



SCIENCE PROJECT GOALS

Have fun, be successful!



Know how you are graded.

- Four Categories

1. Oral, Written and Visual Communication
2. Originality
3. Experimental or Engineering Design
4. Depth of Understanding

Types of Projects - Science

- Inquiry Based Science Experiment
 - Includes a question, research, hypothesis, experiment to test hypothesis, analysis and conclusions.
 - You are controlling some aspect of science and measuring and observing change

Types of Projects - Engineering

- Engineering Design Project
 - A design project is an open-ended process where there is more than 1 correct answer.
 - Includes a “need”, research, problem statement, design & build prototype, test prototype, iterate design as needed to meet design criteria.

Types of Projects - Math

- Mathematical Project
 - Use published scientific data on websites such as NCAR & UCAR
 - Use statistical analysis to prove or disprove your conjecture.

Category 1: Written Communication - Science Project

- Well documented lab notebook
- Research report with research question, hypothesis, procedures, and data collection techniques, analysis, and conclusions
- Clear statement of technical problem
- Bibliography

Category 1:
Written
Communication
- Engineering
Design Project

- Well documented engineering design notebook
- Written report with clear statement of technical problem, and criteria for success
- Bibliography

Category 1: Oral Communication

- Correct and Concise explanation of project, design , and analysis.
- Responses reflect understanding of the project process

Category 1: Visual Communication

- Logical organization of material
- Neatly displayed graphics with legends

Category 2: Originality

- Evidence of thoughtful process to select project.
- Evidence of student unique understanding and development of the project.
- Grade appropriate.

Category 3: Experimental Design

- Project addresses a focused problem with hypothesis that is testable.
- Well designed plan and data collection strategy that identifies variables and controls.
- Reproducible and sufficient data are collected properly analyzed.
- Valid conclusions are reached from obtained data.
- Grade appropriate.

Category 3: Engineering Design

- Project addresses a focused engineering problem or need with criteria for success identified.
- Student identifies and applies established engineering principles in their design.
- Student used materials and processes to correctly build prototype or model.
- Prototype successfully meets criteria that were established for the project.
- Grade appropriate.

Category 4: Depth of Understanding

- Adequate age appropriate background research and/or basic engineering research relevant to the project.
- Answers reflect knowledge gained.
- Age appropriate use of terms and principles.
- Demonstration of age appropriate exploration on science and/or technology.

Visit NEOHSTEM Alliance Website

- For more project information
- <http://neohstem.org/>