WAYS OF KNOWING: SCIENTIFIC AND MATHEMATICAL INQUIRY: EXPERIMENTAL

Demonstrate the ability to use appropriate discipline-specific observational, quantitative, technological methods

Criteria	Exceeds Expectations	Meets Expectations	Fails to Meet Expectations
Describe the roles of observation, hypothesis, and testing in the process of generating and modifying scientific explanations.	Demonstrates EXCEPTIONAL knowledge of the roles of observation, and hypothesis development and testing in the process of generating and modifying scientific explanations.	Demonstrates ADEQUATE knowledge of the roles of observation, and hypothesis development and testing in the process of generating and modifying scientific explanations.	Fails to demonstrate a knowledge of the roles of observation, and hypothesis development and testing in the process of generating and modifying scientific explanations.
Demonstrate the ability to use appropriate discipline-specific observational, quantitative, or technological methods to test hypotheses and determine their potential validity.	Demonstrates an EXCEPTIONAL ability to use appropriate, discipline-specific methods to test hypotheses and determine their potential validity.	Demonstrates an ADEQUATE ability to use appropriate, discipline-specific methods to test hypotheses and determine their potential validity.	Fails to demonstrate an ability to use appropriate, discipline-specific methods to test hypotheses and determine their potential validity.
Apply foundational knowledge and discipline-specific models and/or theories to explain or predict natural phenomena and to solve problems.	Demonstrates an EXCEPTIONAL ability to apply appropriate models and/or theories to explain or predict natural phenomena.	Demonstrates an ADEQUATE ability to apply appropriate models and/or theories to explain or predict natural phenomena.	Fails to demonstrate an ability to apply appropriate models and/or theories to explain or predict natural phenomena.
Locate reliable sources of discipline-specific scientific evidence to construct arguments related to real-world issues and, where appropriate, distinguish between scientific and nonscientific evidence and explanations.	Demonstrates an EXCEPTIONAL ability to identify appropriate sources of evidence to construct scientific arguments related to real-world issues.	Demonstrates an ADEQUATE ability to identify appropriate sources of evidence to construct scientific arguments related to real-world issues.	Fails to demonstrate an ability to identify appropriate sources of evidence to construct scientific arguments related to real-world issues.

POLICY: For Multiple Choice Tests, the course must have three (3) items (or more) for each objective.

1. 3 out of 3 = exceeds expectations
2. 2 out of 3 = meets expectations
3. 1 or 0 out of 3 = fails to meet expectations