



Patapsco Middle School
Judge: Michael C. Eckhardt

Appendix D: Project Report Rubric

Project Report Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Problem Statement	The problem is clearly articulated with well-defined parameters. The needs of the client have been carefully weighted to design a solution. All limitations are clearly identified.	The problem is adequately articulated with some parameters. The needs of the client are evident but not fully demonstrated. Not all limitations are identified.	The problem is poorly articulated with little to no parameters. The needs of the client are evident but leave some questions. Some limitations are identified.	The problem is barely articulated. The needs of the client are not evident. No limitations are evident.	The problem statement is not present or not understandable.	Problem's stated client needs: stated framework problems lack of detail & craftsmanship	
Design Process—Inspiration Research	The prior knowledge, research, and interviews with client(s) is clearly articulated.	No prior knowledge, research, and interviews with client(s) is articulated but leaving some questions.	The prior knowledge, research, and interview with client(s) is poorly articulated.	The prior knowledge, research, and interview with client(s) is minimal.	The prior knowledge, research, and interview with client(s) is not present.	Does not indicate the result of client interview.	
Design Process—Inspiration Client's Needs	The client's needs are clearly accounted for during the inspiration process.	The client's needs are poorly accounted for during the inspiration process.	The client's needs are poorly accounted for during the inspiration process.	The client's needs are not adequately accounted for during the inspiration process.	The client's needs are not accounted for during the inspiration process.	The client's needs are not accounted for during the inspiration process.	Client's needs mentioned in 1 sentence.
Design Process—Implementation Client's Needs (4)	The design process is iterative and adequately shown to have been repeated at least one time.	A path leads from Inspiration to Iteration.	A path leads from Inspiration to Iteration but has some issues.	A path leads from Inspiration to Iteration that is minimal.	A path leads from Inspiration to Iteration.	There is no evidence of repeatability in the iteration phase.	Used 4 iterations!
Design Process—Implementation Lab to Inspiration (4)	Designs are clearly articulated with reference to knowledge gained.	Designs minimally reference the knowledge gained.	Designs poorly reference the knowledge gained.	Little evidence of a path from Inspiration to Iteration.	Little evidence of a path from Inspiration to Iteration.	No evidence of a path from Inspiration to Iteration.	Therefore problem is not well-defined.
Design Process—Iteration Math and Science (4)	Math and Science concepts are clearly articulated as part of the design.	Math and Science concepts are articulated as part of the design.	Math and Science concepts are poorly articulated as part of the design.	Math and Science concepts are barely articulated as part of the design.	Math and Science concepts are barely articulated as part of the design.	Math and Science concepts are present.	Designs discuss math and science concepts, but not clearly defined, thus
Design Process—Implementation Data	Data is recorded and shown as part of tests in graphical form. The data is relevant and useful.	Data is recorded and shown as part of tests. The data is mostly relevant and useful.	Data is recorded and shown as part of tests. The data is partly relevant and useful.	Minimal data is recorded. Data is mostly irrelevant.	Little data is recorded. Data is mostly irrelevant.	No data is recorded.	3 data graphs.
Design Process—Implementation Data Analysis (4)	Data is clearly used to determine strengths and/or weaknesses. Data is used to inspire new ideas.	Data is adequately used to determine strengths and/or weaknesses. Data is adequately used to inspire new ideas.	Data is adequately used to return to the iteration phase to improve the design.	Data is barely used to determine strengths and/or weaknesses. Data is barely used to inspire new ideas.	Data is barely used to determine strengths and/or weaknesses. Data is barely used to inspire new ideas.	Data analysis is not present.	Utilization: technical database of problem/solution
Design Process—Implementation Process (4)	Data is clearly used to return to the iteration phase to improve the design.	Data is used to return to the iteration phase to improve the design.	Data is used to return to the iteration phase to improve the design.	Data is not used to return to the iteration phase to improve the design.	Data is not used to return to the iteration phase to improve the design.	Data is not used to return to the iteration phase to improve the design.	Utilization: technical database of problem/solution

Re: Report Score Sheet



National Engineering Design Competition
MESA Arduino STEM Solutions
Tuesday, 27 September 2017

Project Report Rubric	Inappropriate (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observations Notes
Spelling & Grammar	No errors in spelling and grammar.	A few errors in spelling and grammar.	Numerous errors in spelling and grammar.	Code is difficult to read.	Code is difficult to read with some comments.	Code is minimal or non-existent.	numerous spelling and grammar errors. Code is difficult to read.
Code	Code is easy to read with some comments.	All items are clearly accounted for.	The majority of items are accounted for.	Less than half of the items are accounted for.	Less than half of the research is accounted for.	The report is less than 4 pages in length.	Unusual in length. Like, always b... missing chapters in half
Budget	All resources is accounted for using a consistent format.	All resources is accounted for using a consistent format.	The report is 4 to 11 pages in length.	The report is 4 to 11 pages in length.	The report is less than 4 pages in length.	10 people	
Length	0	12	18	4	4	0	—
Comments/Tools							
Total	38						

Hatapsco Middle
Ruben
4/30/2018



Appendix D: Project Report Rubric

Project Report Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Problem Statement	The problem is clearly articulated with well-defined parameters. The needs of the client have been carefully weighed to design a solution. All limitations are clearly identified.	The problem is adequately articulated with some parameters. The needs of the client are partially demonstrated. Most limitations are identified.	The problem is articulated with some parameters. The needs of the client are evident but leave some questions. Some limitations are identified.	The problem is poorly articulated with little to no parameters. The needs of the client are not evident. No limitations are evident.	The problem statement is not present or non understandable.		
Design Process—Inspiration: Research	The prior knowledge, research, and interviews with client(s) is clearly articulated.	The prior knowledge, research, and interviews with client(s) is articulated but leaves some questions.	The prior knowledge, research, and interviews with client(s) is poorly articulated but leaves some questions.	The prior knowledge, research, and interview with client(s) is minimal.	The prior knowledge, research, and interview with client(s) is not present.		SOME RESEARCH NOT CLEARLY RELATED TO BLOGGING
Design Process—Inspiration: Client's Needs (32)	The client's needs are clearly accounted for during the inspiration process.	The client's needs are adequately accounted for during the inspiration process.	The client's needs are adequately accounted for during the inspiration process.	The client's needs are poorly accounted for during the inspiration process.	The client's needs are not accounted for during the inspiration process.		UNCLEAR IF CLIENT'S NEEDS IS PRESENT IN COMMUNITY OF PARENTS
Design Process—Implementation: Math and Science (32)	The design process is clearly iterative and clearly shown to have been repeated at least one time.	The design process is iteratively and adequately shown to have been repeated at least one time.	The design process is iterative and is minimally shown to have been repeated at least one time.	The design process is not iterative or not adequately shown to have not have been repeated.	The design process is not iterative and is not adequately shown to have been repeated.		
Design Process—Designs Link to Inspiration. (42)	A clear path leads from Inspiration to Ideation	A path leads from Inspiration to Ideation but has some holes.	A path leads from Inspiration to Ideation but has some holes.	A path leads from Inspiration to Ideation that is minimal.	Little evidence of a path from Inspiration to Ideation.	No evidence of a path from Inspiration to Ideation.	
Design Process—Ideation: Data (42)	Designs adequately reference the knowledge gained.	Designs minimally reference the knowledge gained.	Designs poorly reference the knowledge gained.	Designs do not reference the knowledge gained.	Designs do not reference the knowledge gained.		
Design Process—Knowledge: Math and Science (42)	Math and Science concepts are clearly articulated as part of the design.	Math and Science concepts are adequately articulated as part of the design.	Math and Science concepts are poorly articulated as part of the design.	Math and Science concepts are present but not clearly articulated as part of the design.	No Math and Science concepts are present.	No Math and Science concepts are present.	NO CLEAR MAP OF THE SKILL WORKS - DUE TO LACK OF KNOWLEDGE
Design Process—Implementation: Data (42)	Data is recorded and shown as part of tests in graphical form. The data is relevant and useful.	Data is recorded and shown as part of tests. The data is mostly irrelevant and useful.	Data is recorded and shown as part of tests. The data is partly relevant and useful.	Data is recorded. Data is mostly irrelevant.	Little data is recorded. Data is mostly irrelevant.	No data is recorded.	
Design Process—Implementation: Analysis (42)	Data is used to determine strengths and/or weaknesses. Data may or may not be used to inspire new ideas.	Data is adequately used to determine strengths and/or weaknesses. Data is minimally used to inspire new ideas.	Data is minimally used to determine strengths and/or weaknesses. Data is hardly used to inspire new ideas.	Data is minimally used to determine strengths and/or weaknesses. Data is minimally used to inspire new ideas.	Data is barely used to determine strengths and/or weaknesses. Data is hardly used to inspire new ideas.	Data analysis is not present.	TESTING IS UNCLQR. NOT SURE DATA IS FROM TESTING OR SPREAD RESEARCH.
Design Process—Implementation: Process (42)	Data is clearly used to return to the Inspiration phase to improve the design.	Data is used to return to the Inspiration phase to improve the design.	Data is used to return to the Inspiration phase to improve the design.	Data is adequately used to return to the Inspiration phase to improve the design.	Data is adequately used to return to the Inspiration phase to improve the design.	Data is not used to return to the Inspiration phase to improve the design.	NO PLAN TO REMOVE LIMITATIANS



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National Engineering Design Competition
MESA Arduino STEM Solutions
Revised 21 September 2017

Project Report Rubric	Exceptional (5 points)		Excellent (4 points)		Good (3 points)		Fair (2 points)		Poor (1 point)		Not present (0 points)	Numerous errors in spelling and grammar	Observation Notes
	Spelling & Grammar	Code	Code	Budget	Bibliography	Length	Length	Report is less than 10 pages in length	Report is 10 to 11 pages in length	Report is more than 11 pages in length			
Code	Code is easy to read with some comments	Code is difficult to read	Code is minimal or non-existent.	All items are clearly accounted for.	All research is accounted for using a consistent format.	The report is less than 10 pages in length.	The report is 10 to 11 pages in length.	No errors in spelling and grammar	Minor errors in spelling and grammar	Numerous errors in spelling and grammar	A poor proof read.		
Budget													
Bibliography													
Length													
Column Totals	10	20	3	10	1								
Total	44												

