

# 6 – 12 Science Fair Rubric - Experiment

Objectives	Outstanding Work	Acceptable Work	Needs Some Work	Needs Lots of Work
<b>Scientific Method</b>	<b>20 19 18 17 16</b>	<b>15 14 13 12 11</b>	<b>10 9 8 7 6</b>	<b>5 4 3 2 1</b>
<b>1. Shows knowledge of the Scientific Method</b> - Question, Hypothesis and Variables, Materials, Procedure, Data, Conclusions	Can explain all the steps in the scientific method; and justify their conclusion based on their data. Must have a clearly measurable question.	Can explain at least 5 steps in the scientific method with understanding.	Can explain most steps in the scientific method with the help of the display board.	Tries to answer questions (posed by judge) and/or has some steps missing.
<b>Understanding/Learning</b>	<b>20 19 18 17 16</b>	<b>15 14 13 12 11</b>	<b>10 9 8 7 6</b>	<b>5 4 3 2 1</b>
<b>2. Demonstrates understanding</b> of their project and has learned something about science or scientific procedure.	Student shows knowledge of the scientific topic beyond the scope of the experiment and it is evident the project involved a significant amount of work.	Student understands the science behind their experiment and it is evident they put work into the project.	Student understands their experiment but not the science behind it.	Student doesn't completely understand their own experimental procedure.
<b>Spoken Presentation</b>	<b>20 19 18 17 16</b>	<b>15 14 13 12 11</b>	<b>10 9 8 7 6</b>	<b>5 4 3 2 1</b>
<b>3. Speaks knowledgably</b> about their project.	Student is able to share many details about the project through the scientific process. Has good eye contact and volume.	Student shows an understanding of the project. Speaks willingly about the project using note cards.	Student knows about the project and offers minimal explanation. Gives a brief summary when asked.	Student can answer some questions when asked. Answers questions when asked.
<b>Display Board</b>	<b>20 19 18 17 16</b>	<b>15 14 13 12 11</b>	<b>10 9 8 7 6</b>	<b>5 4 3 2 1</b>
<b>4. Board that is well organized and visually appealing</b>	Board shows data in an organized, neat manner, complete with labeled charts, tables and pictures. Proper spelling, grammar, punctuation. Includes a detailed abstract.	Board is neat and attractive and has limited charts, tables and pictures. Proper spelling, grammar, and punctuation and includes an abstract.	Board list major headings of the scientific process and some data. Proper spelling, grammar, and punctuation with a couple of errors.	Board list major headings of the scientific process and limited data. Several spelling, grammar, and punctuation errors. Missing abstract.
<b>Written Report</b>	<b>20 19 18 17 16</b>	<b>15 14 13 12 11</b>	<b>10 9 8 7 6</b>	<b>5 4 3 2 1</b>
<b>5. Written report</b> clearly demonstrates use of research, experimentation and analysis skills.	Report has Cover, Table of Contents, Background research, Experiment Data, Conclusions, Bibliography.	Report has Cover, Table of Contents, Research Data and some of the Experiment Data.	Report has Cover, some Research, some Data. Report is the exact information from the board just with a cover.	Report is minimal or does not exist.

Project Title \_\_\_\_\_ Grade \_\_\_\_\_

Student's name \_\_\_\_\_ Physical or Biological

School \_\_\_\_\_ Experiment

Objectives	Score	Comments
<b>Scientific Method</b>	/20	
<b>1. Shows knowledge of the Scientific Method</b> - Question, Hypothesis and Variables, Materials, Procedure, Data, Conclusions		
<b>Understanding/Learning</b>	/20	
<b>2. Demonstrates understanding</b> of their project and has learned something about science or scientific procedure		
<b>Spoken Presentation</b>	/20	
<b>3. Speaks knowledgeably</b> about their project.		
<b>Display Board</b>	/20	
<b>4. Board that is well organized and visually appealing</b>		
<b>Written Report</b>	/20	
<b>5. Written report</b> clearly demonstrates use of research, experimentation and analysis skills		
<b>TOTAL SCORE</b>	/100	

Judge's name \_\_\_\_\_

## Sample Questions Judges Can Ask

### **Scientific Method**

Why is \_\_\_\_\_ your dependent variable?

Why is \_\_\_\_\_ your independent variable?

### **Understanding/Learning**

How does your data support your conclusion?

How does the conclusion prove or disprove your hypothesis?

Were there other factors that might have influenced your results?

What did you learn from this experiment?

What part of science does your experiment study?

What changes would you make to your experiment?

### **Spoken Presentation**

Can you explain . . . ?

What was the most difficult part of this experiment?

Where did you get your topic?

### **Boards**

Who helped you with your boards?

What did they do?

Can you explain your graph to me?

### **Written Report**

Can you show me your background research for this project in your report?

What sources did you use for your research?