Creative and Practical Problem Solving

Scoring Criteria

| Performance Indicator | Beginning | Developing | Proficient | Expanding |
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| 1. Observe and evaluate situations in order to define problems. | I can   * Make observations about a problem situation. | I can   * Identify variables that influence a problem situation. | I can   * Articulate the problem and identify constraints, based on observations and collect related information from multiple sources. | I can   * Analyze situations to define complex problems and explain their relevance within the world;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Frame questions, make predictions, and design data collection and analysis strategies. | I can   * Ask questions about a situation or phenomenon. | I can   * Take information into consideration when making predictions. | I can   * Identify tools and design procedures needed for collecting, managing, and analyzing information. | I can   * Justify my data collection strategy by analyzing strengths and weaknesses;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Identify patterns, trends, and relationships that apply to solutions. | I can   * Determine whether my data are sufficient or if I need to gather more data. | I can   * Identify the most important or relevant data I have gathered. | I can   * Explain patterns and/or trends (including outliers) in the data and the relationship to the proposed solution. | I can   * Prioritize the significance of the patterns, trends, and relationships as they impact the design of possible solutions;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Analyze, evaluate, and synthesize evidence, arguments, claims, and beliefs. | I can   * Identify evidence to support a claim or argument. | I can   * Summarize the relationship between the evidence and the argument or claim. | I can   * Analyze, synthesize, and cite evidence to develop a claim or argument. | I can   * Evaluate the strengths and weaknesses of the argument;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Generate a variety of solutions, use evidence to build a case for best responses, critically evaluate the effectiveness of responses, and repeat the process to generate alternate solutions. | I can   * Identify multiple solutions. | I can   * Use evidence to identify a possible solution and its strengths and weaknesses. | I can   * Generate and consider a range of solutions and compare the strengths and weaknesses of each, using evidence to justify the choice of solution. | I can   * Critique the potential effectiveness of a range of solutions with careful consideration of real-life constraints;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Identify opportunities for innovation and collaboration. | I can   * Identify a real-life situation where the needs were met through innovation and/or collaboration. | I can   * Identify an opportunity for new thinking or creative problem solving. | I can   * Identify a range of peers and field experts/ organizations to support my creative problem solving. | I can   * Seek out a variety of experts, peers, experiences, or sources of information that could add additional viewpoints or insights;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Use a range of tools, including technology, to solve a problem. | I can   * Identify a range of appropriate tools, including digital technology, to help solve a problem. | I can   * Use a tool to solve a problem and articulate and/or explain why the tool is the best choice. | I can   * Use multiple tools together to effectively solve a problem. | I can   * Develop generalizations about the tools used and apply them to new problems or situations;   Or   * Create alternative evidence that expands upon proficient. |
| 1. Persist in solving challenging problems and learn from failure. | I can   * Make an attempt to solve a challenging problem. | I can   * Learn from trial and error how to improve my efforts over time. | I can   * Learn from experience and continue to put forth effort even after trying several times. | I can   * Apply my learning and adapt to new challenges;   Or   * Create alternative evidence that expands upon proficient. |