

# SALI Scoring Guides

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## Elements of the Variables

### EVIDENCE AND TRADE-OFFS (ET)

Recognizing Relevant Evidence

Using Evidence to Make Trade-offs

### DESIGNING AND CONDUCTING INVESTIGATIONS (DCI)

Recording Design or Procedure

Organizing Data

Analyzing and Interpreting Data

### UNDERSTANDING CONCEPTS (UC)

Applying Relevant Content

### COMMUNICATION OF SCIENTIFIC INFORMATION (CM)

Organization

Technical Aspects

### GROUP INTERACTION (GI)

Task Management

Group Participation

## Scoring Guide: Evidence and Trade-offs (ET) Variable

<b>Score</b>	<b>Recognizing Relevant Evidence</b>	<b>Using Evidence to Make Trade-offs</b>
<b>4</b>	<p><b>What to look for:</b> States correct and relevant evidence (such as facts, data and observations).</p> <p>Response accomplishes level 3, AND goes beyond in some significant way, e.g. questioning or justifying the source, validity, and/or quantity of the evidence.</p>	<p><b>What to look for:</b> Response uses evidence to compare multiple options in order to make a choice.</p> <p>Accomplishes Level 3 AND goes beyond in some significant way, e.g., suggesting additional evidence beyond the activity that would influence choices in specific ways, or questioning the source, validity, and/or quantity of the evidence and explaining how it influences choice.</p>
<b>3</b>	Identifies key evidence with the appropriate number of facts, data and observations.	Uses relevant and accurate evidence to compare multiple options, and makes a choice based on the comparison.
<b>2</b>	Missing key evidence OR insufficient number of facts, data and observations.	Compares options using evidence BUT reasons or choices are incomplete and/or part of the evidence is missing; OR only one complete and accurate perspective has been provided.
<b>1</b>	Missing key evidence AND insufficient number of facts, data, and observations; OR states opinion as facts.	States at least one option BUT only provides subjective reasons and/or uses inaccurate or irrelevant evidence.
<b>0</b>	Missing; illegible, or offers no evidence.	Missing, illegible, or completely lacks reasons and evidence.
<b>X</b>	Student had no opportunity to respond.	

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## Scoring Guide: Designing and Conducting Investigations (DCI) Variable

Score	Recording Design or Procedure	Organizing Data	Analyzing and Interpreting Data
<b>4</b>	<p><b>What to look for:</b> Response states general approach for the investigation, or procedures are described completely, accurately and safely.</p> <p>Accomplishes Level 3 AND goes beyond in some significant way, e.g. identifies alternate procedures, suggests improved materials, or relates clearly to scientific principles and approaches.</p>	<p><b>What to look for:</b> Response accurately records and logically displays data.</p> <p>Accomplishes Level 3 AND goes beyond in significant way, e.g. innovation in the organization or display of data.</p>	<p><b>What to look for:</b> Response accurately summarizes data; detects patterns and trends; and draws valid conclusions based on the data used.</p> <p>Accomplishes Level 3 AND goes beyond in significant way, e.g. explaining unexpected results, judging the value of investigation, suggesting additional relevant investigation.</p>
<b>3</b>	<p>Appropriate design with reproducible procedure if required.</p>	<p>Logically reflects complete and accurate data.</p>	<p>Analyzes and interprets data correctly and completely; conclusion is compatible with data analysis.</p>
<b>2</b>	<p>Incomplete design/procedure AND/OR significant errors.</p>	<p>Reports data logically BUT records are incomplete.</p>	<p>Notes patterns or trends but does so incompletely.</p>
<b>1</b>	<p>Incorrect or inappropriate design/procedure.</p>	<p>Reports data BUT records are illogical and/or contain major errors in the data.</p>	<p>Attempts an interpretation, but ideas are illogical OR show a lack of understanding.</p>
<b>0</b>	<p>Missing, illegible, or irrelevant design/procedure.</p>	<p>Missing, illegible, or no record of data included.</p>	<p>Missing, illegible, or no analysis or interpretation of data included.</p>
<b>X</b>	Student had no opportunity to respond.		

