level students from two-year institutions similar to Washtenaw Community College. On average, students at WCC who took the science reasoning module of the CAAP test performed at a higher level than the national average. Because the CAAP test results do not include an item analysis, it is not possible to identify particular strengths.

   Weaknesses: Because the CAAP test results do not include an item analysis, it is not possible to identify particular weaknesses.

III. Changes influenced by assessment results

1. If weaknesses were found (see II.5 above) or students did not meet expectations (see II.4 above), describe the action that will be taken to address these weaknesses.

   Since our students met expectations, no action will be taken.

2. Identify any other intended changes that will be instituted based on results of this assessment activity (check all that apply). Describe changes and give rationale for change.

   Since our students met expectations, no changes will be made at this time.

- ☐ Master syllabi
  Rationale:
- ☐ Curriculum
  Rationale:
- ☐ Course syllabi
  Rationale:
- ☐ Course assignments
  Rationale:
- ☐ Teaching methodology
  Rationale:
- ☐ Other:
  Rationale:

3. What is the timeline for implementing the actions identified in III.1 and III.2 above?

   N/A

IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this general education strand.

   The CAAP test is an effective tool to measure how WCC students compare to a nationwide peer group of students in their use of science reasoning. There are, however, several concerns to be noted about using the CAAP test to measure student achievement of the general education natural science strand.

   One concern involves the timing of the test administration. Ideally, all of the courses that fulfill the general education natural science strand should have students selected to take the CAAP test, and all of these students should have completed one of these courses. Since the test is administered before the end of the semester, generally during week 12 of the 15-week WCC semester, the test has usually been given to those students who have already completed one full semester of a science course and are currently enrolled in another. Since the more competent students go on to enroll in a second science course, this undoubtedly skews the results toward a higher average score. Indeed, only 48% of students in BIO-101 scored at or above the national average, while 88% of BIO-227, 89% of CEM-122 and 100% of PHY-222 students scored at or above the national average. In future administrations of the CAAP test, students from all courses meeting the natural science general education strand should be included, if possible.

   Another concern about the CAAP test is that its reading level might make it difficult for non-native English language speakers to do well in a timed test setting.

A last concern about using the CAAP test to assess if students are meeting the natural science general education strand requirements is the lack of item analysis in the results received from the testing agency. When no item analysis is provided, it is not possible to determine the areas in which our students have strengths and weaknesses. This, of course, does not provide information that can be used to make improvement in our courses. Until such time when an item analysis for this test becomes available, we will have to trade off the lack of item analysis information against scoring our students against a national norm. At this time, it seems more important to score our students against nationally normed results.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

No changes will be made. However, we are hoping that an item analysis of the test results will be available from the testing agency in the near future.

Submitted by:

Preparer:	**Rosemary Rader** *Print*	Rosemary Rader *Signature*	**Date:**	2-6-09
Dept Chair:	**Kathleen Butcher** *Print*	Kathleen Butcher *Signature*	**Date:**	3/2/09
Dean:	**Martha Showalter** *Print*	Martha Showalter *Signature*	**Date:**	MAR 4 2009

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

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Physical Science Department

Memo

To: Assessment Committee

From: Robert Hagood, Department Chair

Date: June 1, 2003

Re: CAAP Results 2003

In March of 2003, 129 Physical Science students took the "Science Reasoning CAAP Test". 102 of the students (79%) score at or above the national mean for the test. The students were second semester students in Chemistry and Physics. The test is designed to examine the students ability to understand a science concept and see if the students can use science reasoning to answer question base on there science background. Overall the students did very well and showed that our teaching methods are addressing their needs in understanding science.

As a department, we have continued to develop new laboratories and lecture assignment to help the students better understand the Science Reasoning. We would like to continue to use the CAAP test to monitor the progress of our students and ensure that we continue on the correct path in the science education.