PATAPSCO MS AFDC

JUDGE: FARID AHMED



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Project Report Status		Comments		Actions		Next Step	
Date	Description	Owner	Comments	Owner	Action	Date	Comments
2023-09-01	The project is progressing well, with most tasks completed or underway. The team is working effectively, and no significant challenges are currently impacting the timeline.	Project Manager	The project is progressing well, with most tasks completed or underway. The team is working effectively, and no significant challenges are currently impacting the timeline.	Project Manager	Review progress and update stakeholders.	2023-09-15	Review progress and update stakeholders.
2023-09-05	A minor delay has been identified in the software development phase, which may impact the final delivery date by one week.	Software Dev Lead	A minor delay has been identified in the software development phase, which may impact the final delivery date by one week.	Software Dev Lead	Monitor progress closely and adjust timelines if necessary.	2023-09-10	Monitor progress closely and adjust timelines if necessary.
2023-09-10	The hardware component supply chain has experienced some delays, causing a temporary hold on assembly work.	Hardware Eng Lead	The hardware component supply chain has experienced some delays, causing a temporary hold on assembly work.	Hardware Eng Lead	Coordinate with suppliers to expedite delivery.	2023-09-15	Coordinate with suppliers to expedite delivery.
2023-09-15	The software development team has completed the core functionality and is now focused on testing and finalizing the user interface.	Software Dev Lead	The software development team has completed the core functionality and is now focused on testing and finalizing the user interface.	Software Dev Lead	Monitor testing progress and prepare for deployment.	2023-09-20	Monitor testing progress and prepare for deployment.
2023-09-20	The hardware assembly team has started the final assembly process, with all components received and integrated.	Hardware Eng Lead	The hardware assembly team has started the final assembly process, with all components received and integrated.	Hardware Eng Lead	Monitor assembly progress and ensure quality control.	2023-09-25	Monitor assembly progress and ensure quality control.
2023-09-25	The software testing team has completed the initial round of testing and is now performing regression tests to identify any remaining bugs.	Software QA Lead	The software testing team has completed the initial round of testing and is now performing regression tests to identify any remaining bugs.	Software QA Lead	Monitor regression testing and resolve critical issues.	2023-10-05	Monitor regression testing and resolve critical issues.
2023-10-05	The final software build has been completed and is ready for deployment to the test environment.	Software Dev Lead	The final software build has been completed and is ready for deployment to the test environment.	Software Dev Lead	Deploy software to test environment.	2023-10-10	Deploy software to test environment.
2023-10-10	The hardware assembly is complete, and the team is preparing the unit for final inspection and documentation.	Hardware Eng Lead	The hardware assembly is complete, and the team is preparing the unit for final inspection and documentation.	Hardware Eng Lead	Perform final inspection and documentation.	2023-10-15	Perform final inspection and documentation.
2023-10-15	The software testing has been completed, and the team is finalizing the report and preparing for deployment.	Software QA Lead	The software testing has been completed, and the team is finalizing the report and preparing for deployment.	Software QA Lead	Finalize test report and prepare for deployment.	2023-10-20	Finalize test report and prepare for deployment.
2023-10-20	The final software build has been deployed to the production environment, and monitoring is ongoing.	System Admin	The final software build has been deployed to the production environment, and monitoring is ongoing.	System Admin	Monitor system performance and address any issues.	2023-10-25	Monitor system performance and address any issues.
2023-10-25	The hardware unit has passed all final inspections and is now ready for shipping to the customer.	Hardware Eng Lead	The hardware unit has passed all final inspections and is now ready for shipping to the customer.	Hardware Eng Lead	Ship hardware unit to customer.	2023-11-05	Ship hardware unit to customer.
2023-11-05	The customer has received the hardware unit and provided positive feedback on its performance.	Customer	The customer has received the hardware unit and provided positive feedback on its performance.	Customer	Follow up with customer for further feedback.	2023-11-15	Follow up with customer for further feedback.

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F 40

Data process

Appendix C: Technical Interview (Presentation Rubric)

Technical Interview (Presentation Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Nonverbal Skills	Team holds attention of audiences with the use of direct eye contact; uses poster to guide interview exceedingly well; helps the audience visualize. Team displays relaxed, self-confident nature, and is free of fidgeting and/or nervous movement. Exceptional use of body language.	Team holds attention of audiences with the use of direct eye contact; effectively uses poster to guide interview. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Adequate use of body language.	Team uses good direct eye contact with audience, but reads some parts from the poster. Team uses minimal movements/gestures that enhance articulation. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Good use of body language.	Team uses some direct eye contact with audience, but mostly reads from the poster. Team uses minimal movements/gestures that enhance articulation. Team mostly displays nervous nature and has a substantial amount of fidgeting and/or nervous movement. Some use of body language.	Team uses minimal eye contact with audience. Mostly reads from poster at all. No interaction with poster. Very little movement or descriptive gestures. Obviously tension or nervousness.	Team makes no eye contact with audience. Does not interact with poster at all. No movement or descriptive gestures. Obviously tension or nervousness.	
Verbal Skills	Team shows extreme enthusiasm and can verbally convey knowledge about the topic during entire presentation. Uses clear voices and correct usage of technical terms. Can be heard clearly for entire presentation. Entire team shares equally in presentation and most team members are above average in skill.	Team shows mostly enthusiasm and can verbally convey knowledge about the topic during entire presentation. Uses clear voices and correct usage of technical terms. Can be heard clearly for entire presentation. Entire team shares equally in presentation and all team members show proficiency.	Team occasionally shows positive feelings about the topic, but is adequately knowledgeable. Uses clear voice and most technical terms are used correctly. Can be heard clearly for most of presentation. Entire team shares equally in presentation and some team members are less than proficient.	Team shows only mild interest in the topic during presentation. Uses low voice and/or technical terms incorrectly. Is difficult to hear during presentation. Most of team shares equally in presentation but some team members are less than proficient.	Team shows no interest in the topic presented. Mumbles, uses technical terms incorrectly, or speaks too quietly to hear during presentation. Team does not share equally in presentation and most of team members are less than proficient.		
Project Knowledge	Team demonstrates full knowledge of project. Team presents information in a logical and interesting sequence.	Team answers expected questions but cannot elaborate. Team presents information in a logical sequence that can be easily followed.	Team answers expected questions and can mostly elaborate. Team presents information in a logical sequence that can be easily followed.	Team answers expected questions but cannot elaborate. Team presents information in a mostly logical sequence.	Team can only answer simple questions. Audience following incoherent organization, as team jumps around and does not follow a sequence of information well.	Team does not grasp information and cannot answer questions. Audience cannot understand presentation as there is no clear sequence of information.	
Audience Awareness	Interview significantly increases audience's understanding of importance of project and future impact.	Interview increases audience's understanding of importance of project and future impact.	Interview minimally raises audience's understanding of importance of project and future impact.	Interview minimally raises audience's understanding of importance of topic, shows some development with little future impact.	Interview contributes something, but fails to increase audience's understanding of importance of topic. Lacks development and little future impact.	Presentation fails to increase audience's knowledge of topic and has no future impact.	
Response to Questions	Answers to technical questions demonstrate superior knowledge of the concepts and processes used in project. All members contribute equally to answers and all are equally superior in responses.	Answers to technical questions demonstrate above average knowledge of the concepts & processes used in project. All members contribute equally to answers & most team members are above average in responses.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Answers to technical questions demonstrate minimal knowledge of concepts and processes used. All team members do not answer questions.	Team is unable to answer technical questions and/or one member of team answers all the questions.		



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Technical Interview (Presentation Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Content Area: Objective	Team states their project objective exceeding well. Interview stays on topic to properly address objective to the highest level.	Team clearly states their project objective. Interview stays on topic to properly address objective with some excess information.	Team clearly states their project objective. Interview stays somewhat on topic to properly address objective with a fair amount of excess information.	Team does not state their project objective well. Interview does not stay on topic well to properly address objective with a large amount of excess information.	Team does not state their project objective well. Interview does not stay on topic to properly address objective.	Team does not state their project objective. Interview does not stay on topic to properly address objective with a large amount of excess information.	
Content Area: Engineering Design Process	Team exceptionally conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed their decisions exceedingly well.	Team effectively conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed most of their decisions.	Team effectively conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed some of their decisions.	Team inadequately conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is minimally able to incorporate how their research informed any of their decisions.	Team fails to convey their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is unable to incorporate how their research informed any of their decisions.	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team does not use and/or reference data to inform and convey their project choice(s) and reasoning through presentation or interview.
Content Area: Data	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview exceedingly well.	Team mostly uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team rarely uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team is somewhat unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is minimally able to incorporate how their tests resulted in their conclusions.	Team is unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.	Team is somewhat unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is minimally able to incorporate how their tests resulted in their conclusions.	Team is unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.
Content Area: Conclusion and Recommendations	Team is able to effectively present to the highest level their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions exceptionally well.	Team is able to effectively present at an above average level their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions adequately.	Team is able to effectively present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is minimally able to incorporate how their tests resulted in their conclusions.	Team is able to mostly use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team utilizes other support material to enhance interview, but some material is unused or does not add to the enhancement of the interview.	Team is not adequately able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team could use additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team does not use and/or reference support materials on poster to enhance interview and convey understanding of project through presentation or interview.	
Content Area: Support	Team is able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview exceedingly well. Team logically and clearly utilizes other support material to greatly enhance interview.						
Total							
Column Totals							



Appendix C: Technical Interview (Presentation Rubric)

