**Performance Standards for Stage 1 Scientific Studies**

| - | **A** | **B** | **C** | **D** | **E** |
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| **Investigation, Analysis, and Evaluation** | **Critically** deconstructs a problem and designs a **logical**, **coherent**, and **detailed** scientific investigation using a scientific method and/or engineering design process. | **Logically** deconstructs a problem and designs a **well**-**considered** and **clear** scientific investigation using a scientific method and/or engineering design process. | Deconstructs a problem and designs a **considered** and **generally** **clear** scientific investigation using a scientific method and/or engineering design process. | Prepares a **basic** deconstruction of a problem and an **outline** of a scientific investigation using a scientific method and/or engineering design process. | **Attempts** a **simple** deconstruction of a problem and a procedure for a scientific investigation using a scientific method and/or engineering design process. |
| Obtains, records, and represents data, using **appropriate** procedures, conventions and formats **accurately** and **highly** **effectively**. | Obtains, records, and represents data, using **appropriate** procedures, conventions and formats **mostly** **accurately** and **effectively**. | Obtains, records, and represents data, using **generally** **appropriate** procedures, conventions and formats with **some** **errors** but **generally accurately and effectively**. | Obtains, records, and represents data, using procedures, conventions, and formats **inconsistently**, with **occasional accuracy and effectiveness.** | **Attempts** to use **some** procedures and record and represent **some** data, with **limited** accuracy or effectiveness. |
| **Systematically** analyses and interprets data and evidence to formulate **logical** conclusions with **detailed** justification. | **Logically** analyses and interprets data and evidence to formulate **suitable** conclusions with **reasonable** justification. | Undertakes **some** analysis and interpretation of data and evidence to formulate **generally appropriate** conclusions with **some** justification. | **Describes** data and undertakes some **basic** interpretation to formulate a **basic** conclusion. | **Attempts** to **describe** results **and/or** interpret data to formulate a basic conclusion. |
| **Critically** and **logically** evaluates procedures and their effect on data. | **Logically** evaluates procedures and their effect on data. | Evaluates procedures and **some** of their effect on data. | **Attempts** to evaluate procedures or **suggest** an effect on data. | **Acknowledges** that procedures affect data. |
| **Critically** and **perceptively** evaluates the effectiveness of collaboration and its impact on results/outcomes. | **Critically** evaluates the effectiveness of collaboration and its impact on results/outcomes. | Evaluates the effectiveness of collaboration and its impact on results/outcomes. | **Attempts** to evaluate the effectiveness of collaboration and its impact on results/outcomes. | **Acknowledges** the effectiveness of collaboration and its impact on results/outcomes. |
| **Knowledge and Application** | Demonstrates **deep and broad** knowledge and understanding of a **range** of science inquiry skills and scientific concepts. | Demonstrates **some depth and breadth** of knowledge and understanding of a **range** of science inquiry skills and scientific concepts. | Demonstrates knowledge and understanding of a **general range** of science inquiry skills and scientific concepts. | Demonstrates **some basic** knowledge and **partial** understanding of science inquiry skills and scientific concepts. | Demonstrates **limited** recognition and **awareness** of science inquiry skills **and/or** scientific concepts. |
| Applies science inquiry skills and scientific concepts **highly** **effectively** in new **and** familiar contexts. | Applies science inquiry skills and scientific concepts **mostly effectively** in new **and** familiar contexts | Applies science inquiry skills and scientific concepts **generally effectively** in new **or** familiar contexts. | Applies **some** science inquiry skills and scientific concepts in **familiar** contexts. | **Attempts** to apply science inquiry skills **and/or** scientific concepts in **familiar** contexts. |
| **Critically** explores and understands in **depth** the interaction between science and society. | **Logically** explores and understands in **some depth** the interaction between science and society. | Explores and understands **aspects** of the interaction between science and society. | **Partially** explores and **recognises** aspects of the interaction between science and society. | **Attempts** to explore and identify **an aspect** of the interaction between science and society. |
| Communicates knowledge and understanding of science concepts coherently, with **highly effective** use of **appropriate** terms, conventions, and representations. | Communicates knowledge and understanding of science concepts with **mostly coherent and effective** use of appropriate terms, conventions, and representations. | Communicates knowledge and understanding of science concepts with **generally effective** use of appropriate terms, conventions, and representations. | Communicates basic scientific information, using **some** appropriate terms, conventions, **and/or** representations. | **Attempts** to communicate **information** about science. |