RUBENSTEIN SCHOOL
OF ENVIRONMENT AND NATURAL RESOURCES

Rubric for Inquiry and Analysis, part A

Students will be able to apply critical thinking skills and employ qualitative and quantitative methodologies in order to formulate questions and evaluate core knowledge areas.

Objective	Definition	Key Term	(3) Competence	(2) Building Capacity	(1) Exposure
Scientific inquiry	The activities through which students develop knowledge and understand scientific ideas, as well as an understanding of how scientists study the natural world.	Question/ topic selection	Identifies a creative, focused, and manageable research question that addresses potentially significant aspects of the topic that have as yet been explored little, inadequately, or not at all.	Identifies a focused, manageable and testable research question that appropriately addresses relevant aspects of the topic.	Identifies a research topic that, although being a doable and manageable question, it omits relevant aspects of the topic, e.g., it may be too broad or too narrow.
		Design process	All elements of the methodology or theoretical framework are skillfully developed; appropriate methodology or theoretical frameworks may be synthesized from across disciplines or from relevant subdisciplines.	Critical elements of the methodology or theoretical framework are appropriately developed; however, elements are omitted or remain unaccounted.	Critical elements of the methodology or theoretical framework are identified, however, elements are omitted or remain unaccounted.
Information literacy	The ability to know when a need for information exists, and be able to identify, locate, evaluate and then utilize and share information for the problem at hand — The National Forum on Information Literacy.	Access and reference the needed information	Accesses information using effective, well-designed search strategies and most appropriate information sources. Correctly uses all information strategies: use of citations and references; choice of quotes, paraphrasing, or summary; applies information in ways that are true to the original context; and demonstrates a full understanding of the ethical and legal restrictions on use of published, confidential, and/or proprietary information.	Accesses information using a variety of search strategies and sources. Demonstrates ability to refine research. Correctly uses three of these information strategies: citations and references; choice of quotes, paraphrasing, or summary; applies information in ways that are true to the original context; and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	Accesses information using simple search strategies; retrieves it from limited and similar sources. Correctly uses two of these information strategies: use of citations and references; choice of quotes, paraphrasing, or summary; applies information in ways that are true to the original context; and demonstrates a full understanding of the ethical and legal restrictions on the utilization of published, confidential, and/or proprietary information.
		Reading comprehension	Recognizes implications of the text for perspectives beyond the assigned task within the classroom or beyond the author's explicit message (e.g., might recognize broader issues at play, or might pose challenges to the author's message and presentation).	Uses the text, general background knowledge, and/or specific knowledge of the author's context to identify more complex inferences about the author's message and attitude.	Evaluates how textual features (e.g., sentence and paragraph structure or tone) contribute to the author's message; draws basic inferences about context and purpose of text.
Quantitative literacy	A "habit of mind" and competency in working with numerical data.	Data interpretation	Provides accurate explanations of information presented in mathematical forms. Makes sound inferences based on that information.	Provides accurate explanations of information presented in mathematical forms but may draw incorrect conclusions about its meaning. For example, accurately explains trends shown in a graph but may miscalculate the trend line slope.	Attempts to explain information presented in mathematical forms, but draws incorrect or incomplete conclusions about what the information means.
		Quantitative analysis	Uses quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses quantitative analysis of data as the basis for competent judgments, drawing reasonable conclusions from this work. Consistently communicates and justifies conclusions in an effective format.	Uses the quantitative analysis of data as the basis for tentative, basic judgments.

Source: Burke, M., Poleman, W., and Strong, A. (2018) Core Curriculum Revitalization Report. Rubenstein School of Environment and Natural Resources, University of Vermont, Burlington, VT.