Technical Interview (Presentation Rubric)		Exemplar(s) (5 points)		Good (3 points)		Fair (2 points)		Poor (1 point)		Not present (0 points)		Observation Notes	
Nonverbal Skills	Team holds attention with the use of direct eye contact; uses poster to guide interview exceedingly well; helps the audience visualize. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Good use of body language. Exceptional use of body language.	Team holds attention with the use of direct eye contact, effectively uses poster to guide interview. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Adequate use of body language.	Team uses good direct eye contact with audience, but reads some parts from the poster. Movement/gestures enhance articulation. Team somewhat displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Good use of body language.	Team uses good direct eye contact with audience, but mostly reads from the poster. Team uses minimal Movement/gestures that enhance articulation. Team mostly displays nervous nature and has a substantial amount of fidgeting and/or nervous movement. Some use of body language.	Team uses some direct eye contact with audience, but mostly reads from and/or off the poster. Team uses minimal Movement/gestures that enhance articulation. Team mostly displays nervous nature and shows mostly fidgeting and/or nervous movement. Minimal use of body language.	Team makes no eye contact with audience. Does not interact with poster at all. No movement or descriptive gestures. Obvious tension or nervousness.	Team makes no eye contact with audience. Mostly reads from and/or off the poster. Very little movement or descriptive gestures. Team mostly displays nervous nature and shows mostly fidgeting and/or nervous movement. Minimal use of body language.	Team shows no interest in the topic presented. Mumbles, uses technical terms incorrectly, or speaks too quietly to hear during presentation. Most of team shares equally in presentation but some team members are less than proficient.	Team shows no interest in the topic during presentation. Uses low voice and/or technical terms incorrectly. Is difficult to hear during presentation. Team does not share equally in presentation and most of team members are less than proficient.	Team shows only mild interest in the topic during presentation. Uses mostly clear voice and some technical terms are used correctly. Can be heard clearly for some of presentation. Entire team shares equally in presentation but some team members are less than proficient.	Team shows positive feelings about the topic, but is adequately knowledgeable. Uses clear voice and most technical terms are used correctly. Can be heard clearly for most of presentation. Entire team shares equally in presentation and all team members show proficiency.	Team shows no interest in the topic during presentation. Team members are less than proficient.	Team shows no interest in the topic during presentation. Team members are less than proficient.
Verbal Skills	Team shows extreme enthusiasm and can verbally convey knowledge about the topic during entire presentation. Uses clear voices and correct usage of technical terms. Can be heard clearly for entire presentation. Entire team shares equally in presentation and most team members are above average in skill.	Team shows mostly enthusiasm and can verbally convey knowledge about the topic during entire presentation. Uses clear voices and correct usage of technical terms. Can be heard clearly for entire presentation. Entire team shares equally in presentation and most team members are above average in skill.	Team answers expected questions and can adequately elaborate. Team presents information in a logical sequence that can be easily followed.	Team answers expected questions but cannot elaborate. Team presents information in a mostly logical sequence.	Team answers expected questions but cannot elaborate. Team presents information in a mostly logical sequence.	Interview minimally raises audience's understanding of importance of project and future impact.	Interview minimally raises audience's understanding of importance of project and future impact.	Interview contributes to increase audience's understanding of importance of topic, shows some development with little future impact.	Interview contributes to increase audience's understanding of importance of topic. Lacks development and little future impact.	Interview minimally raises audience's understanding of importance of project and future impact.	Interview increases audience's understanding of importance of project and future impact.	Interview significantly increases audience's understanding of importance of project and future impact.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but half or less than one-half are vague.
Project Knowledge	Team demonstrates full knowledge of project. Team presents information in a logical and interesting sequence.	Team demonstrates full knowledge of project. Team presents information in a logical and interesting sequence.	Answers to technical questions demonstrate a textbook knowledge of the concepts & processes used in project. All team members contribute equally to answers and all are equally superior in responses.	Answers to technical questions demonstrate above average knowledge of the concepts & processes used in project. All team members contribute equally to answers and most team members are above average in responses.	Answers to technical questions demonstrate above average knowledge of the concepts & processes used in project. All team members contribute equally to answers and most team members are above average in responses.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Answers to technical questions demonstrate a textbook knowledge of the concepts & processes used in project. All team members answer questions, but half or less than one-half are vague.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Team is unable to answer technical questions and/or one member of team answers all the questions.	
Audience Awareness	Team holds attention with the use of direct eye contact; uses poster to guide interview exceedingly well; helps the audience visualize. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Good use of body language. Exceptional use of body language.	Team holds attention with the use of direct eye contact, effectively uses poster to guide interview. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Adequate use of body language.	Team uses good direct eye contact with audience, but mostly reads from the poster. Team uses minimal Movement/gestures that enhance articulation. Team mostly displays nervous nature and shows mostly fidgeting and/or nervous movement. Minimal use of body language.	Team makes no eye contact with audience. Does not interact with poster at all. No movement or descriptive gestures. Obvious tension or nervousness.	Team makes no eye contact with audience. Mostly reads from and/or off the poster. Very little movement or descriptive gestures. Team mostly displays nervous nature and shows mostly fidgeting and/or nervous movement. Minimal use of body language.	Team shows no interest in the topic during presentation. Team members are less than proficient.	Team shows no interest in the topic during presentation. Team members are less than proficient.	Team shows only mild interest in the topic during presentation. Uses mostly clear voice and some technical terms are used correctly. Can be heard clearly for most of presentation. Entire team shares equally in presentation but some team members are less than proficient.	Team shows no interest in the topic during presentation. Team does not share equally in presentation and most of team members are less than proficient.	Team shows positive feelings about the topic, but is adequately knowledgeable. Uses clear voice and most technical terms are used correctly. Can be heard clearly for some of presentation. Entire team shares equally in presentation and all team members show proficiency.	Team shows positive feelings about the topic, but is adequately knowledgeable. Uses clear voice and most technical terms are used correctly. Can be heard clearly for most of presentation. Entire team shares equally in presentation and most team members are above average in skill.	Team shows extreme enthusiasm and can verbally convey knowledge about the topic during entire presentation. Uses clear voices and correct usage of technical terms. Can be heard clearly for entire presentation. Entire team shares equally in presentation and most team members are above average in skill.	Team holds attention with the use of direct eye contact; uses poster to guide interview exceedingly well; helps the audience visualize. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Good use of body language. Exceptional use of body language.



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MESA Arduino STEM Solutions
Revised 21 September 2017

Technical Interview (Presentation Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present! (0 points)	Observation Notes
Content Area: Objective	Team states their project objective exceeding well. Interview stays on topic to properly address objective to the highest level.	Team clearly states their project objective. Interview stays on topic to properly address objective with some excess information.	Team states their project objective. Interview stays somewhat on topic to properly address objective with a fair amount of excess information.	Team does not state their project objective well. Interview does not stay on topic well to properly address objective.	Team does not state their project objective well. Interview does not stay on topic to properly address objective.	Team does not state their project objective well. Interview does not stay on topic well to properly address objective with a large amount of excess information.	Team does not state their project objective well. Interview does not stay on topic to properly address objective.
Content Area: Engineering Design Process	Team exceptionally conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed their decisions exceedingly well.	Team effectively conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed their decisions.	Team effectively conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed most of their decisions.	Team fails to convey their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is minimally able to incorporate how their research informed any of their decisions.	Team fails to convey their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is unable to incorporate how their research informed any of their decisions.	Team fails to convey their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is unable to incorporate how their research informed any of their decisions.	Team fails to convey their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is unable to incorporate how their research informed any of their decisions.
Content Area: Data	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team mostly uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team rarely uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team does not use and/or reference data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team does not use and/or reference data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team does not use and/or reference data to inform and convey their project choice(s) and reasoning through presentation or interview.
Content Area: Conditions and Recommendations	Team is able to effectively present to the highest level their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions adequately well.	Team is able to effectively present at an above average level their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions adequately well.	Team is able to effectively present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is minimally able to incorporate how their tests resulted in their conclusions.	Team is able to somewhat effectively present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.	Team is somewhat unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.	Team is unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.	Team is unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.
Content Area: Support	Team is able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview exceedingly well. Team logically and clearly utilizes other support material to greatly enhance interview.	Team is able to effectively use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team utilizes other support material to enhance interview, but some material is unused or does not add to the enhancement of the interview.	Team is able to effectively use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team utilizes additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team is not adequately able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team could use additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team is not adequately able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team could use additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team is not adequately able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team could use additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team is not adequately able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team could use additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.
Column Totals	50	50					
Total							



Appendix C: Technical Interview (Presentation Rubric)

Technical Interview (Presentation Rubric)	Expediatory (5 points)	Excellent (9 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Nonverbal Skills	Team holds attention of audiences with the use of direct eye contact; uses poster to guide interview exceedingly well. Helps the audience visualize. Team displays relaxed, self-confident nature, and is free of fidgeting and/or nervous movement. Exceptional use of body language.	Team holds attention of audiences with the use of direct eye contact; effectively uses poster to guide interview. Team displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Good use of body language.	Team uses good direct eye contact with audience, but reads some parts from the poster. Movements/gestures enhance articulation. Team somewhat displays relaxed, self-confident nature, and has minimal use of fidgeting and/or nervous movement. Adequate use of body language.	Team uses some direct eye contact with audience, but reads mostly from the poster. Team uses minimal movements/gestures that enhance articulation. Team mostly displays nervous nature and shows mostly fidgeting and/or nervous movement. Minimal use of body language.	Team makes no eye contact with audience. Mostly reads from and/or has little interaction with poster. Very little movement or descriptive gestures. Obviously tension or nervousness.	Team makes no eye contact with audience. Does not interact with poster at all. No movement or descriptive gestures. Obviously tension or nervousness.	
Verbal Skills	Team shows extreme enthusiasm and can verbally convey knowledge about the topic during entire presentation. Uses clear voices and correct usage of technical terms. Can be heard hand clearly for entire presentation. Entire team shares equally in presentation and most team members are above average in skill.	Team shows mostly enthusiasm and can verbally convey knowledge about the topic, but is adequately knowledgeable. Uses clear voice and correct usage of technical terms. Can be heard clearly for most of presentation. Entire team shares equally in presentation and all team members show proficiency.	Team occasionally shows positive feelings about the topic, but is adequately knowledgeable. Uses mostly clear voice and some technical terms are used correctly. Can be heard clearly for some of presentation. Entire team shares equality in presentation but some team members are less than proficient.	Team shows only mild interest in the topic during presentation. Uses low voice and/or technical terms incorrectly. Is difficult to hear during presentation. Most of team shares equally in presentation but some team members are less than proficient.	Team shows no interest in the topic presented. Mumbles, uses technical terms incorrectly, or speaks too quietly to hear during presentation. Team does not share equally in presentation and most of team members are less than proficient.	Team does not grasp information and cannot answer questions. Audience cannot understand presentation as there is no clear sequence of information.	
Project Knowledge	Team demonstrates full knowledge of project. Team presents information in a logical and interesting sequence.	Team answers expected questions and can adequately elaborate. Team presents information in a logical sequence that can be easily followed.	Team answers expected questions but cannot elaborate. Team presents information in a mostly logical sequence.	Team can only answer simple questions. Audience has difficulty following incomplete organization, as team jumps around and does not follow a sequence of information well.	Interview contributes something, but fails to increase audience's understanding of importance of topic. Lacks development and little future impact.	Presentation fails to increase audience's knowledge of topic and has no future impact.	
Audience Awareness	Interview significantly increases audience's understanding of importance of project and future impact.	Interview minimally raises audience's understanding of importance of project and future impact.	Interview minimally raises audience's understanding of importance of topic, shows some development with little future impact.	Answers to technical questions demonstrate minimal knowledge of concepts and processes used in project. All team members answer questions, but half or less than team can elaborate well.	Answers to technical questions demonstrate some knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.	Team is unable to answer technical questions	Team answers technical questions demonstrating minimal knowledge of concepts and processes used in project. All team members answer questions, but most responses are vague.
Response to Questions	Answers to technical questions demonstrate superior knowledge of the concepts and processes used in project. All members contribute equally to answers and all are equally superior in responses.						



