AHSG Science Fair Scorecard : Apparatus

Apparatus: The goal is to illustrate (show) the use/function of a scientific tool or implement.

Student Name: _____

Project Title: _____

Division: K-2 3-5 6-8 9-12 **Project Number:** _____

Judges: This form will be provided to students after the fair so they know what they did well and ways they can improve.

Scoring must be age appropriate: 5= Excellent 4= Very Good 3= Good 2= Fair 1= Poor 0= Absent

Communication (20 pts)	
Student's 3-5 minute oral presentation makes sense and explains the overall project.	5 4 3 2 1 0
Student is able to give clear, concise, thoughtful answers to questions.	5 4 3 2 1 0
Student communicates effectively with a positive attitude and appropriate personal appearance.	5 4 3 2 1 0
Student demonstrates interest and enthusiasm for the project.	5 4 3 2 1 0
Display (20 pts)	
Tri-fold display is legible when standing at a reasonable distance and is well organized.	5 4 3 2 1 0
Tri-fold display explains use and contains highlights of the project, such as history, parts, etc.	5 4 3 2 1 0
Apparatus (or appropriate subsitute) is displayed with information to explain use/parts/etc.	5 4 3 2 1 0
Information on how the apparatus relates to science is included in the display.	5 4 3 2 1 0
Report (40 pts)	
Written report is neatly handwritten OR typed in Times New Roman 12pt font and has a title page.	5 4 3 2 1 0
Introduction is well written and relevant to the topic. *In addition, for grades 6-12, the 250-word or less abstract gives a clear summary of the project.*	5 4 3 2 1 0
Report explains why the student chose this apparatus and what they knew about it previously.	5 4 3 2 1 0
Report shows the use/function of the apparatus, and explains why it is needed and who uses it.	5 4 3 2 1 0
Report covers science principles involved in the use, function, and/or design of the apparatus.	5 4 3 2 1 0
For student built apparatus, information on build process (design, materials, etc.) is included. For existing apparatus, information on manufacture (where/who, possibly how) is included.	5 4 3 2 1 0
For grades K-5, the report includes a list of sources used and age appropriate citations. *For grades 6-12, the report uses full citations and contains a list of references.*	5 4 3 2 1 0
Conclusion is well written, summarizes what was learned, and appropriately wraps up the report.	5 4 3 2 1 0
General (20 pts)	
Student understands science relevant to the project. (Age appropriate)	5 4 3 2 1 0
The project is a result of the student's own work. (Age appropriate)	5 4 3 2 1 0
Student clearly identifies why apparatus is important.	5 4 3 2 1 0
Student identifies future development for the apparatus (other uses, new improvements, etc.)	5 4 3 2 1 0
Total Score (out of 100)	
Award Level Given (circle one): Bronze (0-59) Silver (60-79)	Gold (80-100)

Judge's comments to the student (use back for more notes if needed)

The best things about your project are:

Your project could have been improved by:

AHSG Science Fair Scorecard : Collection

Collection: The goal is to illustrate (show) the diversity of a set of items.

Student Name: _____

Project Title: _____

Division: K-2 3-5 6-8 9-12 **Project Number:** _____

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Scoring must be age appropriate: 5= Excellent 4= Very Good 3= Good 2= Fair 1= Poor 0= Absent

