

# Leon County Schools STEAM Showcase 2017

## Science Investigation Rubric

Standard	Beginning/ Novice	Developing/ Apprentice	Accomplished/ Proficient	Exemplary/ daVinci Scientist	Score
	0-1 point	2 points	3-4 points	5 points	
<b>Testable Question and Hypothesis</b>	Missing, not testable, or unable to measure; Hypothesis or question is off topic.	Question is not mentioned in hypothesis	Question and hypothesis both present, and hypothesis is supported with reason(s).	Question includes both manipulated and controlled variables; Hypothesis includes reason that is research based and can be explained.	
<b>Variables</b>	Missing, unclear, or not understood	More than one manipulated variable; does not include manipulated and controlled variable; variables not used correctly; variables not clear or understood	Investigation includes some variables; variables are used correctly	Experiment includes identified manipulated and controlled variables	
<b>Materials, Procedures/ Method</b>	Missing; Step by step procedures are not included	Materials list is missing 3 or more items; step by step instructions are vague	Materials list is missing 1-2 items; step by step instructions included	Materials list is complete and includes a list of tools for gathering data. Step-by-step instructions are included and are clear enough for others to repeat the investigation.	
<b>Data/Trials</b>	Missing or not clear	Data shows only 1 trial	Data shows some trials, but no visual representation	Project uses an appropriate number of trials, that are recorded, with average recorded; data presented in a visual format (such as a graph or table) that can be read easily.	
<b>Conclusion with Evidence</b>	Missing	Conclusion presented with no reference to hypothesis	Conclusion presented with hypothesis (supported or not supported) and evidence.	The conclusion includes claims, evidence and reasoning, with a real world application	
<b>Reflection</b>	Missing	Shows vague evidence of analysis and evaluation	Shows some evidence of analysis and evaluation	Complete with evaluation of the investigation on what was successful and what a scientist would do differently next time.	
<b>Originality</b>	Similar project is commonplace or same project can be found online with no variation to presented project			Project is original and unique; or investigated in an original/unique way; the question is addressed in a unique way.	
<b>Log Book/ Journal</b>	Missing	Few entries; missing data; no diagrams with labels; no sources cited for research (but research is included)	Journal mostly complete but not enough details; only 1-2 sources cited for research with notes	Journal contains handwritten notes, research notes from at least 3 sources with citations (citations do not have to be formal), labeled diagrams. Entire investigation is documented. There are at least three entries.	
<b>Oral Representation</b>	Student is unable to explain project without adult assistance; The student demonstrates he/she does not understand the project	Student is able to explain 'some' of the project	Student is able to explain 'most' of the project, but can not answer additional questions related to topic.	Well spoken; explained all parts of the investigation; demonstrates exceptional knowledge of the science concept and can analyze, evaluate, and reflect on investigation; answers questions with appropriate speed, volume, and expression. Able to explain why number of trials is appropriate	
<b>Visual Presentation</b> (no greater than 36" x 48" x 6")	Missing; illegible; messy; too incomplete to understand	Some categories missing; unorganized (process does not flow)	All categories represented; well organized; correctly communicates intent; on stand alone backboard	Project is visually appealing and neatly presented (written or typed); project is on backboard that stands by itself; grammar/spelling are appropriate for age.	

Constructive Comments by Judge:

## Leon County Schools STEAM Showcase 2017

### Engineering/Invention Rubric

Standard	Beginning/ Novice	Developing/ Apprentice	Accomplished/ Proficient	Exemplary/ daVinci's Patent	Score
	0-1 point	2 points	3-4 points	5 points	
<b>Ask</b>	Missing; does not address a problem	Project identifies a stated problem.	Project identifies and addresses a stated problem.	Project identifies and addresses a unique and real problem. Shows insight	
<b>Imagine</b>	Missing	At least 1-2 original ideas are documented	A few original ideas are documented to solve problem with some notes.	Numerous ideas are documented and shared (some may be silly or extreme); notes to explain final plan evident	
<b>Plan</b>	Missing	Little research shared that this process/product does not exist; plan with diagram & some steps	Research sufficiently done with evidence that similar process/product does not exist; plan with diagrams and steps evident.	Research carefully conducted and evidence provided that no similar process/product exists. Plan with multiple diagram views and detailed steps documented.	
<b>Create</b>	Missing	Product is poorly designed and/or constructed.	Product shows adequate attention to detail	Product shows great attention to detail; student built and tested product.	
<b>Improve/ Results of Testing</b>	Missing; no evidence of testing	Evidence of only 1-2 trials;	Evidence of at least 3 trials, but no visual representation; some scientific skills and processes applied.	Evidence of at least 3 tests; testing presented in a visual format; excellent documentation; Evidence of hypothesizing, gathering and analyzing data, and drawing conclusions	
<b>Advertisement</b>	Missing; no attempt to promote product.	Inventor/Engineer has made little attempt to promote product.	Inventor/Engineer has provided adequate advertisement	Inventor/Engineer has effectively advertised and presented product with eye-catching and interesting presentation; product name; sales slogan/jingle	
<b>Reflection</b>	Missing	Shows vague evidence of analysis and evaluation	Shows some evidence of analysis and evaluation	Complete with evaluation of the project...what was successful and what student would do differently next time.	
<b>Originality</b>	Similar project is common or can be found easily online with no variation to presented project			Project is original and unique; or envisioned in an original/unique way; the problem is addressed in a unique way.	
<b>Log Book/ Journal</b>	Missing	Few entries; missing steps; no diagrams with labels; no sources cited for research (but research is included)	Journal mostly complete but not enough details; some sources cited for research with notes	Journal contains handwritten notes, definitive research notes from at least 3 sources with citations (citations do not have to be formal), labeled diagrams. Entire project is documented. There are at least three entries.	
<b>Oral Presentation</b>	Student is unable to explain project without adult assistance; The student demonstrates he/she does not understand/is unknowledgeable about the project	Student is able to explain 'some' of project; student is reluctant to discuss the project.	Student is able to explain 'most' of project; student understands and can discuss project.	Well spoken and able to converse at length about the product and processes involved in its creation; explained all parts of the project; demonstrates exceptional knowledge of all concepts and can analyze, evaluate, and reflect on process; answers questions with appropriate speed, volume, and expression.	
<b>Visual Presentation</b> (no greater than 36" x 48" x 6")	Missing; illegible; messy; too incomplete to understand	Some categories missing; unorganized (process does not flow)	All categories represented; well organized; correctly communicates intent; on stand alone backboard	Project is visually appealing and neatly presented (written or typed); project is on backboard that stands by itself; grammar/spelling are appropriate for age.	

Judge's Constructive Comments: