

SCIENCE FAIR RUBRIC 2024

Criteria	4 points (Advanced)	3 points (Proficient)	2 points (Basic)	1 point (Emerging)
1. Asking Questions and Defining Problems	Independently develops testable, complex questions and clearly defines problems with detailed criteria for success.	Formulates testable questions and defines problems with some guidance; criteria for success are identified.	Asks simple testable questions and defines basic problems; requires assistance to clarify criteria for success.	Attempts to ask questions and define problems but lacks clarity and focus.
2. Developing and Using Models	Creates detailed and accurate models to represent phenomena or solutions; models are used effectively to test predictions.	Develops clear models with guidance; uses models to make predictions.	Constructs basic models; requires support in using models to represent phenomena.	Limited ability in developing or using models.
3. Planning and Carrying Out Investigations	Independently plans and conducts complex investigations; methods are thorough, well-controlled, and clearly recorded.	Effectively plans and conducts investigations with some guidance; methods are appropriate and mostly controlled.	Conducts simple investigations; requires assistance in planning and control of variables.	Limited ability in planning and conducting investigations.
4. Analyzing and Interpreting Data	Demonstrates superior ability to analyze and interpret data to draw logical conclusions; uses complex reasoning.	Analyzes and interprets data correctly; conclusions are logical and based on evidence.	Requires assistance in data analysis and interpretation; conclusions are basic and sometimes supported by data.	Struggles with data analysis and interpretation; conclusions are not data-driven.

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5. Using Mathematics and Computational Thinking	Integrates advanced mathematical and computational methods accurately in investigations.	Uses appropriate mathematical and computational techniques effectively.	Demonstrates basic skills in applying mathematical and computational methods with assistance.	Limited ability in using mathematical and computational methods.
6. Constructing Explanations and Designing Solutions	Constructs detailed and well-reasoned explanations; designs creative and effective solutions.	Provides clear explanations and designs viable solutions with some guidance.	Constructs basic explanations and simple solutions; requires support.	Struggles with constructing explanations and designing solutions.
7. Engaging in Argument from Evidence	Effectively argues from evidence with sophisticated reasoning; addresses counterarguments.	Presents arguments based on evidence; begins to address counterarguments.	Forms basic arguments from evidence; requires support in addressing counterarguments.	Limited ability in arguing from evidence.
8. Obtaining, Evaluating, and Communicating Information	Excellent obtains, evaluates, and communicates complex information; uses a variety of reliable sources.	Effectively obtains, evaluates, and communicates information; uses appropriate sources.	Requires assistance in obtaining, evaluating, and communicating information; relies on provided sources.	Struggles with obtaining, evaluating, and communicating information.