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Technical Interview (Presentation Rubric)		Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Content Area: Objective	Team states their project objective exceeding well. Interview stays on topic to properly address objective to the highest level.	Team clearly states their project objective. Interview stays on topic to properly address objective with some excess information.	Team clearly states their project objective. Interview stays somewhat on topic to properly address objective with a fair amount of excess information.	Team states their project objective. Interview stays somewhat on topic to properly address objective with a fair amount of excess information.	Team does not state their project objective well. Interview does not stay on topic well to properly address objective with a large amount of excess information.	Team does not state their project objective well. Interview does not stay on topic to properly address objective.		
Content Area: Engineering Design Process	Team exceptionally conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed their decisions exceedingly well.	Team effectively conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed most of their decisions.	Team mostly conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed some of their decisions.	Team mostly conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is able to incorporate how their research informed most of their decisions.	Team inadequately conveys their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is minimally able to incorporate how their research informed any of their decisions.	Team fails to convey their Methodology and Process, and their project challenges and correlating solutions through presentation or interview. Team is unable to incorporate how their research informed any of their decisions.		
Content Area: Data	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview exceedingly well.	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team rarely uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team uses and references data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team does not use and/or reference data to inform and convey their project choice(s) and reasoning through presentation or interview.	Team does not use and/or reference data to inform and convey their project choice(s) and reasoning through presentation or interview.		
Content Area: Conditions and Recommendations	Team is able to effectively present to the highest level their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions exceptionally well.	Team is able to effectively present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions adequately.	Team is able to effectively present an above average level their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is able to incorporate how their tests resulted in their conclusions well.	Team is able to effectively present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is minimally able to incorporate how their tests resulted in their conclusions.	Team is somewhat unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.	Team is unable to present their final project and discuss conclusive findings, limitations, next steps, and recommendations for further development through presentation or interview. Team is unable to incorporate how their tests resulted in their conclusions.		
Content Area: Support	Team is able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview exceedingly well. Team logically and clearly utilizes other support material to greatly enhance interview.	Team is able to effectively use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team utilizes other support material to enhance interview, but some material is unused or does not add to the enhancement of the interview.	Team is able to mostly use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team utilizes other support material to enhance interview, and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team is not adequately able to use and reference support materials on poster to enhance interview and convey understanding of project through presentation or interview. Team could use additional material to enhance interview and/or what is available is mostly unused or does not add to the enhancement of the interview.	Team does not use and/or reference support materials on poster to enhance interview and convey understanding of project through presentation or interview.	Team does not use and/or reference support materials on poster to enhance interview and convey understanding of project through presentation or interview.		
Column Totals		50	50					
Total		50	50					

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Appendix B: Technical Interview (Poster Rubric)

Technical Interview (Poster Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Organization	All content areas are included, clearly presented, labeled, and easy to follow even in the absence of the team.	Most of the expected content areas are there, but the presentation is confusing, not all is labeled, and it is difficult to follow in the absence of the team.	Some of the expected content areas are present, but poorly laid out and confusing to follow without the team.	Have at least one content area present but poorly laid out and entirely confusing to follow without the team.	There is not a clear content area present and unable to follow without the team.		
Coherence	All content is carefully chosen to overview the team's project and present the prototype. There is no extraneous information. Information is succinct and important.	Some content is not consistent with the overview of the team's project and presentation of the prototype. There is a moderate amount of extraneous information.	Content appears inconsistent with much of the overview of the team's project and presentation of the prototype. It is difficult to follow because of too much extraneous information or too little relevant information.	Content appears inconsistent and does present a clean overview of the team's project or presentation of the prototype. It is difficult to follow because of too much extraneous information or too little relevant information.	There is no clear coherence. Content does not relate to project. There is an abundance of extraneous information or not enough information.		
Content Area: Objective	The objective of the project and requirements of the design are all conveyed succinctly, they are articulate, they convey a clear scope of the project, and the quality of background information is exceptional.	The objective of the project and requirements of the design are mostly conveyed succinctly, they are mostly articulate, they convey a satisfactory scope of the project, and the quality of background information is enough to define basic objective.	The objective of the project and requirements of the design are mostly conveyed succinctly, they are articulate, they convey a good scope of the project, and the quality of background information is above average.	The objective of the project and requirements of the design are not conveyed succinctly, they do not articulate, they convey a fair scope of the project, and the quality of background information does not define objective entirely.	The objective of the project and requirements of the design are not conveyed succinctly, they are not articulate, they do not convey a scope of the project, and the quality of background information is poor.	The objective of the project and requirements of the design are not conveyed succinctly or at all, they are not articulate, they are missing or do not convey a clear scope of the project, and the quality of background information is extremely poor or absent.	
Content Area: Engineering Design Process Methodology	There is a clear description and exceptional visual representation of the teams Methodology and Design Process.	There is an adequate description and visual representation of the teams Methodology and Design Process.	There is an above average description and visual representation of the teams Methodology and Design Process.	There is a fair description and minimal visual representation of the teams Methodology and Design Process. Needs some additional information to understand entire process.	There is a poor description and no visual representation of the teams Methodology and Design Process. Needs a fair amount of additional information to understand entire process.	There is no clear description and visual representation of the teams Methodology and Design Process. Needs a large amount of additional information to understand entire process.	
Content Area: Design Evaluation	There is a complete analysis of project challenges and the correlating solutions, there is a superior evaluation of any competing design solutions; section includes succinct and relevant research and/or background.	There is a good analysis of project challenges and the correlating solutions, there is a good evaluation of any competing design solutions; section includes succinct and relevant research and/or background.	There is an adequate analysis of project challenges and the correlating solutions, there is a fair evaluation of any competing design solutions; section includes succinct and a fair amount of relevant research and/or background.	There is a limited analysis of project challenges and the correlating solutions, there is a poor or missing; there is somewhat relevant evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	There is not an adequate analysis of project challenges and the correlating solutions are extremely minimal or missing; there is no evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	Project challenges and the correlating solutions are extremely minimal or missing; there is no evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	



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Technical Interview (Poster Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Content Area: Data	Excellent charts and/or graphs are present that support exemplary research and testing. They are appropriate, clear, and provide a superior perspective to their project. There is a logical and clear Arduino Diagram(s) to support programming choice.	Above average charts and/or graphs are present that support adequate research and testing. They are appropriate, clear, and provide a satisfactory perspective to their project. There is an Arduino Diagram(s) to support programming choice that is understandable and satisfactory.	Charts and/or graphs are present that support adequate research and testing. They are somewhat appropriate, clear, and provide a minimal perspective to their project. There is an Arduino Diagram(s) to support some programming choice(s).	Charts and/or graphs support some amount of research and testing. They are somewhat appropriate, and provide a minimal perspective to their project. There is an Arduino Diagram(s) that supports any programming choice(s), or are absent.	Charts and/or graphs support minimal amount of research and testing. They are not appropriate, and provide a minimal perspective to their project. Arduino Diagram(s) do not support any programming choice(s), or are absent.		
Content Area: Conclusions and Recommendations	Includes a superior design flaw analysis and justification for their design choice. Includes clear and relevant next steps for their project.	Includes an above average design flaw analysis and justification for their design choice. Next steps for their project are satisfactory.	Includes a vague or limited design flaw analysis and justification for their design choice. Includes some next steps for their project, but could use work.	Includes a minimal design flaw analysis and poor justification for their design choice. Next steps for their project, but could use work.	Includes no design flaw analysis or justification for their design choice. Next steps for their project are missing or entirely inadequate.		
Content Area: Support Concepts	Poster includes quality Math and Science concepts that are relevant and clearly show a superior use of those concepts.	Poster includes quality Math and Science concepts that are relevant and clearly show a above average use of those concepts.	Poster includes quality Math and Science concepts that are relevant and clearly show a satisfactory use of those concepts.	Poster includes Math and/or Science concept(s) that are somewhat relevant and show some use of those concepts.	Poster includes Math and/or Science concept(s) that are minimally relevant and show poor use of those concepts.	Poster does not include any Math and/or Science concept(s) and/or does not show any use of those concepts.	
Content Area: Support Visualizations	Excellent use of support materials to include illustrations, diagrams, sample code, and/or photos. Support materials significantly improve understanding and enhance visual appeal. All items are properly labeled and are completely significant to project.	Above average use of support materials to include illustrations, diagrams, sample code, and/or photos. Support materials greatly improve understanding and enhance visual appeal. Some of items are properly labeled and most are significant to project.	Adequate use of support materials to include illustrations, diagrams, sample code, and/or photos. Support materials somewhat improve understanding and enhance visual appeal. Most or all of items are not properly labeled. Most items are not significant to project.	Fair use of support materials to include illustrations, diagrams, sample code, and/or photos. Support materials somewhat improve understanding and enhance visual appeal. Most or all of items are not properly labeled. Most or all of items are not significant to project.	Poor use of support materials to include illustrations, diagrams, sample code, and/or photos. Support materials offer no understanding or inadequate significance to project.	Support Items are completely inadequate or missing sample code. If present, support materials offer no understanding or inadequate significance to project.	
Text/Foot, Spelling and Grammar	All text is clear and readable at a distance of 3 feet. Contains no errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains minimal errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains a fair amount of errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains too small to read at 3 feet. Contains an extraordinary amount of errors in spelling or grammar including definition of acronyms at their first use.	Font is a bit distracting or too small to read at 3 feet. Contains a large amount of errors in spelling or grammar including definition of acronyms at their first use.	Font is entirely distracting or too small to read at 3 feet. Contains an extraordinary amount of errors in spelling or grammar including definition of acronyms at their first use.	
Column Total	50	50					
Total							

