

SCIENTIFIC REASONING RUBRIC FOR GENERAL EDUCATION ASSESSMENT

	Exceeds Standard (4)	Meets Standard (3)	Approaches Standard (2)	Needs Attention (1)
Recognize how scientific knowledge evolves based on observation of the natural world	Skillfully describes how knowledge evolves based on what has been learned or what can change based on new information. Makes connections to other materials inside or outside the classroom.	Describes how knowledge evolves based on what has been learned or what can change based on new information.	Minimally describes how knowledge evolves based on what has been learned or what can change based on new information.	Unclearly describes how knowledge evolves based on what has been learned or what can change based on new information.
Apply principles and techniques of scientific inquiry to solve problems	Applies complete and logical steps to solving a problem. Selects a scientific principle or concept, discusses rationale for selecting the principle, and applies the principle to solve the problem.	Applies logical steps to solving a problem. Selects a scientific principle or concept and applies the principle to solve the problem.	Applies steps to solving a problem, but some steps are missing or not applied correctly . Demonstrates a limited ability to determine conclusions or solve the problem.	Attempts to solve a problem but too many steps are missing or not applied correctly to be able to solve the problem or come to a conclusion.
Evaluate the credibility of conclusions drawn from scientific information	Skillfully explains if conclusions are appropriate and reasonable based on results or observations. Provides a thorough explanation.	Explains if conclusions are appropriate and reasonable based on results or observations. Provides an explanation .	Weakly explains if conclusions are appropriate and reasonable based on results or observations. Provides a cursory, surface level explanation that lacks depth.	Attempts to explain if the conclusions are appropriate and reasonable based on results or observations but explanation is illogical or unsupported connections are made; or explanation is missing .
Relate scientific concepts to everyday life	States a thorough explanation of how an everyday occurrence takes place based on discipline-specific concepts. Discusses important patterns, differences, similarities, or relevance.	States a general explanation of how an everyday occurrence takes place based on discipline-specific concepts. Broadly discusses patterns, differences, similarities, or relevance.	Minimally states an explanation of how an everyday occurrence takes place based on discipline-specific concepts. Attempts to discuss important patterns, differences, similarities, or relevance.	States an unclear or vague explanation of how an everyday occurrence takes place based on discipline-specific concepts; or explanation is missing . Little or no attempt to discuss important patterns, differences, similarities, or relevance.