

CSCU GENERAL EDUCATION ASSESSMENT RUBRIC
COMPETENCY AREA: Scientific Knowledge and Understanding

Scientific Knowledge and Understanding Goal: Students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues.

Scale Outcomes	4 Highly Competent	3 Competent	2 Minimally Competent	1 Not Competent
1. Communicate using appropriate scientific terminology.	Can define and use scientific terminology in a new context.	Can define and use scientific terminology in a given context.	Can define scientific terminology but cannot use it appropriately.	Cannot define scientific terminology.
2. Use representations and models to communicate scientific knowledge and solve scientific problems.	Use representations and models to communicate scientific knowledge and solve scientific problems.	Can use representations and models to communicate scientific knowledge and solve scientific problems in a given context.	Can use representations and models to communicate scientific knowledge but cannot use them to solve scientific problems.	Cannot use representations and models to communicate scientific knowledge or solve scientific problems.
3. Plan and implement data collection strategies appropriate to a particular scientific question.	Can plan and implement data collection strategies appropriate to a new or unique scientific question.	Can plan and implement data collection strategies appropriate to a particular scientific question.	Can plan and implement data collection strategies appropriate to a particular scientific question with instructor assistance.	Cannot plan and implement data collection strategies.
4. Articulate the reasons that scientific explanations and theories are refined or replaced.	Can articulate the reasons that scientific explanations and theories are refined or replaced.	Can articulate the reasons that a particular scientific explanation or theory is refined or replaced.	Can articulate the reasons that a particular scientific explanation or theory is refined or replaced with significant instructor prompting.	Cannot articulate the reasons that a particular scientific explanation or theory is refined or replaced
5. Evaluate the quality of scientific information on the basis of its source and the methods used to generate it.	Can evaluate the quality of scientific information on the basis of its source and the methods used to generate it.	Can recognize valid sources and methods used to generate scientific information.	Can recognize valid sources of scientific information from limited choices of sources provided by an instructor.	Cannot recognize valid sources and methods used to generate scientific information.