

Innovation Lab Network Performance Assessment Project
Quality Criteria for Performance Assessments
Cyrobiology

Quality Criteria	Yes	Yes, with Slight Modifications	No	Rationale/Suggestions
1. Focus on Deeper Learning				
a. Does the task require the demonstration and/or application of complex skills (e.g., Critical Abilities, DOK Levels 3 and 4, 21 st century skills, Key Cognitive Strategies)?*	✓			The task requires critical thinking as students read, analyze, and discuss texts around the topic of cryobiology. The process of synthesizing notes and ideas from the texts into a coherent and compelling essay is a complex skill.
b. Can students' responses to this task (what students are asked to produce) provide evidence of important college/career readiness skills and Critical Abilities (e.g., collaboration, research skills, evidence-based communication)?*	✓			This task specifically provides evidence of the following critical abilities: Analysis of Information and Communication in Many Forms. Other critical abilities and college/career readiness skills are also represented, such as collaboration during the Socratic seminar.
c. Does the task address key concepts and skills in the discipline that are transferable to other contexts?*	✓			Analyzing multiple viewpoints and sources of evidence is transferable to almost every discipline. Furthermore, there are many different bioethics debates that will continue to be relevant in society beyond simply cryobiology.
2. Alignment to Standards				
a. Does the task measure key skills and major claims emphasized by the Common Core State Standards (CCSS) and/or NGSS? *		✓		Specifically, the task measures several NGSS standards that are not listed. The task can be connected to units about properties and states of matter, so several performance expectations relating to these topics have been selected. These standards should be listed: <u>HS.PS.1-5</u> Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. <u>MS.PS.1-4</u> Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.
b. Can students' responses to this task (what students are asked to produce) be scored using CCSS/NGSS aligned rubrics? *	✓			The responses to this task will be argumentative essays about whether cryobiology should be used. The responses can easily be assessed using a rubric aligned to Common Core writing and argumentation standards. Students' discussion of the relevant science content can be assessed using criteria related to the

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				disciplinary core ideas addressed in 2.a.
c. Are the scoring criteria--rubrics, point scoring systems, checklists (if provided)--aligned to key expectations of the CCSS/NGSS?		✓		The rubric aligns very thoroughly to the CCSS. However, there are no specific science standards or science-related criteria in the rubric. The task would better meet the criteria if there were one or two criteria in the rubric that addressed the disciplinary core ideas listed in 2.a.
d. Is the rigor of the task appropriately matched to the grade-level standards being assessed?	✓			The expectations for reading, analysis, writing, and science content are adequately matched to high school students' skills and understanding.
3. Student Choice and Agency				
a. Does the task allow for a variety of responses and/or solution pathways? *	✓			There is not a prescribed or clear-cut answer; rather, students are expected to synthesize their own argument based on the analysis of different sources of information.
b. Does the task offer opportunities for student ownership and student choice (e.g., selecting a research question or topic; selecting sources; etc.)?	✓			The students get to choose the pieces of evidence to use in their essays, as well as construct their own claim.
c. Does the task require student-initiated planning and management of information/data and ideas (e.g., determining strategies for solving a problem; designing an investigation; deciding how to present findings; etc.)?	✓			The task is very strong in this criterion. There is a great deal of information management required in order to take the source information, analyze and paraphrase them, and construct a cohesive argument from the notes and quotes.
4. Relevance and Authenticity				
a. Is task content represented in a way that is appropriately authentic (i.e., not overly hypothetical), relevant (i.e., relatable), and/or meaningful to students and the discipline (e.g., topic connects to students' lives, task simulates authentic purpose and audience)? *		✓		The introductory question about whether Mr. Kimmel should be cryonically preserved when he dies is a very relevant and authentic hook for the students. However, the overall prompt to argue about the pros and cons of the technique becomes less relevant. This could be improved by making the overall essay prompt more closely related to a real person, i.e. "would you choose to be cryonically preserved?"
b. Is the task related to real world problems, contexts, and/or purposes?	✓			Cryobiology and the bioethics questions that surround it have real implications in today's society.
5. Suitable for Diverse Student Populations				

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a. Is the task, at its core, free of bias that might disadvantage specific student populations and free of stereotypes in language, content, and design? *	✓			The only bias that may be present is that this is probably a very unfamiliar topic for some students, but the texts explain the concept thoroughly enough that this is not a problem.
b. Does the task include, or allow for the use of, a variety of stimuli?	✓			There are video as well as text stimuli.
c. Does the task provide instructional scaffolds to support student learning and skill development toward successful completion of the task?	✓			Instructional scaffolds are provided that give detailed information about the student sub-tasks as well as instructional strategies.
d. Does the task include appropriate recommendations for accommodations and differentiation to provide access for diverse students?		✓		Throughout the instructional scaffolds in the instructional strategies column, there are a number of suggestions that could be considered accommodations and differentiation. Some of these include peer review, use of graphic organizers, review of specific vocabulary words, and explicit instruction of skills such as paraphrasing. However, there is no designated accommodations section. Some of the suggestions listed above could be placed into a category of accommodations, as well as sentence or paragraph frames to support students with less developed writing skills.
6. Design of Student Task				
a. Is the overall task prompt clear (e.g., clear student directions, unambiguous graphics)? *	✓			The task is very clear: to analyze multiple sources of information and construct an argumentative essay about whether cryobiology should be used.
b. Is task information presented in an organized way?	✓			The task information, rubric, and instructional scaffolds are well organized.
7. Curriculum-Embedded				
a. Is the task feasible for most school/classroom environments (e.g., access to necessary resources)?	✓			The task requires equipment to project videos, and some way of writing the essays. Computer access would be ideal but it can be done without computers.
b. Does the task include opportunities for independent work as well as interaction/collaboration with peers?	✓			Overall the task is individual, but the Socratic seminar and peer review are both opportunities for collaboration.

Task Materials	Yes	No	Comments
a. Is the task missing any referenced accompanying materials (resources, handouts, rubrics etc.)? If yes, please indicate which materials are missing.		✓	
b. Does this task contain topics/materials/texts that might be sensitive for some students? If yes, please explain.		✓	

Comments: Overall, the task is strong; it is a well designed and clearly laid out opportunity for students to read critically, analyze information, and communicate an argument about a relevant topic. The modifications that need to be made in order for this task to be accepted are: a list of accommodations, a list of the NGSS standards addressed by the task, one or two criteria in the rubric that address science content, and a slightly more authentic framing of the task prompt.

Criteria summarized in this document were derived from the following sources:

- *Quality Criteria for Performance Assessments*, SCALE, 2013
- *Criteria for High-Quality Assessment*, SCOPE, CRESST, LSRI, June 2013
- *Quality Performance Assessment: Harnessing the Power of Teacher and Student Learning*, Brown & Mevs, February 2012
- *ThinkReady Task Review Checklist*, 2013