

G-PAC Student Learning Outcome	Assessment Plan	Assessment Findings	Interpretation of Findings	Action Plan
<p>1. Understand the hypothetico-deductive method</p> <p>Semester: Fall</p> <p>Year: 2016</p>	<p>Measure A (must be direct)</p> <p><i>Examples of Direct: scores on presentations, papers, or performances using a rubric; pre-post test scores or scores on specific exam questions.</i></p>			
	<p>Exam: Summative assessment. Questions were incorporated into the exam to determine student's knowledge of hypothesis and scientific method. There is one exam composed of 50 multiple choice questions and cover all material leading up to the exam. The questions include both knowledge-based and application questions.</p>	<p>Results from 193 students on the two exams were as follows: Correct answers were distributed as follows: 7% received greater than 90% correct answers 26% received 80-90% correct answers 36% received 70-80% correct answers 21% received 60-70% correct answers less than 10% received less than 60%</p>	<p>The exam questions were challenging but evaluated their conceptual understanding of hypothetico-deductive method.</p>	<p>Spring 2017 we gathered data from any GPAC courses which achieved objective 1: Understand the hypothetico-deductive method. The data suggests that the students are more successful in executing the lab handouts than their performance on the exams. We will review the content of the exams to determine if adjustments need to be made. We will resume the assessment of this objective in Spring 2021.</p>
	<p>Measure B may be direct or indirect; indicate which it is: <u>indirect</u></p> <p><i>Examples of Indirect: participation scores, student course evaluation questions referring to student learning (as opposed to questions about the instructor).</i></p>			
<p>Students are responsible for developing their own hypothesis for outcomes during different lab activities when variables are changed. Execute (5pts.): this is to get you to do science and connect it to your life. The lab handout grade will include on-time attendance of lab, attending the correct lab section, possession of the lab manual for that day's activities, participation during lab activities, and completion of the manual questions for each assigned activity. Grading of lab activity questions includes grammar, spelling, the accuracy of answers and the use of one's own wording.</p>	<p>Results from 193 students on the laboratory handouts were as follows: 3% achieved a 90% or better 65% achieved a 80-90% 4% achieved a 70-80% 1.5% achieved a 50-70% 1.5% achieved below 50%</p>	<p>These activities are effective in testing their ability to develop a hypothesis and use the scientific inquiry methods we have taught.</p>		