Key Concept: Systems Global Concept: Scientific and Technical Innovation

Statement of Inquiry: Systems often provide the framework for abstract thinking, analysis, and creation.

| **CATEGORY** | **0** | **1-2** | **3-4** | **5-6** | **7-8** |
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| **Criterion A**  **Inquiring and Analyzing** | You do not create the necessary work | 1. You state the need for a solution 2. You state the findings of the research | 1. You outline the need for a solution 2. You state some research needed to create a solution (with guidance) 3. You state the major features of an existing product that inspires your solution 4. You outline some of the research findings | 1. You explain the need for a solution 2. You state and prioritize the research used to develop a solution (with guidance) 3. You outline the major features of an existing product that inspires your solution 4. You outline the research | 1. You explain and justify the solution 2. You state and prioritize the research used to develop a solution 3. You describe the major features of an existing product that inspires your solution 4. You present the research |
| **Criterion B**  **Developing Ideas** | You do not create the necessary work | 1. You state one success criteria for the solution 2. You present one design idea 3. You create an incomplete planning drawing/diagram | 1. You state a few success criteria for the solution 2. You present more than one design idea 3. You state the key features of the chosen design 4. You create a planning diagram or list requirements for creating the chosen design | 1. You develop a few success criteria for the solution 2. You present a few reasonable design ideas (use appropriate media and label the features) 3. You present the final design and state the key features 4. You create a planning diagram and list the main details of how to create your solution | 1. You develop a list of success criteria for the solution 2. You present a few reasonable design ideas (use appropriate media and label the features) 3. You present the final design and describe the key features 4. You create a planning diagram and outline the main details of how to create your solution |
| **Criterion C**  **Creating the Solution** | You do not create the necessary work | 1. You demonstrate minimal technical skill when creating the solution/project 2. You create a solution which functions poorly and is incomplete | 1. You list the main steps in a plan with some detail (difficult to follow) 2. You demonstrate satisfactory technical skill when creating the solution/project 3. You create a solution which partially functions and is adequately presented 4. You state one change made to the chosen design or plan | 1. You list the steps in a plan, considering time and resources 2. You demonstrate competent technical skill when creating the solution/project 3. You create a solution that functions as intended and is presented well 4. You state one change made to the chosen design or plan | 1. You outline a plan, considering time and resources 2. You demonstrate excellent technical skill when creating the solution/project 3. You create a solution that functions as intended and is presented well 4. You list the changes made to the chosen design or plan |
| **Criterion D**  **Evaluating** | You do not create the necessary work | 1. You define a testing method used to measure the success of your solution 2. You state the success of the solution | 1. You define a relevant test, which generates data, to measure the success of the solution 2. You state the success of the solution against the design based on one relevant test 3. You state one way the solution could be improved 4. You state one way the solution can impact the target audience | 1. You define a relevant testing methods, which generate data, to measure the success of the solution 2. You state the success of the solution against the design based on relevant testing 3. You outline one way the solution could be improved 4. You outline the impact of the solution on the target audience (with guidance) | 1. You outline simple, relevant testing methods, which generate data, to measure the success of the solution 2. You outline the success of the solution against the design based on authentic testing 3. You outline how the solution could be improved 4. You outline the impact of the solution on the target audience |