

Table 9. Draft Critical Thinking Matrix - 11/15/11

Criteria	Needs Work	Meets Standard	Exceeds Standard
Evaluating Information	Confuses facts and inferences; Unable to grasp numerical relationships in graphs; Misunderstands the limitations of correlational data; Confuses appropriate and inappropriate conclusions.	Distinguishes facts from inferences; Interprets numerical relationships in graphs; Understands the limitations of correlational data; Identifies appropriate and inappropriate conclusions.	Analyzes confounding data; Differentiates correlation and causation; Identifies and attacks fallacies; Evaluates conclusions of others; Synthesizes information into coherent arguments.
Creative Thinking	Makes faulty alternative interpretations for data; Unable to grasp new information to support/contradict a hypothesis; Gets confused with new information when trying to change a problem.	Identifies alternative interpretations for data; Identifies new information that might support/contradict a hypothesis; Explains how new information can change a problem.	Identifies and attacks problems or opportunities; Develops strategies for data collection and analysis; Develops and tests hypotheses; Combines multiple facts / sources of information; Combines and extends existing ideas, thoughts, or theories.
Learning & Problem Solving	Confuses relevant/irrelevant information; Unable to blend information to help solve problems; Misunderstands new information; Confuses skills hindering them from solving real-world problems.	Separates relevant/irrelevant information; Integrates information to solve problems; Learns and applies new information; Uses mathematical skills to solve real-world problems.	Searches appropriate framework for problem-solving; Seeks and analyzes multiple sources of information for more complex problems; Solves more complex problems by combining learned skills.
Communication	Withholds ideas; Describes ideas disjointly; Presents answers to mis-identified problems.	Communicates ideas effectively; Uses information and presentation appropriate to intended audience; Uses proper grammar and spelling; Keeps audience's attention.	Presents clear and concise information; Uses appropriate media to deliver message; Mechanics are without error; Argues against competing ideas.