

THE ORIGINAL SCIENCE EXPERIMENT

All students must submit an original science experiment as part of the Graduation Portfolio. The format of the experiment must meet the standards as given in the Rubric for evaluation which follows.

Please refer to the rubric in developing your experiment.

**New York Performance Standards Consortium
Science Experiment/Project
Extended Project or original experiment**

Performance Indicator	Outstanding	Good	Competent	Needs Revision
Problem to be Investigated	Hypothesis or thesis is testable and thoughtful and/or original Background information is researched in several sources, including at least one scientific journal Hypothesis reflects a synthesis of primary background research	Hypothesis or thesis is testable and thoughtful. Background information is researched in several sources, including at least one scientific journal Hypothesis or thesis reflects an understanding of the background research	Hypothesis or thesis is testable Background information is researched in several popular sources Hypothesis or thesis reflects basic understanding of the background research	Does not have a hypothesis or thesis Background information is researched in one source Hypothesis or thesis does not reflect an understanding of the background research
Experimental Design/Project	Appropriately identified and describes all variables in the experiment or project Uses accepted or appropriate technology and tools to gather and analyze data and recognizes bias in data collection	Appropriately identifies and describes most of the variables in the experiment or project Uses accepted or appropriate technology and tools to gather and analyze data	Appropriately identifies and describes some of the variables in the experiment or project Uses technology and tools to gather and analyze data	Appropriately identifies and describes one of the variables in the experiment or project Does not use appropriate technology and tools to gather and analyze data
Results	Number of trials or depth of research is extremely thorough Uses basic algebraic functions and more than one statistical test for data analysis Creates graphs and charts which reflect the use of basic algebraic functions and multiple statistical tests Makes clear and meticulous observations	Number of trials or depth of research is thorough Uses basic algebraic functions and a statistical test for data analysis Creates graphs and charts which reflect the use of basic algebraic functions and a statistical test Makes clear observations	Number of trials or depth of research is adequate Uses basic algebraic functions for data analysis Creates graphs and charts which reflect the use of basic algebraic functions Makes adequate observations	Number of trials or depth of research is not adequate Does not use mathematical procedures during data analysis Creates graphs and charts which do not reflect the proper use of mathematical procedures Does not make adequate observations
Analysis of Results	Creatively interprets hypothesis in light of results Poses creative questions to explore further Recognizes the moral, social, aesthetic and/or environmental implications of the experiment	Thoughtfully interprets hypothesis in light of results Poses thoughtful questions to explore further Recognizes more than one connection of the experiment to a larger context	Adequately interprets hypothesis in light of results Poses adequate questions to explore further Recognizes a connection of the experiment to a larger context	Does not interpret hypothesis as related to results Does not pose questions to explore further Does not recognize a connection of the experiment to a higher context
Presentation	Thoroughly answers questions relevant to the experiment and related topics Makes imaginative use of multimedia to display and represent the experiment (e.g., computer models, poster board, slide show, videos, artwork, music, etc.)	Adequately answers questions relevant to the experiment and related topics Uses multimedia to display and represent the experiment (e.g., computer models, poster board, slide show, videos, artwork, music, etc.)	Adequately answers questions relevant to the experiment Uses one type of media to display and represent the experiment (e.g., computer models, poster board, slide show, videos, artwork, music, etc.)	Does not adequately answer questions relevant to the experiment Does not use multimedia to display and represent the experiment