

EXPLORATION 3: RUBRIC

Evaluate—Scoring Rubrics

Science and Engineering Practice

4 Advanced	3 Proficient	2 Partially Proficient	1 Beginning
<p>Problem is clearly stated and relevant to the topic of electrical power generation by bioenergy. Constraints and criteria are clearly defined and correlated to problem. Scientific claims regarding bioenergy performance and limitations are supported by sound evidence. Sources of information are cited. All sources are valid and free of bias.</p>	<p>Problem is clearly stated and relevant to the topic of electrical power generation by bioenergy. Constraints and criteria are clearly defined and correlated to problem. Scientific claims regarding bioenergy performance and limitations are supported by sound evidence. Sources of information are cited.</p>	<p>Any one of the following: Problem is not clearly stated, and/or relevancy to the topic of bioenergy is not clear. Constraints and criteria are defined, but may be only weakly correlated to problem.</p>	<p>More than one of the following: Problem is not clearly stated, and/or relevancy to the topic of electrical power generation by solar cells is not clear. Constraints and criteria are defined, but may be only weakly correlated to problem.</p>

Science and Engineering Practice

4 Advanced	3 Proficient	2 Partially Proficient	1 Beginning
<p>Student applies scientific principles to design an object, tool, process, or system. Construct an oral and written argument to support bioenergy performance.</p>	<p>Student applies scientific principles to design an object, tool, process, or system.</p>	<p>Student completes design requirements, but design and/or argument has errors in logic, engineering, and/or supporting evidence.</p>	<p>Student is missing required documentation of the engineering project, or it is incomplete.</p>

Crosscutting Concept

4 Advanced	3 Proficient	2 Partially Proficient	1 Beginning
<p>Student can explain short- and long-term consequences, positive as well as negative, for bioenergy technology. Student explains how use of bioenergy is connected to societal needs, desires, and values; scientific research; and climate, natural resource, and economic conditions. Student uses data and specific examples to support explanations.</p>	<p>Student can explain short and long-term consequences, positive as well as negative, for bioenergy technology. Student explains how use of bioenergy is connected to societal needs, desires, and values; scientific research; and climate, natural resource, and economic conditions.</p>	<p>Student completes requirements, but explanations have errors in information, data, or logic.</p>	<p>Student's explanation has multiple errors or is incomplete.</p>