

Santiago Canyon College

Department: Earth, Space and Physical Sciences (Chemistry) Year: 2008

Semester: F07

Dept Review Sub-report for Sections C – D on SLO Assessment (Chem 209)

1) Outcome to be assessed by dept members	3- Describe and provide reasoned explanations about the role and nature of chemical events through utilization of the concepts, symbols and equations of modern chemistry.																																		
2) Means of assessment and criteria of success	The assessment assignment was developed as a course embedded assignment with a rubric to score that assignment. The assignment probe their ability to identify chemical formulas and translate it into names followed by identifying the type of reaction involved. All sections of the class will be administered this assessment. Collection of the data will follow and will be reported in its due course. A discussion of the results of the assessment will follow with faculty.																																		
3) Summary of data collected	<p>No students = 52 students No sections = 4 sections</p> <p>The table shows the average score.</p> <table border="1" data-bbox="671 1116 2520 1877"> <thead> <tr> <th rowspan="2">Rubric Components</th> <th colspan="4">Point Scale</th> <th rowspan="2">Students Average Score</th> </tr> <tr> <th>4</th> <th>3</th> <th>2</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>chemical formulas of reactants.</td> <td>Student provides all the formulas correct of the reactants. This might require internet research.</td> <td>Student provides most chemical formulas correct of the reactants. May not have used internet research.</td> <td>Student provides some correct chemical formulas. Student did use research.</td> <td>Student did not provide correct chemical formulas for reactants.</td> <td>4</td> </tr> <tr> <td>Predict the type of the chemical reaction.</td> <td>Based on type of reactants, student predicts what type of reaction.</td> <td>Based on types of reactants, student may be able to predict what type of reaction.</td> <td>Student could not predict most types of reactions.</td> <td>Student could not predict type of reaction.</td> <td>3</td> </tr> <tr> <td>Correct chemical formulas for products.</td> <td>Student provides correct formulas of products.</td> <td>Student provides most product formulas correct.</td> <td>Student provides some correct chemical formulas of products.</td> <td>Student did not provide correct chemical formulas for products.</td> <td>3</td> </tr> <tr> <td>Balanced chemical equation.</td> <td>Student balances the chemical equation.</td> <td>Most chemical equations are balanced.</td> <td>Few chemical equations are balanced.</td> <td>Chemical equations are not balanced.</td> <td>3</td> </tr> </tbody> </table>	Rubric Components	Point Scale				Students Average Score	4	3	2	1	chemical formulas of reactants.	Student provides all the formulas correct of the reactants. This might require internet research.	Student provides most chemical formulas correct of the reactants. May not have used internet research.	Student provides some correct chemical formulas. Student did use research.	Student did not provide correct chemical formulas for reactants.	4	Predict the type of the chemical reaction.	Based on type of reactants, student predicts what type of reaction.	Based on types of reactants, student may be able to predict what type of reaction.	Student could not predict most types of reactions.	Student could not predict type of reaction.	3	Correct chemical formulas for products.	Student provides correct formulas of products.	Student provides most product formulas correct.	Student provides some correct chemical formulas of products.	Student did not provide correct chemical formulas for products.	3	Balanced chemical equation.	Student balances the chemical equation.	Most chemical equations are balanced.	Few chemical equations are balanced.	Chemical equations are not balanced.	3
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4) Analysis and discussion of data	<p>Most of the students answered the question regarding iron rusting and decomposition of sodium azide. Both of these questions have very direct correlation to the lecture material. They also have been shown as examples in the lecture and text.</p> <p>The harder questions for the students were sugar fermentation and cleaning a penny with salt and vinegar. Both of these questions required internet research to find out the formulas and the exact reaction. About 99% of students missed that sugar fermentation requires oxygen. About 80% of the students missed the equation where salt and vinegar combine first to produce hydrochloric acid then it is the acid effect to clean the penny.</p>
5) Plan of action/what to do next	<p>These results indicate that the students can make the direct correlation to lecture material when answering questions but have a harder time correlating to actual life situations. More correlation between real life situation and chemical formulas must be introduced as examples during lecture.</p>