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| C:\Users\bjaco\AppData\Local\Microsoft\Windows\INetCache\Content.Word\SLS-Teaching-Toolkit-Logo_Stacked-Initials.jpg | Student Learning Outcome (SLO) Rubric: SLO 1Identify relationships among ecological, social, and economic systems |
| **OVERVIEW:**The following rubric assesses SLO 1: Students will be able to identify relationships among ecological, social, and economic systems. The goal of this SLO is for students to develop a baseline schema to identify both existing and novel examples of relationships among key sustainability components (ecological, social, and economic systems). This tool was developed and improved by a diverse group of GT faculty in collaboration with SLS. |
| **INSTRUCTIONS:**1. The rubric should be readily available to students before they begin an assignment. Posting rubrics on the web and including them in the course pack for in-class writing promotes their usefulness.
2. Consider involving students in a dialogue about the rubric criteria. Students gain a keen sense of your expectations for learning by explicitly understanding the criteria and by contributing to the modification of criteria in a rubric to enhance clarity.
3. Use the appropriate row or rows of the rubric to evaluate student work and assign a score
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| **SLS STUDENT LEARNING OUTCOMES & ASSESSMENT:**The Serve-Learn-Sustain toolkit teaching tools are designed to help students achieve not only SLS student learning outcomes (SLOs), but the unique learning outcomes for your own courses. Reflection, concept maps, rubrics, and other assessment methods are shown to improve student learning. For resources on how to assess your students’ work, please review our [Assessment Tools](http://serve-learn-sustain.gatech.edu/tool-category/assessment). **This tool achieves SLOs 1. See the end of this tool for further details.** |

**Want Help?**

Rebecca Watts Hull is the contact for this tool. You can reach her at rwattshull@gatech.edu.

Student Learning Outcome 1

**OVERVIEW**

This rubric is designed to assess students’ understandings of the three sustainability systems (ecological, economic, and social sustainability) and their ability to identify and demonstrate relationships between and among them. This rubric is intentionally broad in order to be applicable across courses. If your assignment does not ask students to identify novel sustainability relationships (here: examples external to those supplied directly by instructors), simply omit the “Sustainability: Broad Awareness as it applies to Identifying Novel Sustainability Issues” dimension from your use of this rubric. If you use this rubric to score student work, make sure to assign a zero to work that does not meet benchmark level performance (cell one).

Thisrubric is designed to assess the ways that students identify relationships among sustainability dimensions, and thus, it is intentionally broad and applicable across courses. Students are not expected to achieve mastery in their initial interactions with this material; as such, students will progress (rightward) in their abilities to identify each of four ‘degrees of complexity’ (scaled to Bloom’s Taxonomy) over a span of time (often a semester).

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| **SLO 1: Students will be able to identify relationships among ecological, social, and economic systems***Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance* |
| **SLO Dimensions** | **Degree of understanding** |
| **Beginning****1** | **Developing****2** | **Competent****3** | **Accomplished****4** |
| **Degree of complexity** | **Recognizes the parts or structural conditions of the three systems of sustainability (ecological, economic, and social****sustainability)** | The student exhibits difficulty recognizing and defining even one system. | The student adequately recognizes and defines one system, exhibiting a sufficient understanding of basic subcomponents and their connections (e.g. within the social system: economic growth and income inequality). | The student adequately recognizes and defines two systems, exhibiting a sufficient understanding of basic subcomponents and their connections within each. | The student recognizes and adequately defines all three systems, exhibiting a strong understanding of basic subcomponents and their connections within each. |
| **Describes relationship among systems** | The student exhibits difficulty describing even one relationship between two systems. For example, a relationship may be inaccurately communicated (e.g. a negative relationship is described between two elements that are positively related, such as describing a synergy where a trade-off exists). | The student adequately describes one relationship between two systems, identifying key synergies and trade-offs. | The student adequately describes at least one relationship among all three systems, identifying key synergies and trade-offs. | The student describes at least one relationship among all three systems, in depth, identifying key synergies and trade-offs supported by data, literature, or policy. |
| **Synthesizes the complexity of the relationship among systems** | The student demonstrates no or minimal understanding of how the relationships among the sustainability systems change across time, space, or context.  | The student demonstrates a basic understanding of how the relationships among the sustainability systems change across space, time, or context. | The student demonstrates an intermediate understanding of how relationships among the sustainability systems change across space, time, or context, generating one argument with evidence about a sustainability challenge and solution.  | The student demonstrates a deep understanding of how relationships among the sustainability systems change across space, time, or context, generating one argument with evidence about a sustainability challenge and solution. The student draws parallels to arguments about another challenge and solution, demonstrating a broader understanding of the complexity of the sustainability system overall. |
| **Identifies or creates novel examples of systems and their relationships** | The student identifies no examples of how even one system plays out from outside the course.  | The student identifies one example of how one or more systems plays out, from outside the course, in ways no previously introduced. The relationship to other systems is not demonstrated or superficial and limited to ways previously introduced. | The student identifies one or more examples of how one or more systems play out, from outside the course, in ways not previously introduced. The relationship to other systems is demonstrated in some depth, in ways not previously introduced.  | The student identifies one or more examples of how one or more systems play out, from outside the course, in ways not previously introduced. The relationship to other systems is demonstrated in significant depth, in creative and unpredictable ways not previously introduced.  |

**Adapted from the University of Arizona; last row from the Georgia Tech developed SOLO Taxonomy Rubric**

Student Learning Outcomes

1. Identify relationships among ecological, social, and economic systems.
2. Demonstrate skills needed to work effectively in different types of communities.
3. Evaluate how decisions impact the sustainability of communities.
4. Describe how to use their discipline to make communities more sustainable.\*

\* *Note:* SLO 4 is intended to be used by upper division, project-based courses such as Capstone.