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Appendix B: Technical Interview (Poster Rubric)

Technical Interview (Poster Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observing Notes
Organization	All content areas are included, clearly presented labeled, and easy to follow even in the absence of the team.	Content areas are found, but the presentation is a bit crowded, not all is labeled, or it is disorganized. Requires the team for full comprehension.	Most of the expected content areas are there, but the presentation is confusing, not all is labeled, and it is difficult to follow in the absence of the team.	Some of the expected content areas are present, but poorly laid out and confusing to follow without the team.	Have at least one content area present, but poorly laid out and entirely confusing to follow without the team.	There is not a clear content area present and unable to follow without the team.	
Coherence	All content is carefully chosen to overview the team's project and present the prototype. There is no extraneous information. Information is succinct and important.	Content is carefully chosen to overview the team's project and present the prototype. There may be a few extraneous points. Information could be more succinct.	Some content is not consistent with the overview of the team's project and presentation of the prototype. There is a moderate amount of extraneous information.	Content appears inconsistent with much of the overview of the team's project and presentation of the prototype and is difficult to follow. There is a moderate amount of extraneous information.	Content appears inconsistent and does present a clean overview of the team's project or presentation of the prototype. It is difficult to follow because of too much extraneous information or too little relevant information.	There is no clear coherence. Content does not relate to project. There is an abundance of extraneous information or not enough information.	
Content Area: Objective	The objective of the project and requirements of the design are all conveyed succinctly, they are articulate, they convey a clear scope of the project, and the quality of background information is exceptional.	The objective of the project and requirements of the design are mostly conveyed succinctly, they are mostly articulate, they convey a satisfactory scope of the project, and the quality of background information is above average.	The objective of the project and requirements of the design are mostly conveyed succinctly, they are mostly articulate, they convey a satisfactory scope of the project, and the quality of background information is enough to define basic objective.	The objective of the project and requirements of the design are not conveyed succinctly, they are not articulate, they do not convey a scope of the project, and the quality of background information does not define objective entirely.	The objective of the project and requirements of the design are not conveyed succinctly, they are not articulate, they do not convey a scope of the project, and the quality of background information is poor.	The objective of the project and requirements of the design are not conveyed succinctly or at all, they are not articulate, they are missing or do not convey a clear scope of the project, and the quality of background information is poor.	
Content Area: Engineering Design Process Methodology	There is a clear description and exceptional visual representation of the teams Methodology and Design Process.	There is an above average description and visual representation of the teams Methodology and Design Process.	There is an adequate description and visual representation of the teams Methodology and Design Process.	There is a fair description and minimal visual representation of the teams Methodology and Design Process.	There is a poor description and no visual representation of the teams Methodology and Design Process.	There is no clear description and visual representation of the teams Methodology and Design Process.	
Content Area: Engineering Design Process Evaluation	There is a complete analysis of project challenges and the correlating solutions, there is a superior evaluation of any competing design solutions; section includes succinct and relevant research and/or background.	There is a good analysis of project challenges and the correlating solutions, there is a good evaluation of any competing design solutions; section includes succinct and relevant research and/or background.	There is an adequate analysis of project challenges and the correlating solutions; there is a fair evaluation of any competing design solutions; section includes succinct and a fair amount of relevant research and/or background.	There is a limited analysis of project challenges and the correlating solutions; there is a inadequate or missing, there is somewhat relevant evaluation of any competing design solutions; section does not include a minimal amount of research and/or background.	There is not an adequate analysis of project challenges and the correlating solutions; there is a poor or missing, there is minimal evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	Project challenges and the correlating solutions are extremely minimal or missing; there is no evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	



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Technical Interview (Poster Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Content Area: Data	Excellent charts and/or graphs are present that support exemplary research and testing. They are appropriate, clear, and provide a superior perspective to their project. There is logical and clear Arduino Diagram(s) to support programming choice.	Above average charts and/or graphs are present that support adequate research and testing. They are appropriate, clear, and provide complete perspective to their project. There is logical and clear Arduino Diagram(s) to support programming choice.	Charts and/or graphs are present that support adequate research and testing. They are somewhat appropriate, clear, and provide a minimal perspective to their project. There is an Arduino Diagram(s) to support some programming choice(s).	Charts and/or graphs support some amount of research and testing. They are somewhat appropriate, and provide a minimal perspective to their project. Arduino Diagram(s) do not support any programming choice(s) or are absent.	Charts and/or graphs support minimal amount of research and testing. They are not appropriate, and provide no perspective to their project. Arduino Diagram(s) minimally supports any programming choice(s).	Charts and/or graphs are absent or do not support research and testing. They are not appropriate, and provide no perspective to their project. Arduino Diagram(s) do not support any programming choice(s) or are absent.	
Content Area: Conclusion and Recommendations	Includes a superior design flaw analysis and justification for their design choice. Includes clear and relevant next steps for their project.	Includes an above average design flaw analysis and justification for their design choice. Includes clear and relevant next steps for their project.	Includes a satisfactory design flaw analysis and justification for their design choice. Next steps for their project are satisfactory.	Includes a vague or limited design flaw analysis and justification for their design choice. Includes some next steps for their project, but could use work.	Includes minimal design flaw analysis and poor justification for their design choice. Includes minimal next steps for their project, but could use work.	Includes no design flaw analysis or justification for their design choice. Next steps for their project are missing or entirely inadequate.	
Content Area: Concepts	Poster includes quality Math and Science concepts that are relevant and clearly show a superior use of those concepts.	Poster includes quality Math and Science concepts that are relevant and clearly show an above average use of those concepts.	Poster includes quality Math and Science concepts that are relevant and cleanly show a satisfactory use of those concepts.	Poster includes Math and/or Science concept(s) that are minimally relevant and show some use of those concepts.	Poster includes Math and/or Science concept(s) that are minimally relevant and show poor use of those concepts.	Poster does not include any Math and/or Science concept(s) and/or does not show any use of those concepts.	
Content Area: Support Visualization	Excellent use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials significantly improve understanding and enhance visual appeal. All items are properly labeled and are completely significant to project.	Above average use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials greatly improve understanding and enhance visual appeal. Most of items are properly labeled and most are significant to project.	Adequate use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials improve understanding and enhance visual appeal. Some of items are properly labeled and most are significant to project.	Fair use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials somewhat improve understanding and enhance visual appeal. Most or all of items are not properly labeled. Most or all items are not significant to project.	Poor use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials offer no improvement or inadequate significance to project.	Support items are completely inadequate or missing sample code. If present, support materials offer no understanding or inadequate significance to project.	
Text Font, Spelling and Grammar	All text is clear and readable at a distance of 3 feet. Contains no errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains minimal errors in spelling or grammar including definition of acronyms at their first use.	Most of text is clear and readable at a distance of 3 feet. Contains a fair amount of errors in spelling or grammar including definition of acronyms at their first use.	Font is a bit distracting or too small to read at 3 feet. Contains a large amount of errors in spelling or grammar including definition of acronyms at their first use.	Font is entirely distracting or too small to read at 3 feet. Contains an extraordinary amount of errors in spelling or grammar including definition of acronyms at their first use.		
Column Totals							
Total							

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Appendix B: Technical Interview (Poster Rubric)