Communication (20 pts)	
Student's 3-5 minute oral presentation makes sense and explains the overall project.	5 4 3 2 1 0
Student is able to give clear, concise, thoughtful answers to questions.	5 4 3 2 1 0
Student communicates effectively with a positive attitude and appropriate personal appearance.	5 4 3 2 1 0
Student demonstrates interest and enthusiasm for the project.	5 4 3 2 1 0
Display (25 pts)	
Logbook is completed appropriately and provides an accurate record of collected items.	5 4 3 2 1 0
Collection items (or photos of) are displayed in a way that is neat and logical (or creative).	5 4 3 2 1 0
The collection includes sufficient specimen variety to demonstrate diversity.	5 4 3 2 1 0
Tri-fold display is legible when standing at a reasonable distance and is well organized.	5 4 3 2 1 0
Display includes enough information for visitors to understand the purpose of the collection.	5 4 3 2 1 0
Report (35 pts)	
Written report is neatly handwritten OR typed in Times New Roman 12pt font and has a title page.	5 4 3 2 1 0
Introduction is well written and relevant to the topic. *In addition, for grades 6-12, the 250-word or less abstract gives a clear summary of the project.*	5 4 3 2 1 0
Report explains why they chose this collection and what they learned.	5 4 3 2 1 0
Report includes information about the collection process and explains major terms and definitions.	5 4 3 2 1 0
Report includes science information relating to the diversity of the collection.	5 4 3 2 1 0
For grades K-5, the report includes a list of sources used and age appropriate citations. *For grades 6-12, the report uses full citations and contains a list of references.*	5 4 3 2 1 0
Conclusion is well written, summarizes what was learned, and appropriately wraps up the report.	5 4 3 2 1 0
General (20 pts)	
Student understands science relevant to the project. (Age appropriate)	5 4 3 2 1 0
The project is a result of the student's own work. (Age appropriate)	5 4 3 2 1 0
The student highlights particular specimens of interest in either the display or report or both.	5 4 3 2 1 0
The student identifies future collection goals (specimens, locations, other science, study ideas, etc.)	5 4 3 2 1 0
Total Score (out of 100)	
Award Level Given (circle one): Bronze (0-59) Silver (60-79)	Gold (80-100)

Judge's comments to the student (use back for more notes if needed)

The best things about your project are:

Your project could have been improved by:

AHSG Science Fair Scorecard : Demonstration

Demonstration: The goal is to illustrate (show) a scientific principle or fact.

Student Name: _____

Project Title: _____

Division: K-2 3-5 6-8 9-12 **Project Number:** _____

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Scoring must be age appropriate: 5= Excellent 4= Very Good 3= Good 2= Fair 1= Poor 0= Absent

Communication (20 pts)	
Student's 3-5 minute oral presentation makes sense and explains the overall project.	5 4 3 2 1 0
Student is able to give clear, concise, thoughtful answers to questions.	5 4 3 2 1 0
Student communicates effectively with a positive attitude and appropriate personal appearance.	5 4 3 2 1 0
Student demonstrates interest and enthusiasm for the project.	5 4 3 2 1 0
Display & Demonstration (25 pts)	
Tri-fold display is legible when standing at a reasonable distance and is well organized.	5 4 3 2 1 0
Display includes step-by-step directions for the demonstration(or model build), incl. materials needed.	5 4 3 2 1 0
Demonstration is repeatable, and ideally can be done by visitors to experience the science personally. Or, for a demonstration using a model, visitors are able to view and manipulate the model.	5 4 3 2 1 0
Display includes information on the scientific theory (why does it work/why is it important, etc.)	5 4 3 2 1 0
Student is able to perform the demonstration during judging without outside instruction.	5 4 3 2 1 0
Report (35 pts)	
Written report is neatly handwritten OR typed in Times New Roman 12pt font and has a title page.	5 4 3 2 1 0
Introduction is well written and relevant to the topic. *In addition, for grades 6-12, the 250-word or less abstract gives a clear summary of the project.*	5 4 3 2 1 0
Report includes why they chose this, why it is important, and what they learned.	5 4 3 2 1 0
Body discusses scientific principle or fact being demonstrated and explanation of what is going on.	5 4 3 2 1 0
Report includes description of how to do the demo/model, and materials needed to do it.	5 4 3 2 1 0
For grades K-5, the report includes a list of sources used and age appropriate citations. *For grades 6-12, the report uses full citations and contains a list of references.*	5 4 3 2 1 0
Conclusion is well written, summarizes what was learned, and appropriately wraps up the report.	5 4 3 2 1 0
General (20 pts)	
The overall demonstration project clearly shows a scientific principle or fact.	5 4 3 2 1 0
Student understands science relevant to the project. (Age appropriate)	5 4 3 2 1 0
The project is a result of the student's own work. (Age appropriate)	5 4 3 2 1 0
Student identifies ways to pursue further studies as a result of this project.	5 4 3 2 1 0
Total Score (out of 100)	
Award Level Given (circle one): Bronze (0-59) Silver (60-79)	Gold (80-100)

Judge's comments to the student (use back for more notes if needed)

The best things about your project are:

Your project could have been improved by:

AHSG Science Fair Scorecard : Engineering Design

Engineering Design Project: The goal is to solve a problem by designing a process or a physical item.

