**Teaching Fellows Institute**

**Faculty ELO Working Group Submission**

Email this document to chris.garrett@nsc.edu by Friday, June 11th.

1. A) Name of the Essential Learning Outcome (ELO)

Co-Creative Problem Solving

1. if you have an alternative name for the ELO feel free to also suggest it here

 NA

1. Both refined definitions of the ELO:
2. one short definition (one sentence directed for students)

*The ability to actively work with others to develop creative solutions and move us toward a better world.*

1. a longer definition (useful particularly for faculty)

*The ability to actively work with others to analytically and strategically respond to open-ended questions and relevant challenges. It involves the process of combining/synthesizing existing ideas, images, and expertise in original ways; and is rooted in teamwork, divergent thinking and imagination.*

1. Glossary of key terms

-**A great deal of assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group only after using methods of direct instruction to engage all of the members of the group. It is clear that the group needs the instructor to lead the conversation and to make sure everyone is engaged.

-**Assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group only after answering a significant number of questions to provide focus and /or content knowledge. It is clear that the group needs the instructor to refresh the group on how to work as a team in order for the group to continue to function.

 -**Little assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group after answering some questions to provide focus or better understanding.

-**No Assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group after answering only a few questions.

1. If applicable, identify the key resource that you used to generate your rubric (e.g., an AACU Value Rubric or one from another university), if you used one as a starting point and made slight modifications

modified from: [**https://www.rit.edu/affiliate/weimpact/documents/FinalWEIMPACT\_Synergistic%20Rubric%201%201%20(2).pdf**](https://www.rit.edu/affiliate/weimpact/documents/FinalWEIMPACT_Synergistic%20Rubric%201%201%20%282%29.pdf)

1. Examples of key assessments/assignments/projects

Any work completed with a group of students would be applicable to this ELO and rubric.

1. The completed rubric with dimensions and performance levels

(attach as a separate document or copy and paste into this document)

**CO-CREATIVE PROBLEM-SOLVING RUBRIC**

An educational experience is often created to increase critical thinking and problem solving. Creative thinking is both the ability to combine or synthesize existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way characterized by a high degree of innovation, divergent thinking, and risk taking. Problem solving is the process of designing, evaluating and implementing a strategy to answer an open-ended question or achieve a desired goal. The ability to collaborate has increasingly become an important skill in today’s workplace and therefore an important skill to learn. Collaboration is a cooperative or coordinated effort on the part of a group of persons acting together in the interests of a common cause. This rubric is meant to measure these three skills. Below is a description for each skill.

**Creative Thinking Definition**

Creative thinking must be distinguished from less focused types of creativity such as, for example, the creativity shown by a small child’s drawing, which comes not from an understanding of connections, but from an ignorance of boundaries. Creative thinking can only be expressed productively within a particular framework. The instructor should provide the student with a foundation in the strategies and skills of the area of study in order to prepare them to make connections and synthesize. While demonstrating solid knowledge of the topic, the creative thinker, at the highest levels of performance, pushes beyond those boundaries in new, or unique, combinations, uncovering or critically perceiving new syntheses and using or recognizing creative risk-taking to achieve a solution. The Creative Thinking Rubric is intended to help assess creative thinking in a broad range of areas. The rubric is made up of a set of attributes that are common to creative thinking. Examples of work samples or collections of work that could be assessed for creative thinking may include research papers, lab reports, musical compositions, a mathematical equation that solves a problem, a prototype design, a reflective piece about the final product of an assignment, or other academic works. The work samples or collections of work should be completed by a group of students.

**Problem Solving Definition**

Problem-solving covers a wide range of activities that may vary significantly. Activities that include problem-solving by students may involve problems that range from well-defined to ambiguous in a simulated or laboratory context, or in real world settings. This rubric contains the common elements of most problem-solving situations. The problem-solving dimension is designed to measure the quality of a **process**, rather than the **quality** of a product. As a result, this part of the rubric should be used during observations of groups solving problems rather than assessment of a final product.

**Collaboration** **Definition**

Students participate on many different teams, in many different settings leading to diverse collaborations. For example, a given student may work on separate teams to complete a lab assignment, give an oral presentation, or complete a community service project. Furthermore, the people the student engages with are likely to be different in each of these different teams. This part of the rubric is designed to work across all of these different settings.

