

Secondary Sciences Cornerstone Assessments Scoring Rubric: Earth Science

Directions: Use the key provided and the scoring rubric to score each student's response. Provide a score for each student according to the critical element.

Critical Element	Not Attempted (0)	Novice (1)	Practitioner (2)	Expert (3)
Experimental Design Skills				
Stating or evaluating a hypothesis with justification Part A.3a and 3b	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.1a, 1b, 2a, 2b	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.4a, 4b	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. 5 and 6	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

Teacher Name: _____

Earth Science Cornerstone Assessment Rubric

Critical Element	Not Attempted (0)	Novice (1)	Practitioner (2)	Expert (3)
Data Interpretation and Analysis				
Creating a graph, map, or table from given data Part A. 7	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
Interpreting data from a graph, map, or table Part B.2 and 3	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. 1	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. 4	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 Part B. 2	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.) Part B. On the graph	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