Student Name: _____

Project Title: _____

Division: K-2 3-5 6-8 9-12 **Project Number:** _____

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Scoring must be age appropriate: 5= Excellent 4= Very Good 3= Good 2= Fair 1= Poor 0= Absent

Communication (20 pts)	
Student's 3-5 minute oral presentation makes sense and explains the overall project.	5 4 3 2 1 0
Student is able to give clear, concise, thoughtful answers to questions.	5 4 3 2 1 0
Student communicates effectively with a positive attitude and appropriate personal appearance.	5 4 3 2 1 0
Student demonstrates interest and enthusiasm for the project.	5 4 3 2 1 0
Display (20 pts)	
Tri-fold display is legible when standing at a reasonable distance and is well organized.	5 4 3 2 1 0
Display includes information on problem, design process, testing, design changes, and final solution.	5 4 3 2 1 0
Lab notebook includes information on design process and records all testing and design iterations.	5 4 3 2 1 0
Display includes finished product or process. May include previous prototypes if appropriate.	5 4 3 2 1 0
Report (35 pts)	
Written report is neatly handwritten OR typed in Times New Roman 12pt font and has a title page.	5 4 3 2 1 0
Introduction is well written and relevant, and includes statement of problem and why it is a problem. *In addition, for grades 6-12, the 250-word or less abstract gives a clear summary of the project.*	5 4 3 2 1 0
Report includes research on past/current other solutions to this problem, or why there aren't any.	5 4 3 2 1 0
Report includes description of design process, any testing, prototypes, changes made, etc.	5 4 3 2 1 0
Report explains how student tested the solution and checked to see if it solved the problem.	5 4 3 2 1 0
For grades K-5, the report includes a list of sources used and age appropriate citations. *For grades 6-12, the report uses full citations and contains a list of references.*	5 4 3 2 1 0
Conclusion is well written, restates problem and determines if the solution fully solves the problem.	5 4 3 2 1 0
General (25 pts)	
Student understands science relevant to the project. (Age appropriate)	5 4 3 2 1 0
The project is a result of the student's own work. (Age appropriate)	5 4 3 2 1 0
Student understands applications and limitations of designed prototype/process.	5 4 3 2 1 0
Student identifies how the design was refined over time and why changes were needed.	5 4 3 2 1 0
Student identifies ways that this design could be improved more in the future.	5 4 3 2 1 0
Total Score (out of 100)	
Award Level Given (circle one): Bronze (0-59) Silver (60-79)	Gold (80-100)

Judge's comments to the student (use back for more notes if needed)

The best things about your project are:

Your project could have been improved by:

AHSG Science Fair Scorecard : Experiment

Experiment: The goal is to confirm or deny a possible answer to a science question (hypothesis) by performing repeatable tests.

