

Name: _____ Grade 5 6 7 8

Science Fair/Invention Convention Grade Record

Checkpoint Assignments

INVENTION CONVENTION					SCIENCE FAIR
1. Invention Log	4	3	2	1	Journal
2. Intent to Invent	4	3	2	1	Topic Proposal
3. Scamper	4	3	2	1	Literature Review
4. Prototype	4	3	2	1	Procedure Check
5. Final Invention	4	3	2	1	Data/Analysis Check
6. Poster sketch due date	4	3	2	1	Final Report
7. Poster due date	4	3	2	1	Poster
8. Presentation due date	4	3	2	1	Presentation
9. Invention Convention	4	3	2	1	Science Fair

Final Project Grades

Presentation (Classwork grade) _____

Prepared with materials	4	3	2	1
Presentation outlined/planned	4	3	2	1
Detailed presentation	4	3	2	1
Made use of poster/invention	4	3	2	1
Body language/eye contact	4	3	2	1

Display (Lab/Project grade) _____

Detailed informational sections	4	3	2	1
Use of graphics (sketch/photo)	4	3	2	1
Visually appealing/Neat	4	3	2	1
Adherence to guidelines	4	3	2	1

Invention and Log (Lab/Project grade) _____

Solves a real problem	4	3	2	1
Attention to detail in design	4	3	2	1
Practicality of design	4	3	2	1
Inventive process/ solved problems/ modified designs	4	3	2	1
Construction of invention	4	3	2	1
Completion of log sections	4	3	2	1
Adherence to guidelines	4	3	2	1

Rubrics for these grades are on the following pages

Science Fair/Invention Convention Rubrics

Name: _____ Grade 5 6 7

Rubric Comments

4 - Advanced

Understanding: A *strong understanding* of the concept is demonstrated by the student through their project and/or written responses. Depth of knowledge exceeds the grade level standards/skills, often evidenced in a lab report by student's reasoning, examples provided, research connections and use of cross-cutting concepts and skills such as mathematical analysis.

Quality: The quality, attention to detail, following of directions and creativity is *excellent*.

3 - Secure

Understanding: A *strong understanding* of the concept is demonstrated by the student through their project and/or written responses.

Quality: The quality, attention to detail, following of directions and creativity is *good* although some areas may need minor improvement.

2 - Approaching target

Understanding: A *partial understanding* of the concept is demonstrated by the student through their project and/or written responses.

Quality: The quality, attention to detail, following of directions and creativity is *acceptable* in some areas and other areas are *inconsistent in quality or need improvement*.

1 - Not yet Proficient

Understanding: The response does *not provide evidence* of understanding of the concept.

Quality: The quality, attention to detail, following of directions and creativity is *not acceptable* or very inconsistent.

Classwork Grades

1) **Presentation**

Grade _____

Prepared with materials	4	3	2	1
Presentation outlined/planned	4	3	2	1
Detailed presentation	4	3	2	1
Made use of poster/invention	4	3	2	1
Body language/eye contact	4	3	2	1

The student presents the audience with a strong understanding of the purpose, research, value or importance of project, experimental design, results and conclusions using appropriate vocabulary and examples. The presentation reflects a high level of effort, enthusiasm and originality/creativity in ideas and experimental design.

- The student is prepared and serious about presenting to the best of their ability.
- The student speaks slowly and loudly so that the audience can understand the dialogue.
- Information is presented in an orderly arrangement.
- There are appropriate pauses so that the audience has moments to think or time to understand the information.
- When mistakes happen, the student adjusts and moves on with minimal disruption.

Project Grade

2) **Poster**

Grade _____

Detailed informational sections	4	3	2	1
Use of graphics (sketch/photo)	4	3	2	1
Visually appealing/Neat	4	3	2	1
Adherence to guidelines	4	3	2	1

Quality: A neat, clean, freestanding display that is easily readable, easy to follow the flow of the information and visually appealing. All necessary sections are on the poster.

Content: The display effectively communicates the story of the student's experiment or invention, including the major categories of the experiment or step in the invention process and the value of this information to the audience. Information and data is accurate and units are labeled. Sources are cited

Major sections on science fair posters

Title
Purpose
Hypothesis
Background information or introduction
Procedure
Results
Graphs
Discussion
Conclusions

Sketches or photos of your experiment

Major sections on invention posters

Invention name
Problem it solves
Purpose of Invention
Invention Log Book
How it is made
Steps in designing
Trials, solutions, and improvements

Pictures/Photographs

Project Grade

3) Invention and Invention Log Grade_____

Solves a real problem	4	3	2	1
Attention to detail in design	4	3	2	1
Practicality of design	4	3	2	1
Inventive process/ solved problems/ modified designs	4	3	2	1
Construction of invention	4	3	2	1
Completion of log sections	4	3	2	1
Adherence to guidelines	4	3	2	1

OR

4) Science Fair Report Grade_____

Abstract	4	3	2	1
Title Page/Contents	4	3	2	1
Introduction (Literature review content accuracy and thoroughness)	4	3	2	1
Purpose and hypothesis	4	3	2	1
Procedure, variables, Materials and methods	4	3	2	1
Data Tables	4	3	2	1
Graphs	4	3	2	1
Results/Analysis	4	3	2	1
Discussion Section	4	3	2	1
Conclusion	4	3	2	1
Bibliography	4	3	2	1
Credits/Acknowledgments	4	3	2	1
Work Quality	4	3	2	1

Classwork Grades

5) Science Project Journal

Grade_____

- 4 Journal entries neatly written, organized, and dated. Detailed descriptions of ideas and discussions with others, procedures and outcomes, changes to experiment and reasoning, research and references, are provided as well as appropriate illustrations. Photos and notes may also be attached with double-sided tape or other means if they were not originally written in journal. The entries reflect a well-paced long term project.
- 3 Journal provides most of the information necessary to follow a student's work and development of their ideas. More detail may be necessary or some important information may be noticeably absent. Entries may be sporadic.
- 2 The journal documents some of the student's work, but lacks whole types of information (ideas, research, data, changes to experiment) or it does not reflect an appropriate amount of effort and time devoted to the project since the previous log check.
- 1 The journal does not meet expectations for completion and quality.

What to include in your journal:

- 1) Actions or thoughts recorded
- 2) Conversations with others related to project
- 3) Correspondence with experts
- 4) Ideas or sketches
- 5) A record of actions done that day
- 6) Original data recorded in tables with units indicated
- 7) Reference citation information, internet searches and keywords
- 8) Research information written down
- 9) Challenges encountered and solutions

Name: _____

Science Fair **Research Paper Checklist**

Some students like to check this list before completing their report.

Checklist

- 1) Abstract
- 2) Title Page
- 3) Contents
- 4) Introduction including:
 - a) Purpose
 - b) Hypothesis
 - c) Review of literature
 - d) Development of your project idea and what you hoped to achieve
- 5) Materials and methods
- 6) Results
 - a) Original data
 - b) Mathematical analysis
 - c) Graphs
- 7) Discussion
 - a) "This is the essence of your paper. Compare your results with theoretical values, published data, commonly held beliefs, and/or expected results. Include a discussion of possible errors. How did the data vary between repeated observations of similar events? How were your results affected by uncontrolled events? What would you do differently if you repeated this project? What other experiments should be conducted?" (CT Science Fair – Student Guide 2010)
- 8) Conclusions
- 9) Credits
- 10) References/Bibliography

See the original packet for more detailed description of each section from the state handbook.