**EXPLORATIONS - NATURAL SCIENCES (E-NS/E-SL)**

**CLO ARTIFACT ASSESSMENT RUBRIC**

*Adapted from AAC&U LEAP VALUE Rubrics (Integrative Learning, Intercultural Knowledge and Competence)*

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| **E-NS/E-SL CLO 1** | **Capstone (4)** | **Milestone (3)** | **Milestone (2)** | **Benchmark (1)** |
| **Demonstrate an understanding of the methods of scientific inquiry.** | Demonstrates sophisticated understanding of the methods of scientific inquiry, including elements of process (observations, hypotheses, predictions, experimentation) and key concepts (parsimony, hypothesis-testing, falsifiability).  | Demonstrates adequate understanding of the methods of scientific inquiry, including elements of process (observations, hypotheses, predictions, experimentation) and key concepts (parsimony, hypothesis-testing, falsifiability). | Demonstrates partial understanding of the methods of scientific inquiry, including elements of process (observations, hypotheses, predictions, experimentation) and key concepts (parsimony, hypothesis-testing, falsifiability). | Demonstrates surface understanding of the methods of scientific inquiry, including elements of process (observations, hypotheses, predictions, experimentation) and key concepts (parsimony, hypothesis-testing, falsifiability). |
| **E-NS/E-SL CLO 2** | **Capstone (4)** | **Milestone (3)** | **Milestone (2)** | **Benchmark (1)** |
| **Explain basic concepts and principles in one or more of the sciences.** | Demonstrates sophisticated understanding of the complexity of elements central to the discipline, including key theories/principles, facts, evidence, and practices. | Demonstrates adequate understanding of the complexity of elements central to the discipline, including key theories/principles, facts, evidence, and practices. | Demonstrates partial understanding of the complexity of elements central to the discipline, including key theories/principles, facts, evidence, and practices. | Demonstrates surface understanding of the complexity of elements central to the discipline, including key theories/principles, facts, evidence, and practices. |
| **E-NS/E-SL CLO 3** | **Capstone (4)** | **Milestone (3)** | **Milestone (2)** | **Benchmark (1)** |
| **Apply scientific principles to interpret and make predictions in one or more of the sciences.** | Applies scientific principles to propose one or more hypotheses/ predictions that indicate a deep comprehension of the problem. Hypotheses/ predictions are sensitive to contextual factors. | Applies scientific principles to propose one or more hypotheses/ predictions that indicate an adequate comprehension of the problem. Hypotheses/ predictions are sensitive to contextual factors. | Applies scientific principles to propose hypotheses/predictions that do not address the specific contextual factors of the problem.  | Applies scientific principles to propose hypotheses/ predictions that are vague or only indirectly address the problem. |
| **E-NS/E-SL CLO 4** | **Capstone (4)** | **Milestone (3)** | **Milestone (2)** | **Benchmark (1)** |
| **Explain how scientific principles relate to issues of personal and/or public importance.** | Independently adapts and applies scientific principles (e.g., skills, abilities, theories, methodologies) to address solutions to problems/ explore issues of personal and/or public importance in original ways. | Adapts and applies scientific principles (e.g., skills, abilities, theories, methodologies) to address solutions to problems/explore issues of personal and/or public importance. | Uses scientific principles (e.g., skills, abilities, theories, methodologies) to contribute to understanding of problems/issues of personal and/or public importance. | Uses scientific principles (e.g., skills, abilities, theories, methodologies) in a basic way in consideration of problems/issues of personal and/or public importance. |

 *Evaluators are encouraged to assign a zero to any work that does not meet the benchmark-level performance.*