This part of the rubric is meant to assess a group's ability to effectively collaborate, not as individuals but as a team. Therefore, it is possible for a group to receive a low rating, even if some of the students on the team work fairly well. Second, this part of the rubric is designed to measure the quality of a process and the ability to cooperatively communicate findings. As a result, observation of students working in groups will need to include some evidence of group interactions (e.g., notes from group meetings, peer-evaluations etc.).

**Glossary**

The definitions that follow were developed to clarify terms and concepts used in this rubric only

-**A great deal of assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group only after using methods of direct instruction to engage all of the members of the group. It is clear that the group needs the instructor to lead the conversation and to make sure everyone is engaged.

-**Assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group only after answering a significant number of questions to provide focus and /or content knowledge. It is clear that the group needs the instructor to refresh the group on how to work as a team in order for the group to continue to function.

 -**Little assistance**: The instructor will interact with the group to determine how the group is working and is able to leave the group after answering some questions to provide focus or better understanding.

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|  | **4****Exemplary** | **3****Proficient** | **2****Developing** | **1****Needs Development** | **Comments** |
| **Creative Thinking** |  |  |  |  |  |
| Brainstorming | The group **frequently** sees links between seemingly unrelated ideas. Able to produce solutions that are novel and well developed with **no assistance**. | The group **often** sees links between seemingly unrelated ideas. Able to produce solutions that are novel and well developed with **little assistance**. | The group **occasionally** sees links between seemingly unrelated ideas. Able to produce solutions that are novel but only with **a great deal of** **assistance**.  | The group is **unable** to see links between seemingly unrelated ideas. Unable to produce novel and/or unique ideas and solutions.   |  |
| Realization and Risk-Taking | The group actively seeks out and follows through on untested ideas or approaches to a problem. The risk of failure is a real possibility but does not constrain the group. | The group is willing to consider and follow through on untested ideas or approaches to a problem. The risk of failure is a possibility and puts some constraint on the group. | The group considers untested ideas or approaches to a problem only with strong encouragement. The risk of failure constrains the group.  | The group will not consider untested ideas. Stays strictly within the constraints of the problem which ensures that there is little risk of failure. |  |
| **Problem Solving** |  |  |  |  |  |
| Define Problem | The group identifies the key elements of the problem and clearly outlines the objectives in an effective manner with **no assistance**. | The group identifies the key elements of the problem and clearly outlines the objectives in an effective manner with **little assistance**.  | The group identifies the key elements of the problem and clearly outlines the objectives in an effective manner **with assistance**. | The group is unable to identify the key elements of the problem and/or the objectives without **a great deal of assistance**. |  |
| Developing Strategies | The group develops and evaluates strategies that are insightful and use appropriate reasoning to reach accurate results with **no assistance**. | The group develops and evaluates strategies that are insightful and use appropriate reasoning to reach accurate results with **little assistance**. | The group develops and evaluates strategies that are insightful and use appropriate reasoning to reach accurate results **with assistance**. | The group is unable to develop and evaluate strategies that are insightful and does not use appropriate reasoning without a **great deal of assistance**. |  |
| **Collaboration** |  |  |  |  |  |
| Interpersonal Engagement | Members of the group share respect for each other. All members of the group feel free to ask questions and contribute. Conflicts are resolved with open dialogue and compromise. | There is a general atmosphere of respect for all group members. The majority of group members feel free to ask questions and contribute. Members are generally able to resolve conflicts through open discussion. | There is a general atmosphere of respect for group members, but some members of the group do not feel free to ask questions and contribute. Members are generally able to resolve conflicts through open discussion with outside assistance. | The group atmosphere is competitive and/or individualistic. Conflicts that arise are not dealt with or cannot be resolved and/or there are no effective group interactions. |  |
| Communication of Findings | The group constructs a representation (model, drawing, written, verbal) that accurately interprets results and effectively communicates the findings with **no assistance**.  | The group constructs a representation (model, drawing, written, verbal) that may interpret results and attempts to effectively communicate the findings with **little assistance.** | The group constructs a representation (model, drawing, written, verbal) that may interpret results and attempts to effectively communicate the findings with **assistance**. | The group constructs a representation (model, drawing, written, verbal) that may interpret results and attempts to effectively communicate findings but only with **a great deal of assistance**. |  |