



4th/5th Grade - Problem Solving/Experimental Design

(Focus: Science, Technology, Engineering, Art, Math)

Project Specifications

Wonderings: What have I always wondered about? What experiment can I create to learn more?

Requirements:

Scientific Thinking/Model Design

Why did you create your experiment?

- Identify a purposeful question or problem which could be investigated. Be sure to base the experiment on personal interest with support
- Form a claim, clearly outline the procedures, and identify what stayed the same and what changed in each trial. Repeat the experiment at least 5 or more times (trials)

Research Plan (Scientific Process)

What is the procedure for creating your experiment?

- Be sure to complete all written parts and research the topic using 3 or more sources
- Create an abstract (summary) of the project.

Scientist's Data and Results

What evidence did you have to support your claim and reasoning?

- Includes daily, detailed notes about your observations and experiment problems
- Measure and display your evidence and list materials used
- Indicate the redesign of the experiment and provide detailed reasoning.

Visual/Digital Display

How will you share your project?

- The experimental design may only occupy a space the size of a student's desktop (24" long and 15" deep). Anything larger must be approved by the teacher.
- The experimental design may be mounted on a display board, cardboard/tagboard, or any reasonable manner that fulfills the size display requirements.
- Students must produce their own display that is organized and clearly communicates findings.

Oral Presentation

How will you verbally explain your project?

- Must be 1-2 minutes and explain the purpose of the project and what was discovered.
- Presentations can be via video, but the student has to be the one explaining the experiment in the video, and student must be prepared to answer questions during the presentation.

***Please see scoring rubric on the back for even more details.**