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## Scoring Guide: Understanding Concepts (UC) Variable

<b>Score</b>	<b>Applying Relevant Content</b>
	<p><b>What to look for:</b> Response uses relevant scientific information in situations such as solving problems or resolving issues.</p>
<b>4</b>	Accomplishes Level 3 AND extends beyond in some significant way, e.g. relating to one's own life or to scientific concepts or themes.
<b>3</b>	Accurately and completely uses scientific information to solve problem or resolve issue.
<b>2</b>	Shows an attempt to use scientific information BUT the explanation is incomplete; also may have minor errors.
<b>1</b>	Uses scientific information incorrectly and/or provides incorrect scientific information; OR provides correct scientific information BUT does not use it.
<b>0</b>	Missing, illegible, or is irrelevant or off topic.
<b>X</b>	Student had no opportunity to respond.

## Scoring Guide: Communicating Scientific Information (CM) Variable

<b>Score</b>	<b>Organization</b>	<b>Technical Aspects</b>
<b>4</b>	<p><b>What to look for:</b> Response logically organizes arguments, evidence and/or ideas related to a problem or issue.</p> <p>Accomplishes Level 3 AND goes beyond in some significant way, e.g. highlights key ideas effectively, exhibits originality.</p>	<p><b>What to look for:</b> Response clearly conveys a concept or idea. Possible forms of communication and areas to examine are:</p> <ul style="list-style-type: none"> <li>• written (e.g. report): sentence structure, grammar, spelling, neatness;</li> <li>• oral (e.g. presentation): enunciation, projection and eye contact</li> <li>• visual (e.g. poster): balance of light, color, size of lettering, and clarity of image</li> <li>• multimedia (e.g. computer slide show): effective use of available technology</li> </ul> <p>No technical errors; accomplishes Level 3 AND enhances communication in some significant way.</p>
<b>3</b>	All parts present and logically organized.	Clear and easy to understand, with few minor errors.
<b>2</b>	Shows logical order BUT part is missing.	Understandable BUT clarity is missing in places; technical errors may exist BUT do not prevent audience from understanding the message.
<b>1</b>	Lacks logical order OR is missing multiple parts.	Unclear; technical errors seriously distract audience from understanding the message.
<b>0</b>	Missing, illegible, or contains no evidence or ideas related to the task.	Missing, illegible, incoherent, or contains no evidence or ideas related to the task.
<b>X</b>	Student had no opportunity to respond.	

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## Scoring Guide: Group Interaction (GI) Variable

<b>Score</b>	<b>Task Management</b>	<b>Group Participation</b>
	<p><b>What to look for:</b> Group stayed on task, managing time efficiently.</p>	<p><b>What to look for:</b> Group members work together as a team and the ideas of all members were valued and weighed in working toward the common goal.</p>
<b>4</b>	Accomplishes Level 3 AND goes beyond in some significant way, e.g. group defines own approach to more effectively managing activity, group members actively help each other accomplish the task, group uses extra time productively.	Accomplishes Level 3 AND goes beyond in some significant way, e.g. group members actively ask questions about each others' ideas, group members compromise if there are disagreements, group members actively help each other accomplish the task.
<b>3</b>	Group managed time well and stayed on task throughout the activity.	All group members participated and respectfully considered each others' ideas.
<b>2</b>	Group stayed on task most of the time.	Unequal group participation OR group respectively considered some, but not all, ideas.
<b>1</b>	Group was off-task majority of the time, but task completed.	Significantly unequal group participation OR group totally disregarded some members' comments and ideas.
<b>0</b>	Group did not stay on task which caused task not to be completed.	Single individual does entire task.
<b>X</b>	Group was not present.	