NATURAL WORLD CURRICULUM RUBRIC (N)

Program goal:

Guide and prompt students to understand the scientific method and resulting principles and theories, critically evaluating data to answer questions about the natural world.

Student learning objective	Student Learning Outcomes' Levels of Competency:				
	Unsatisfactory	Emerging	Developing	Proficient	Mastery
SLO1: Scientific Method The student understands how the scientific method involves experimentation or empirical observations that are used for the development, testing, and application of models, theories, or laws.	The student fails to demonstrate understanding of the scientific method.	Recalls some steps of the scientific method but does not understand how experimentation or empirical observations are used for the development, testing, and application of models, theories, or laws.	Recalls all steps of the scientific method and begins to offer an explanation of how experimentation or empirical observations are used for the development, testing, and application of models, theories, or laws.	Accurately explains how experimentation or empirical observations associated with the scientific method are used for the development, testing, and application of models, theories, or laws.	Thoroughly explains and evaluates which results from experimentation or empirical observations are most significant in the development, testing, and application of models, theories, or laws.
SLO2: Scientific Principles The student demonstrates a broad understanding of scientific principles and theories specific to the discipline and can explain their origins.	Fails to demonstrate understanding of scientific principles and theories.	Defines some basic scientific principles and theories, with some errors in understanding.	Accurately describes basic scientific principles and theories and able to make some connections to their origins.	Explains more complex scientific principles and theories as well as their origins.	Goes beyond explanation and synthesizes complex scientific principles and theories with clear understanding of their origins.
SLO3: Data and Problem-Solving The student critically evaluates scientific information and/or solves problems using scientific data.	Fails to critically evaluate scientific information and/or solve problems.	Begins to recognize when scientific information is either accurate or flawed or begins to identify the appropriate way to use scientific data to solve a problem.	Consistently recognizes when scientific information is either accurate or flawed and attempts to develop solutions to problems with some errors in logic or calculations.	Provides an accurate interpretation of scientific information or develops solutions to problems with few errors and draws reasonable conclusions from the solution.	Critically analyzes scientific information and thoughtfully solves problems using scientific data and makes intuitive conclusions from the solution. Generalize s patterns of data to larger systems.

A **program goal** is a clear statement that expresses what our program will do for students. Each goal is designed to prompt and guide teaching practice and program assessment.

A **student learning objective** is a clear statement about what we expect students to learn or accomplish. Like any type of objective, a student learning objective is a desired outcome.

A **student learning outcome** is the result of a learning process; in other words, it is an actual outcome. To foster assessment of student learning, student learning outcomes must be observable, observed, measurable, and measured. Student learning outcomes can be characterized using an ordinal scale of competency (e.g., unsatisfactory, emerging, developing, proficient, and mastery).

A **competency** is the ability to do something successfully. CU's expectation is that students will perform at or above the level of **Proficient.**