Technical Interview (Poster Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Organization	All content areas are included clearly presented, labeled, and easy to follow even in the absence of the team.	Content areas are found, but the presentation is a bit crowded, not all is labeled, or it is disorganized. Requires the team for full comprehension.	Most of the expected content areas are there, but the presentation is confusing, not all is labeled, and it is difficult to follow in the absence of the team.	Some of the expected content areas are present, but poorly laid out and confusing to follow without the team.	Have at least one content area present, but poorly laid out and entirely confusing to follow without the team.	There is not a clear content area present and unable to follow without the team.	
Coherence	All content is carefully chosen to overview the team's project and present the prototype. There is no extraneous information. Information is succinct and important.	Content is carefully chosen to overview the team's project and present the prototype. There may be a few extraneous points. Information could be more succinct.	Content is not consistent with the overview of the team's project and presentation of the prototype. There is a moderate amount of extraneous information.	Content appears inconsistent with much of the overview of the team's project and presentation of the prototype and is difficult to follow. There is a moderate amount of extraneous information.	Content appears inconsistent and does not present a clean overview of the team's project or presentation of the prototype. It is difficult to follow because of too much extraneous information or too little relevant information.	There is no clear coherence. Content does not relate to project. There is an abundance of extraneous information or not enough information.	
Content Area: Objective	The objectives of the project and requirements of the design are mostly conveyed succinctly, they are articulate, they convey a good scope of the project, and the quality of background information is above average.	The objectives of the project and requirements of the design are mostly conveyed succinctly, they are articulate, they convey a satisfactory scope of the project, and the quality of background information is enough to define basic objective.	The objectives of the project and requirements of the design are mostly conveyed succinctly, they are mostly articulate, they convey a satisfactory scope of the project, and the quality of background information is enough to define basic objective.	The objectives of the project and requirements of the design are not conveyed succinctly, they are not articulate, they do not convey a scope of the project, and the quality of background information does not define objective entirely.	The objective of the project and requirements of the design are not conveyed succinctly, they are not articulate, they do not convey a scope of the project, and the quality of background information is poor.	The objective of the project and requirements of the design are not conveyed succinctly, they are not articulate, they do not convey a scope of the project, and the quality of background information is poor.	
Content Area: Engineering Design Process Methodology	There is a clear description and exceptional visual representation of the teams Methodology and Design Process.	There is an above average description and visual representation of the teams Methodology and Design Process.	There is an adequate description and visual representation of the teams Methodology and Design Process.	There is a fair description and minimal visual representation of the teams Methodology and Design Process. Needs some additional information to understand entire process.	There is a poor description and minimal visual representation of the teams Methodology and Design Process. Needs a fair amount of additional information to understand entire process.	There is no clear description, and visual representation of the teams Methodology and Design Process is unclear or absent. Needs a large amount of additional information to understand entire process.	
Content Area: Engineering Design Process Evaluation	There is a complete analysis of project challenges and the correlating solutions; there is a superior evaluation of any competing design solutions; section includes succinct and relevant research and/or background.	There is a good analysis of project challenges and the correlating solutions; there is a good evaluation of any competing design solutions; section includes succinct and relevant research and/or background.	There is an adequate analysis of project challenges and the correlating solutions; there is a fair evaluation of any competing design solutions; section includes succinct and a fair amount of relevant research and/or background.	There is a limited analysis of project challenges and the correlating solutions; there is a poor or missing, there is somewhat relevant evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	There is not an adequate analysis of project challenges and the correlating solutions are extremely minimal or missing; there is no evaluation of any competing design solutions; section does not include succinct or relevant research and/or background.	Project challenges and the correlating solutions are extremely minimal or missing; there is no evaluation of any competing design solutions; section does not include succinct or relevant research and/or background	



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Technical Interview (Poster Rubric)	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Content Area: Data	Excellent charts and/or graphs are present that support complete research and testing. They are appropriate, clear, and provide a superior perspective to their project. There is logical and clear Arduino Diagram(s) and clear Arduino Diagram(s) to support programming choice.	Above average charts and/or graphs are present that support adequate research and testing. They are appropriate, clear, and provide a satisfactory perspective to their project. There is an Arduino Diagram(s) to support some programming choice that is understandable and satisfactory.	Charts and/or graphs are present that support adequate research and testing. They are somewhat appropriate, and provide a minimal perspective to their project. There is an Arduino Diagram(s) to support some programming choice(s).	Charts and/or graphs support some amount of research and testing. They are somewhat appropriate, and provide a minimal perspective to their project. Arduino Diagram(s) do not support any programming choice(s) or are absent.	Charts and/or graphs support minimal amount of research and testing. They are not appropriate, and provide no minimal perspective to their project. Arduino Diagram(s) do not support any programming choice(s).	Charts and/or graphs are absent or do not support research and testing. They are not appropriate, and provide no minimal perspective to their project. Arduino Diagram(s) do not support any programming choice(s) or are absent.	
Content Area: Correlations and Recommendations	Includes a superior design flow analysis and justification for their design choice. Includes clear and relevant next steps for their project.	Includes an above average design flow analysis and justification for their design choice. Includes clear and relevant next steps for their project.	Includes a satisfactory design flow analysis and justification for their design choice. Next steps for their project are satisfactory.	Includes vague or limited design flow analysis and justification for their design choice. Includes some next steps for their project, but could use work.	Includes minimal design flow analysis and justification for their design choice. Includes minimal next steps for their project, but could use work.	Includes no design flow analysis or justification for their design choice. Next steps for their project are missing or entirely inadequate.	
Content Area: Support Concepts	Poster includes quality Math and Science concepts that are relevant and clearly show an above average use of those concepts.	Poster includes quality Math and Science concepts that are relevant and clearly show a satisfactory use of those concepts.	Poster includes quality Math and Science concepts that are relevant and clearly show a above average use of those concepts.	Poster includes Math and/or Science concept(s) that are minimally relevant and show poor use of those concepts.	Poster includes Math and/or Science concept(s) that are minimally relevant and show poor use of those concepts.	Poster does not include any Math and/or Science concept(s) and/or does not show any use of those concepts.	
Content Area: Support Visualization	Excellent use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials significantly improve understanding and enhance visual appeal. All items are properly labeled and are completely significant to project.	Above average use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials improve understanding and enhance visual appeal. Some items are properly labeled and most are significant to project.	Adequate use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials somewhat improve understanding and enhance visual appeal. Some items are not properly labeled. Most items are not significant to project.	Fair use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials somewhat improve understanding and enhance visual appeal. Most or all items are not properly labeled. Most or all items are not significant to project.	Poor use of support materials to include: illustrations, diagrams, sample code, and/or photos. Support materials offer no improvement or enhance visual appeal. Most or all items are not properly labeled. Most or all items are not significant to project.	Support items are completely inadequate or missing. Sample code, if present, support materials offer no understanding or inadequate significance to project.	
Text Foot, Spelling and Grammar	All text is clear and readable at a distance of 3 feet. Contains no errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains no errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains a few errors in spelling or grammar including definition of acronyms at their first use.	All text is clear and readable at a distance of 3 feet. Contains a fair amount of errors in spelling or grammar including definition of acronyms at their first use.	Font is a bit distracting or too small to read at 3 feet. Contains a large amount of errors in spelling or grammar including definition of acronyms at their first use.	Font is entirely distracting or too small to read at 3 feet. Contains an extreme amount of errors in spelling or grammar including definition of acronyms at their first use.	
Column Totals							
Total							



Appendix A: Technical Interview (Prototype Demonstration) Rubric

Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Design <i>Design is simple and practical. It exceeds the requirements and the needs of client. All design elements are intentional and well thought out.</i>	Design is simple and practical. It meets most of the requirements and the needs of client. Most of the design elements are intentional and well thought out.	Design is somewhat simple and/or practical. It meets some requirements and the needs of client. Some of the design elements are intentional and well thought out. Could use some additional design development.	Design is not simple and/or practical. It does not meet most of the requirements and the needs of client. Most of the design elements are not intentional or well thought out.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay any part of the design process.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay most of the design process.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay any part of the design process.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay any part of the design process.
Originality <i>Prototype is completely creative, original, and not currently available. Team can clearly describe research done and what makes their prototype innovative and unique.</i>	Prototype is mostly creative and original and/or modifies an item currently available. Team can adequately describe research done and what makes their prototype somewhat innovative and unique.	Prototype mostly resembles an item currently available. Minimal modifications are made to make item unique.	Prototype mostly resembles an item currently available. Team can somewhat describe research done and attempts to make their project minimally unique.	Prototype is somewhat intuitive, easy to learn, and easy to use. Team can adequately articulate prototype instructions and purpose.	Prototype is somewhat intuitive, easy to learn, and easy to use. Needs a large amount of instruction and experience to use. Team can somewhat adequately articulate prototype instructions and purpose.	Prototype is not intuitive, not easy to learn, and difficult to use. AND/OR Team has a difficult time articulating prototype instructions and purpose.	Prototype is not intuitive, extremely difficult to learn, and is very difficult to use. AND/OR Team cannot describe any research done to attempt originality.
Usability <i>Prototype is exceedingly intuitive, easy to learn, and easy to use. Team can completely articulate prototype instructions and purpose.</i>	Prototype is entirely intuitive, easy to learn, and easy to use. Team can completely articulate prototype instructions and purpose.	Most of materials, equipment, and technologies are appropriate for design. Team is logical in material usage and budget consideration. Team can articulate and is knowledgeable about reasoning and purpose for all materials and technology used.	Some of materials, equipment, and technologies are appropriate for design. Team shows some logic in material usage and budget consideration. Team can somewhat articulate and is minimally knowledgeable about reasoning and purpose for materials and technology used.	Most of materials, equipment, and technologies are not appropriate for design. Team shows little or no logic in material usage and budget consideration. AND/OR Team cannot articulate or show knowledge about any of materials and technology used.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team no logic in material usage and budget consideration. AND/OR Team cannot articulate or show knowledge about reasoning and purpose for most of materials and technology used.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team no logic in material usage and budget consideration. AND/OR Team cannot articulate or show knowledge about any of materials and technology used.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team no logic in material usage and budget consideration. AND/OR Team cannot articulate or show knowledge about any of materials and technology used.
Materials and Technology <i>All materials, equipment, and technologies are exceedingly appropriate for design. Team is extremely logical in material usage and budget consideration. Team can exceedingly articulate and is knowledgeable about reasoning and purpose for all materials and technology used.</i>	All materials, equipment, and technologies are appropriate for design. Team is logical in material usage and budget consideration. Team can somewhat articulate and is knowledgeable about reasoning and purpose for all materials and technology used.						



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Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Arduino Usage (22)	Selected Arduino Hardware and Use of Sensor(s) are innovative, effective, and relevant to project. Team can exceptionally convey why selections were made or not made. Team is exceptionally knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are mostly innovative, effective, and relevant to project. Team can adequately convey why selections were made or not made. Team is adequately knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are somewhat innovative, effective, and/or relevant to project. Team can somewhat convey why selections were made or not made. Team is somewhat knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are poorly innovative, effective, and relevant to project. Team can poorly convey why selections were made or not made. Team is not very knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are not innovative, effective, and relevant to project. Team can not convey why selections were made or not made. Team shows no knowledge about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are not innovative, effective, and relevant to project. Team can not convey why selections were made or not made. Team shows no knowledge about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are not innovative, effective, and relevant to project. Team can not convey why selections were made or not made. Team shows no knowledge about sensor use and programming.
Data Collection Input	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Prototype is exceedingly able to process input data to result in an actual output data response. Team can clearly convey what data they are collecting and/or what variables are occurring to result in an output. This includes adequate knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can adequately convey what data they are collecting and/or what variables are occurring to result in an output. This includes adequate knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual or theoretical output data response. Team can somewhat convey what data they are collecting and/or what variables are occurring to result in an output. This includes some knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is not able to process input data to result in an actual or theoretical output data response. Team can poorly convey what data they are collecting and/or what variables are occurring to result in an output. This includes poor knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response.
Data Response Output (22)	Selected Arduino Hardware and/or Sensor(s) responds to data exceptionally efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can exceptionally convey the output process and what happens during use. This includes superior knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) responds to data efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can completely convey the output process and what happens during use. This includes complete knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) responds to data effectively. Prototype is able to be demonstrated effectively and with ease. Team can adequately convey the output process and what happens during use. This includes adequate knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen.



Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	No present (0 points)	Observation Notes
Testing	3 or more tests were conducted, documented, and used to improve the design. Team is exceedingly able to convey testing conditions, variables, and results of all tests. Team can convey exceptionally how each test helped to inform design choice(s).	3 or more tests were conducted, documented, and used to adequately improve the design. Team is adequately able to convey testing conditions, variables, and results of all tests. Team can convey how each test helped to inform design choice(s).	1 or more tests were conducted, documented, and used to somewhat improve the design. Team is somewhat able to convey testing conditions, variables, and results of all tests. Team can somewhat convey how each test helped to inform design choice(s).	1 or more tests were conducted, documented, and used to minimally improve the design. Team is minimally able to convey testing conditions, variables, and results of all tests. Team can convey minimally how each test helped to inform design choice(s), if at all.	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s).	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s).	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s). AND/OR If teams conducted a test, team can convey minimally or not at all how each test helped to inform design choice(s), if at all.
Column Totals							
Total Score:							

Technical Interview Totals

Prototype Demonstration Total: _____

Poster Total: _____

Presentation Total: _____

Shirt Penalty: _____

Grand Total: _____

(-5 points if not wearing official event shirt)

B.11 Smith - 2015
Datasets



Appendix A: Technical Interview (Prototype Demonstration) Rubric

Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Design	Design is simple and practical. It exceeds the requirements and the needs of client. All design elements are intentional and well thought out.	Design is simple and practical. It meets all of the requirements and the needs of client. All design elements are intentional and well thought out.	Design is somewhat simple and/or practical. It meets some requirements and the needs of client. Some of the design elements are intentional and well thought out. Could use some additional design development.	Design is not simple and/or practical. It does not meet most of the requirements and the needs of client. Most of the design elements are not intentional or well thought out.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development.	AND/OR Team could not adequately describe or relay any part of the design process.
Originality	Prototype is mostly creative and original and/or modifies an item currently available. Team can clearly describe research done and what makes their prototype innovative and unique.	Prototype is somewhat creative and original and/or modifies an item currently available. Team can adequately describe research done and what makes their prototype innovative and unique.	Prototype mostly resembles an item currently available. Minimal modifications are made to make item unique. Team can somewhat describe research done and attempts to make their project minimally unique.	Prototype is somewhat intuitive, easy to learn, and easy to use. Team can completely articulate prototype instructions and purpose.	Prototype is somewhat intuitive, easy to learn, and easy to use. Needs a large amount of instruction and experience to use. Team can somewhat adequately articulate prototype instructions and purpose.	Prototype is somewhat intuitive, easy to learn, and easy to use. Team can adequately articulate prototype instructions and purpose.	Prototype is a direct copy of a product currently available. AND/OR Team cannot describe any research done to attempt originally
Usability	Prototype is exceedingly intuitive, easy to learn, and easy to use. Team can completely articulate prototype instructions and purpose.	Prototype is entirely intuitive, easy to learn, and easy to use. Team can completely articulate prototype instructions and purpose.	Prototype is somewhat intuitive, easy to learn, and easy to use. Team has a difficult time articulating prototype instructions and purpose.	Prototype is not intuitive, not easy to learn, and difficult to use. Team has a difficult time articulating prototype instructions and purpose.	Prototype is not intuitive, extremely difficult to learn, and very difficult to use. Team cannot articulate any prototype instructions and purpose.	Prototype is not intuitive, extremely difficult to learn, and very difficult to use.	AND/OR Team cannot articulate any prototype instructions and purpose.
Materials and Technology	All materials, equipment, and technologies are exceedingly appropriate for design. Team is extremely logical in material usage and budget consideration. Team can exceedingly articulate and is knowledgeable about reasoning and purpose for all materials and technology used.	All materials, equipment, and technologies are appropriate for design. Team is logical in material usage and budget consideration. Team can articulate and is knowledgeable about reasoning and purpose for most of materials and technology used.	Some of materials, equipment, and technologies are appropriate for design. Team shows some logic in material usage and budget consideration. Team can somewhat articulate and is minimally knowledgeable about reasoning and purpose for materials and technology used.	Most of materials, equipment, and technologies are appropriate for design. Team shows little or no logic in material usage and budget consideration.	Most of materials, equipment, and technologies are not appropriate for design. Team shows no logic in material usage and budget consideration.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team has no logic in material usage and budget consideration.	AND/OR Team cannot articulate or show knowledge about any of materials and technology used.



Technical Interview (Prototype Demonstration) Rubric	Exceptional (4 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Arduino Usage (2)	Selected Arduino Hardware and Use of Sensor(s) are innovative, effective, and relevant to project. Team can completely convey why selections were made or not made. Team is exceptionally knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are mostly innovative, effective, and relevant to project. Team can adequately convey why selections were made or not made. Team is adequately knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are somewhat innovative, effective, and/or relevant to project. Team can selections were made or not made. Team is somewhat knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are poorly innovative, effective, and relevant to project. Team can selections were made or not made. Team is not very knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are not innovative, effective, and relevant to project. AND/OR Team cannot convey why selections were made or not made. Team shows no knowledge about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are not innovative, effective, and relevant to project. AND/OR Team cannot convey why selections were made or not made. Team shows no knowledge about sensor use and programming.	
Data Collection Input	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can adequately convey what data they are collecting and/or what variables are occurring to result in an output. This includes complete knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can clearly convey what data they are collecting and/or what variables are occurring to result in an output. This includes complete knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect some input data. Prototype is able to process input data to result in an actual or theoretical output data response.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response.	
Data Response Output	Selected Arduino Hardware and/or Sensor(s) responds to data exceptionally efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can exceptionally convey the output process and what happens during use. This includes superior knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) responds to data efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can completely convey the output process and what happens during use. This includes complete knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) responds to data efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can adequately convey the output process and what happens during use. This includes adequate knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated, but team can vaguely relay what should happen.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen.	Selected Arduino Hardware and/or Sensor(s) theoretically cannot respond to data effectively. Prototype is not able to be demonstrated and team cannot relay what should happen.	
Output Code and Hardware							Team can poorly convey the output process and what happens during use. This includes minimal knowledge of output code and hardware.



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Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes:
Testing	1 or more tests were conducted, documented, and used to improve the design. Team is exceedingly able to convey testing conditions, variables, and results of all tests. Team can convey exceptionally how each test helped to inform design choice(s). 	3 or more tests were conducted, documented, and used to adequately improve the design. Team is completely able to convey testing conditions, variables, and results of all tests. Team can convey how each test helped to inform design choice(s).	1 or more tests were conducted, documented, and used to minimally improve the design. Team is adequately able to convey testing conditions, variables, and results of all tests. Team can somewhat convey how each test helped to inform design choice(s), if at all.	1 or more tests were conducted, documented, and used to somewhat improve the design. Team is able to convey testing conditions, variables, and results of all tests. Team can somewhat convey how each test helped to inform design choice(s), if at all.	No tests were conducted. Team can somewhat convey what tests should have occurred to help inform design choice(s).	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s).	No tests were conducted. Team AND/OR If teams conducted a test, team can convey minimally or not at all how each test helped to inform design choice(s), if at all.
Column Totals	40	8					
Total Score:	40	8					

Technical Interview Totals

Prototype Demonstration Total: 48

Poster Total:

50

Presentation Total:

Shirt Penalty: (-5 points if not wearing official event shirt)

Grand Total:

Part 2000 - 2018



Appendix A: Technical Interview (Prototype Demonstration) Rubric

Technical Interview (Prototype Demonstration) Rubric	Exceptional (8 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Design	Design is simple and practical. It exceeds the requirements and the needs of client. All design elements are intentional and well thought out.	Design is simple and practical. It meets all of the requirements and the needs of client. All design elements are intentional and well thought out.	Design is somewhat simple and/or practical. It meets some requirements and the needs of client. Some of the design elements are intentional and well thought out. Could use some additional design development.	Design is not simple and/or practical. It does not meet most of the requirements and the needs of client. Most of the design elements are not intentional or well thought out.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay any part of the design process.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay most of the design process.	Design was done with little or no thought to the needs of the client. Design elements were used without any hint of design development. AND/OR Team could not adequately describe or relay any part of the design process.
Originality	Prototype is completely creative, original and/or significantly modifies an item currently available. Team can clearly describe research done and what makes their prototype innovative and unique.	Prototype is somewhat creative, original and/or modifies an item currently available. Team can adequately describe research done and what makes their prototype somewhat innovative and unique.	Prototype mostly resembles an item currently available. Minimal modifications are made to make item unique.	Prototype done and attempts to make their project minimally unique.	Prototype is a near direct copy of a product currently available. AND/OR Team cannot describe any research done to attempt originality.	Prototype is a direct copy of a product currently available. AND/OR Team cannot describe any research done and why they chose to mimic a currently available product.	Prototype is a direct copy of a product currently available. AND/OR Team cannot describe any research done to attempt originality.
Usability	Prototype is exceedingly intuitive, easy to learn, and easy to use. Team can completely articulate prototype instructions and purpose.	Prototype is mostly intuitive, easy to learn, and easy to use. Team can adequately articulate prototype instructions and purpose.	Prototype is somewhat intuitive, easy to learn, and easy to use. Needs a large amount of instruction and experience to use.	Prototype is not intuitive, not easy to learn, and difficult to use. Team has a difficult time articulating prototype instructions and purpose.	Prototype is not intuitive, not easy to learn, and difficult to use. AND/OR Team has a difficult time articulating prototype instructions and purpose.	Prototype is not intuitive, not easy to learn, and difficult to use. AND/OR Team cannot articulate any prototype instructions and purpose.	Prototype is not intuitive, not easy to learn, and difficult to use. AND/OR Team cannot articulate any prototype instructions and purpose.
Materials and Technology	All materials, equipment, and technologies are appropriate for design. Team is extremely logical in material usage and budget consideration. Team can exceedingly articulate and is knowledgeable about reasoning and purpose for all materials and technology used.	All materials, equipment, and technologies are appropriate for design. Team is logical in material usage and budget consideration. Team can adequately articulate and is adequately knowledgeable about reasoning and purpose for most of materials and technology used.	Most of materials, equipment, and technologies are appropriate for design. Team shows some logic in material usage and budget consideration. Team can somewhat articulate and is minimally knowledgeable about reasoning and purpose for materials and technology used.	Most of materials, equipment, and technologies are inappropriate for design. Team shows little or no logic in material usage and budget consideration. AND/OR Team cannot articulate or show knowledge about reasoning and purpose for most of materials and technology used.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team no logic in material usage and budget consideration AND/OR Team cannot articulate or show knowledge about any of materials and technology used.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team no logic in material usage and budget consideration AND/OR Team cannot articulate or show knowledge about reasoning and purpose for most of materials and technology used.	Materials, equipment, and technologies are vague, missing, and/or not appropriate. Team no logic in material usage and budget consideration AND/OR Team cannot articulate or show knowledge about reasoning and purpose for most of materials and technology used.