Student Name: _____

Project Title: _____

Division: K-2 3-5 6-8 9-12 **Project Number:** _____

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Communication (20 pts)	
Student's 3-5 minute oral presentation makes sense and explains the overall project.	5 4 3 2 1 0
Student is able to give clear, concise, thoughtful answers to questions.	5 4 3 2 1 0
Student communicates effectively with a positive attitude and appropriate personal appearance.	5 4 3 2 1 0
Student demonstrates interest and enthusiasm for the project.	5 4 3 2 1 0
Display (20 pts)	
Tri-fold display is legible when standing at a reasonable distance and is well organized.	5 4 3 2 1 0
Tri-fold display shows the hypothesis, data, method, and conclusions.	5 4 3 2 1 0
Lab notebook shows recorded data and observations taken at the time the experiment was performed.	5 4 3 2 1 0
Lab notebook shows that sufficient data has been collected to justify student's conclusions.	5 4 3 2 1 0
Report (35 pts)	
Written report is neatly handwritten OR typed in Times New Roman 12pt font and has a title page.	5 4 3 2 1 0
Introduction is well written and includes purpose/hypothesis and background information. *In addition, for grades 6-12, the 250-word or less abstract gives a clear summary of the project.*	5 4 3 2 1 0
Body of the report includes test procedure including methods and materials and equipment.	5 4 3 2 1 0
Test data is clear and complete and arranged in an organized manner (labeled tables or graphs, etc.).	5 4 3 2 1 0
Report includes discussion and analysis. Results are explained, analyzed, and compared (as needed).	5 4 3 2 1 0
For grades K-5, the report includes a list of sources used and age appropriate citations. *For grades 6-12, the report uses full citations and contains a list of references.*	5 4 3 2 1 0
Conclusion is well written, summarizes what was learned, and appropriately wraps up the report.	5 4 3 2 1 0
General (25 pts)	
Student understands science relevant to the project. (Age appropriate)	5 4 3 2 1 0
The project is a result of the student's own work. (Age appropriate)	5 4 3 2 1 0
Student performed the full experiment multiple times in order to show repeating results.	5 4 3 2 1 0
Student identifes possible sources of experimental error and evaluates if the results were conclusive. This includes identifying whether the hypothesis was confirmed or denied, or if more data is needed.	5 4 3 2 1 0
Student identifies future plans (further experiments, refinements, other implications, etc.)	5 4 3 2 1 0
Total Score (out of 100)	
Award Level Given (circle one): Bronze (0-59) Silver (60-79)	Gold (80-100)

Judge's comments to the student (use back for more notes if needed)

The best things about your project are:

Your project could have been improved by:

AHSG Science Fair Scorecard : Research

Research: The goal is to answer a question about science using primary sources.

Student Name: _____

Project Title: _____

Division: K-2 3-5 6-8 9-12 **Project Number:** _____

Judges: This form will be provided to students after the fair so they know what they did well and ways they can improve.

Scoring must be age appropriate: 5= Excellent 4= Very Good 3= Good 2= Fair 1= Poor 0= Absent

Communication (20 pts)	
Student's 3-5 minute oral presentation makes sense and explains the overall project.	5 4 3 2 1 0
Student is able to give clear, concise, thoughtful answers to questions.	5 4 3 2 1 0
Student communicates effectively with a positive attitude and appropriate personal appearance.	5 4 3 2 1 0
Student demonstrates interest and enthusiasm for the project.	5 4 3 2 1 0
Display (20 pts)	
Tri-fold display is legible when standing at a reasonable distance and is well organized.	5 4 3 2 1 0
Display clearly shows the research topic (question) and the answer, with supporting data.	5 4 3 2 1 0
Images and data are included to improve visual interest and are clearly labeled.	5 4 3 2 1 0
Display information is presented in a way that allows visitors to understand without reading the report.	5 4 3 2 1 0
Report (40 pts)	
Written report is neatly handwritten OR typed in Times New Roman 12pt font and has a title page.	5 4 3 2 1 0
Introduction is well written and relevant to the topic. *In addition, for grades 6-12, the 250-word or less abstract gives a clear summary of the project.*	5 4 3 2 1 0
Report explains why they asked this question/their interest in the topic.	5 4 3 2 1 0
Body includes data/information from credible sources that answer the question/research topic posed.	5 4 3 2 1 0
Body includes information on signficance/importance of topic & explains major terms & definitions.	5 4 3 2 1 0
For grades K-5, the report includes a list of sources used and age appropriate citations. *For grades 6-12, the report uses full citations and contains a list of references.*	5 4 3 2 1 0
Student's final answer to their question/research topic is supported by the data collected.	5 4 3 2 1 0
Conclusion is well written, summarizes what was learned, and appropriately wraps up the report.	5 4 3 2 1 0
General (20 pts)	
Student understands science relevant to the project. (Age appropriate)	5 4 3 2 1 0
The project is a result of the student's own work. (Age appropriate)	5 4 3 2 1 0
Sources are credible, authoritative, & reliable. Student identifies potential biases/conflicts of interest.	5 4 3 2 1 0
Student identifies areas for future research. (Their own/ideas for researchers/ongoing research, etc.)	5 4 3 2 1 0
Total Score (out of 100)	
Award Level Given (circle one): Bronze (0-59) Silver (60-79)	Gold (80-100)

Judge's comments to the student (use back for more notes if needed)

The best things about your project are:

Your project could have been improved by: