

Experimental Projects

Project Number # _____

Question and Hypothesis (5 points)

Hypothesis very clearly stated. Completely testable	Hypothesis present but not completely testable.	Hypothesis incomplete or difficult to test.	Hypothesis missing or obscure. Impossible to test.
4 – 5 Points	3 Points	2 Points	0 – 1 Points

Experimental Procedure (15 points)

Well explained methods. Sequential steps listed. Strong evidence of method refinement to improve repeatability. Use of variables and controls.	Solid methods with good descriptions. Understands relationship between thoroughness of methods and repeatability of results.	Adequate methods reasonable well followed. Opportunities for improvement not observed or not implemented.	Methods not listed or followed. Obvious opportunities for improvement overlooked or ignored.
12 – 15 Points	8-11 Points	4-7 Points	0 – 4 Points

Observation and Analysis (20 points)

Conclusion (15 Points)

States if hypothesis was correct or incorrect. Uses data from experiment to support conclusion. Accuracy, reliability, and reproducibility of the data were evaluated. Adequate data collected / enough trials for conclusion drawn. Controls clearly identified. Possible sources of error and uncontrolled conditions discussed. Discussion is insightful and demonstrates a clear understanding of the research.	Conclusion is somewhat objective. Explanations understood but briefly expressed. Project design could be improved to resolve potential problems.	Conclusion is reasonably objective. Explanations not well expressed or understood. Appears conclusion is slightly forced to fit weak results. Possible sources of error were not addressed.	Conclusion missing or not supported by rest of presentation.
12 – 15 Points	8-11 Points	4-7 Points	0 – 4 Points

Creativity, Originality & Skill Level (20 Points)

The approach to the	The project type is commonly	Common project modified for	Lacking originality and
investigation was scientific,	found online and in books, but	some originality. The project	creativity. Safety issues were
creative & original. The problem	with original goals and	was slightly more simple than	not addressed. The project
is new, different, and/or	methods. The approach and	the student's age would	was significantly more simple
meaningful. Safety issues, if any,	level of difficulty were	indicate. There was some	

were addressed. The approach and level of difficulty were challenging for a student of this age. The project was clearly the student's work (It is appropriate for students to receive help and instruction from others, but the project should be done entirely	reasonable for a student of this age. The project was most likely entirely the student's work.	ambiguity as to what help the student might have received.	than the student's age would indicate.
project should be done entirely by the student.) All help was			
clearly noted and credited.			
16 – 20 Points	11 – 15 Points	5 – 10 Points	0 – 4 Points

Clarity (5 Points)

Very well organized on board and in workbook. Visuals, models and graphics clearly support topic and goals. Presentation flows very well.	Organized and orderly. Easy to follow. Understandable graphics. Importance of quantifying results is evident.	Adequate correlation of data and conclusions. Limited charts, tables and graphs.	Difficult to read due to sloppiness and misspellings. Visually uninteresting. Lack of care distracts from work.
4 – 5 Points	3 Points	2 Points	0 – 1 Points

Display (20 Points)

Display is self-explanatory &	Project is well organized and	Adequate readability and view	Difficult to read due to
easy to understand	easy to understand.	ability.	sloppiness and misspellings.
Sections neatly and clearly	Sections are present but might	Presentation appears to be an	Visually uninteresting /
labeled	be slightly harder to find /	afterthought.	confusing.
Everything is pleasantly	follow.	Overall adequate effort.	Lack of care distracts from
readable. Spelling and grammar	Project is readable but could be	May lack in one or more	work.
are correct. Writing is neat.	improved & spelling / grammar	areas.	Appears rushed.
Project is eye catching and	contain only a few mistakes.		Hastily conducted and
exhibits excellent appearance	Project size and materials are		assembled.
and quality.	slightly awkward.		Inappropriate materials,
Project size and materials help			violates requirements (such
convey aspects of the project			as free standing)
and meet all requirements			
16 – 20 Points	11-15 Points	5-10 Points	0 – 4 Points

Project Comments:

Notes: This criteria is intended to be reasonably absolute in that it is not to be adjusted for grade level. Nonetheless, the points system is skewed slightly for effort, observation and creativity - qualities achievable at all grade levels. The goal of the Science Fair is to encourage the scientific thought process: **Hypothesis / Testing / Results / Conclusion.** Therefore, a project incorporating an experiment will, in most cases, score higher than a project which is merely a demonstration.