

Secondary Sciences Cornerstone Assessments Scoring Sample Rubric

| Critical Element | Not Attempted (0) | Novice (1) | Practitioner (2) | Expert (3) |
|---|---|---|--|---|
| Experimental Design Skills | | | | |
| Stating or evaluating a hypothesis with justification Part A. | Left blank or response is completely inaccurate | Stating: Shows some cause and effect but errors exist Evaluating: Shows some evidence of accurately evaluating a hypothesis but errors exist | Stating: Shows a clear cause and effect Evaluating: Accurately evaluates the hypothesis | Stating: Shows and supports a clear cause and effect with sufficient reasoning Evaluating: Accurately evaluates the hypothesis and provides sufficient reasoning for support |
| Stating IV and DV with justification Part A. | Left blank or response is completely inaccurate | Some error in stating the IV and DV | Identifies both the IV and DV correctly but support may lack sufficient reasoning | Identifies the IV and DV correctly and provides sufficient reasoning for support |
| Identifying appropriate features of the experimental design with justification <ul style="list-style-type: none"> • Control • Constants Part A. | Left blank or response is completely inaccurate | Begins to identify appropriate variables but errors exist | Identifies appropriate variables | Identifies appropriate variables and provides sufficient reasoning for support |
| Develop aligned procedures that test a hypothesis <ul style="list-style-type: none"> • Steps • Materials Part A. | Left blank or response is completely inaccurate | Develops incorrect or incomplete procedures | Develops an appropriate but lacks sufficient detail to be replicable | Develops a reproducible procedure to test a hypothesis |
| Data Interpretation and Analysis | | | | |
| Creating a graph, map, or table from given data Part A. | Left blank or response is completely inaccurate | Creates a graph, map, or table that contains significant omissions and/or accuracies | Presents elements of graph, map, or table accurately with minor omissions | Presents all elements of graph, map, or table accurately |

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|---|--|---|--|---|
| Interpreting data from a graph, map, or table Part B. | Left blank or response is completely inaccurate | Interprets data but interpretation contains errors | Interprets most of the data from graph, map, or table accurately | Interprets all parts of the data table, map or graph correctly and provides sufficient reasoning for support |
| Making predictions using scientific data Part B. | Left blank or response is completely inaccurate | Begins to make predictions but predictions contain errors | Makes logical predictions based on scientific data | Makes logical predictions based on scientific data and provides sufficient reasoning for support |
| Drawing and supporting conclusions based on scientific data Part B. | Left blank or response is completely inaccurate | Begins to draw conclusions based on scientific data but conclusions contain errors | Draws logical conclusions based on scientific data | Draws logical conclusions based on scientific data and provides sufficient reasoning for support |
| Scientific Reasoning | | | | |
| Reasoning through a multi-step process with justification | Left blank or response is completely inaccurate | Begins to reason through a multi-step process but errors in reasoning exist | Reasons through most of a multi-step process | Reasons through all steps of a multi-step process and provides sufficient support |
| Selecting and using appropriate mathematics procedures, where appropriate (This part of the rubric may not apply across all content areas.) | Left blank or response is completely inaccurate Selects inappropriate mathematical procedures | Selects and applies uses appropriate mathematical procedures but response may contain mathematical errors | Selects and uses appropriate mathematical procedures and arrives at an accurate response | Selects and uses appropriate mathematical procedures and arrives at and communicates response using proper syntax |