

WHAT ARE THE ELEMENTS OF “RIGOR” FOR PROBLEM SOLVING TASKS?

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RIGOROUS LEARNING AND PERFORMANCE ON PROBLEM SOLVING TASKS INCLUDES:

(The 4Cs are in bold and underlined)

1. A deep understanding of discipline, course and unit questions through applications of that knowledge to real situations, issues, needs, problems, etc. in the larger world
2. A variety of research skills to find, evaluate, identify, and save information relevant to the problem to be solved
3. A variety of information processing skills to make meaning from the research information collected
4. Use and integration of **critical and creative**, higher-order thinking processes
5. A variety of modes of **communication** skills tailored and used effectively to impact specific audiences
6. Team-work skills to **collaborate** effectively and productively with others
7. Digital tools to improve problem-solving and communication
8. Work habits and study skills to be an effective, productive, responsible, and independent learner
9. Metacognitive skills of self-reflection: self-assessment, self-evaluation and goal-setting that actually results in continuous improvement of the performance of the student
10. **Progress towards becoming a problem solver who can do this work independently**
11. The level of performance on a rigorous performance task is assessed and evaluated using clear criteria such as benchmarks and rubrics

PROBLEM SOLVING TASKS ARE RIGOROUS ASSESSMENTS THAT ARE:

1. **Authentic When They:**
 - A. Engage students in finding real problems that connect their lives to their academic learning.
 - B. Provide a real audience beyond the teacher and classroom accompanied by explicit standards / criteria for performance through models, check-lists, rubrics – students should be involved in creating and learning to use such tools
 - C. Engage the student in applications of concepts; strategic processes including research using a variety of sources; critical and creative, higher-order thinking skills; team-work; communications; the use of digital technology as they are used naturally in the larger world
 - D. Provide students a variety of choices
 - E. Engage the student in metacognition: self-assessment, self-evaluation, and goal setting
2. **Clearly Aligned To Common Core Standards – The Language Of The Standards Is Explicit In All Components Of The Assessment And Its Scoring Tools**
3. **Embedded In The Context Of Instruction Within A Class, Team, or Department And Across Disciplines**
 - A. Supported by formative assessments and differentiated instruction
 - B. Provide increasing frequent opportunities for students to make independent choices regarding the problem, audience, and problem-solving strategies to the point where students are completely independent problem-solvers.
4. **Valid When They:**
 - A. Measure what we intend to measure
 - B. Are seen as important and worthwhile and worth the time they take
 - C. Are designed to be strongly linked to the important content and skills in the curriculum they are intended to assess students
 - D. Elicit products and performances that clearly show the depth of the student’s understanding of the concepts and proficiency with the skills being assessed
 - E. Use rubrics or other scoring tools that are explicit and clear in how they address the specific content and processes being assessed
 - F. Are “fair” to the students regarding the assessment’s difficulty; amount of scaffolding; length; organization; complexity; requirements for reading and writing; bias in information related to ethnic, socioeconomic, or gender; adjusted to accommodate students with disabilities; and conditions of administration of the assessment
5. **Reliable When:**
 - A. Students would produce the same quality of performance if the assessment was repeated under the same conditions.
 - B. Several trained scorers using appropriate conditions of security come to the same conclusion about the details and overall quality of the student work from the assessment, e.g., there is strong, positive inter-rater reliability

Rigor is a relative term. It is a condition which stretches the individual learner to move beyond the individual’s current “comfort zone” and grow as an independent learner

Rigor is not synonymous with “difficult” or “hard.” Assessments can be difficult and hard and not rigorous