Risk at Transform Boundaries: Summative Assessment Rubric

Criterion	Scores			
The student explains how specific geological characteristics of the school site (strong shaking potential, which includes rock/soil type and distance from potentially active faults; liquefaction potential; landslide potential) contribute to seismic hazard. (Aligned with unit goal 1)	**3 pts**: The response correctly identifies the degree to which the school sites are exposed to seismic hazard, and explains the factors contributing to the seismic hazard at each specific site. Complete explanations include a discussion of proximity to active faults; rock/soil type and consolidation (liquefaction potential); proximity to steep slope	**2 pts**: The response correctly identifies the degree to which the school sites are exposed to seismic hazard, but incompletely explains the factors contributing to the seismic hazard at each specific site (i.e. not all of the points listed above under "complete explanations" are included).	**1 pt**: The response incorrectly identifies the degree to which the school sites are exposed to seismic hazard, but explains at least one factor contributing to the seismic hazard at each specific site.	**0 pts:** The response incorrectly identifies the degree to which the school sites are exposed to seismic hazard, and does not explain any of the factors contributing to the seismic hazard at a specific site.
The student explains how construction at each school site could be upgraded to enhance seismic safety. (Aligned with unit goal 2)	**3 pts:** The response correctly identifies specific seismic hazard mitigation options and explains why they would be useful at the two chosen school sites. The mitigation options are relevant to the hazards outlined in the response. These may include: To mitigate loose soil/ liquefaction effects: add deep piles to foundation, dewater or densify sediment To mitigate effects of shaking: reinforce soft stories, add devices to resist vibration	**2 pts**: The response identifies specific seismic hazard mitigation options and explains why they would be useful at the two chosen school sites. The mitigation options are not all relevant to the hazards outlined in the response.	**1 pt**: The response identifies seismic hazard mitigation options but does not explain why they would be useful at the two chosen school sites. The mitigation options are not necessarily relevant to the hazards outlined in the response.	**0 pts**: The response does not identify seismic hazard mitigation options.
The student appropriately calculates risk as a combination of hazard, vulnerability, and value, with value in this case referring to the potential number of lives saved. (Aligned with unit goal 3)	**3 pts**: The response takes into account all risk factors when prioritizing seismic retrofits	**1.5 pts:** The response is based only on one or two risk factors.		0 pts: The response does not refer to calculated risk.