**National Engineering Design Competition
MESA Arduino STEM Solutions
Revised 21 September 2017**

Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor (1 point)	Not present (0 points)	Observation Notes
Arduino Usage (22)	Selected Arduino Hardware and/or Sensor(s) are innovative, effective, and relevant to project. Team can exceptionally convey why selections were made or not made. Team is exceptionally knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are somewhat innovative, effective, and relevant to project. Team can adequately convey why selections were made or not made. Team is adequately knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are mostly innovative, effective, and relevant to project. Team can convey why selections were made or not made. Team is somewhat knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are poorly innovative, effective, and relevant to project. Team can somewhat convey why selections were made or not made. Team is somewhat knowledgeable about sensor use and programming.	Selected Arduino Hardware and Use of Sensor(s) are not innovative, effective, and relevant to project. AND/OR Team cannot convey why selections were made or not made. Team shows no knowledge about sensor use and programming.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response. AND/OR Team cannot convey what data they are collecting and/or what variables are occurring to result in an output. This includes poor knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) are not innovative, effective, and relevant to project. Team can adequately convey why selections were made or not made. Team shows no knowledge about sensor use and programming.
Data Collection: Input	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can clearly convey what data they are collecting and/or what variables are occurring to result in an output. This includes superior knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently. Prototype is exceptionally able to process input data to result in an actual output data response. Team can exceptionally convey what data they are collecting and/or what variables are occurring to result in an output. This includes complete knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can adequately convey what data they are collecting and/or what variables are occurring to result in an output. This includes adequate knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can adequately convey what data they are collecting and/or what variables are occurring to result in an output. This includes adequate knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can adequately convey what data they are collecting and/or what variables are occurring to result in an output. This includes adequate knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) cannot collect input data. Therefore, not able to process input data to result in an actual or theoretical output data response. AND/OR Team cannot convey what data they are collecting and/or what variables are occurring to result in an output. This includes poor knowledge of input code and hardware.	Selected Arduino Hardware and/or Sensor(s) can collect input data efficiently and effectively. Prototype is able to process input data to result in an actual output data response. Team can adequately convey what data they are collecting and/or what variables are occurring to result in an output. This includes adequate knowledge of input code and hardware.
Data Response: Output	Selected Arduino Hardware and/or Sensor(s) respond to data exceptionally efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can exceptionally convey the output process and what happens during use. This includes superior knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) respond to data efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can adequately convey the output process and what happens during use. This includes complete knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) respond to data efficiently and effectively. Prototype is able to be demonstrated effectively and with ease. Team can adequately convey the output process and what happens during use. This includes some knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen. AND/OR Team can somewhat convey the output process and what happens during use. This includes minimal knowledge of output code and hardware.	Selected Arduino Hardware and/or Sensor(s) theoretically can respond to data effectively. Prototype is not able to be demonstrated and team can vaguely relay what should happen. AND/OR Team cannot convey the output process and what happens during use. This includes no knowledge of output code and hardware.		



Technical Interview (Prototype Demonstration) Rubric	Exceptional (5 points)	Excellent; (4 points)	Good; (3 points)	Fair; (2 points)	Poor; (1 point)	Not present (0 points)	Observation Notes
Testing	3 or more tests were conducted, documented, and used to improve the design. Team is exceedingly able to convey testing conditions, variables, and results of all tests. Team can convey exceptionally how each test helped to inform design choice(s).	3 or more tests were conducted, documented, and used to improve the design. Team is completely able to convey testing conditions, variables, and results of all tests. Team can convey how each test helped to inform design choice(s).	1 or more tests were conducted, documented, and used to adequately improve the design. Team is adequately able to convey testing conditions, variables, and results of all tests. Team can convey how each test helped to inform design choice(s).	1 or more tests were conducted, documented, and used to minimally improve the design. Team is somewhat able to convey testing conditions, variables, and results of all tests. Team can somewhat convey how each test helped to inform design choice(s).	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s). AND/OR If teams conducted a test, team can convey minimally or not at all how each test helped to inform design choice(s), if at all.	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s).	No tests were conducted. Team cannot convey what tests should have occurred to help inform design choice(s).
Column Totals		40					
Total Score:		40					

Technical Interview Totals

Prototype Demonstration Total: _____

Poster Total: _____

Presentation Total: _____

Shirt Penalty: _____

Grand Total: _____

(-5 points if not wearing official event shirt)

Hilary Hersey - Lucy
Pepse 2015



Appendix E: Pitch Presentation Rubric

Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor/Lacking (1 point)	Not present (0 points)	Observation Notes:
Problem Definition (Total 20 Points)							
Client Description							
<ul style="list-style-type: none"> Market size (no. of people) Impact on Client Market area (where are the clients located) 	Client base is clearly identified and a complete profile, including information on population size and location, is provided so that observers have no questions about the client base.	Client base is clearly identified but may be missing a few minor details leaving observers with less than 100% clarity about the client base.	Client base is identified and the profile includes the essential details, but observers need some crucial information for full clarity about the client base.	Client base is mostly identified, but the profile is incomplete and observes need a significant amount of information to be clear about the client base.	Client base is minimally identified and a profile, if included, provides little useful information about the client base.	It is unclear who the client base is and a profile, if included, does not provide any useful information about the client base.	
Client Impact							
<ul style="list-style-type: none"> How is the client affected by the problem? Did they talk to actual clients? 	Articulately explains how the client is affected and includes all necessary data gathered from research and anecdotal information from clients to provide a complete picture.	Explains how the client is affected and includes significant data gathered from research and anecdotal information from clients to provide a clear picture.	Explains how the client is affected and includes essential data gathered from research and anecdotal information from clients to provide a less than adequate picture.	Explains how the client is affected and includes somewhat true data gathered from research and anecdotal information from clients to provide a unclear picture.	Somewhat explains how the client is affected and includes inconsequential data gathered from research and anecdotal information from clients to provide a unclear picture.	Does not explain how the client is affected and data included, if any, is not useful. Anecdotal information from clients is random.	
Problem Description							
<ul style="list-style-type: none"> Describe what the problem is that they are trying to solve. 	A clear and complete description is provided, and includes all significant variables or aspects of the problem that need to be addressed.	A clear and almost complete description is provided, and includes most variables of the problem that need to be addressed.	An adequate description is provided, and includes enough variables of the problem that need to be addressed.	An inadequate description is provided, and is missing crucial variables of the problem that need to be addressed.	A description is provided, but lacks enough variables of the problem that need to be addressed to understand the problem.	Little to no description is provided. Variables, if included are illogical.	
Current Solutions							
<ul style="list-style-type: none"> How is the problem currently being solved and what are the weaknesses of these solutions? 	All current solutions are listed and a complete breakdown of their weaknesses is provided.	Most of the current solutions are listed and a breakdown of most of their weaknesses is provided.	The essential current solutions are listed and an adequate breakdown of their weaknesses is provided.	A few of the current solutions are listed and an incomplete breakdown of their weaknesses is provided.	Little to none of the current solutions are listed and very little breakdown of their weaknesses is provided.	Current solution are glossed over or left out completely. There is no breakdown of weaknesses or breakdown is illogical.	
Product (Total 10 points)							
Why did they choose this solution?	Team clearly articulates research, design, and testing that led to the prototype.	Team adequately articulates research, design, and testing that led to the prototype.	Team articulates research, design, and testing that led to the prototype.	Team somewhat adequately articulates research, design, and testing that led to the prototype.	Team barely articulates research, design, and testing that led to the prototype.	Team does not discuss research, design, and testing.	
<ul style="list-style-type: none"> How has their research and design process led to this prototype? 							
Advantages							
<ul style="list-style-type: none"> What makes their solution better than others and best for client? 	Team clearly describes advantages of prototype over other solutions for client citing multiple reasons.	Team clearly describes advantages of prototype over other solutions for client citing one reason.	Team describes advantages of prototype over other solutions with some degree of clarity.	Team describes advantages of prototype over other solutions with no clear reason as to why.	Team description of advantages of prototype over other solutions is unclear.	No mention of advantages over other solutions.	



	Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 point(s))	Poor/Lacking (1 point)	Not present (0 point(s))	Observation Notes
Prototype Demo (Total: 25 points)								
Demonstration	Demonstrates that easily used by client and is intuitive. Explains all of the features and functions of the prototype.	Demonstrates that easily used by client and is mostly intuitive. Explains most of the features and functions.	Demonstration shows that minimal training is needed for client to use. Explains the essential features and functions.	Demonstration shows that some training is needed for client to use. Explains some of the features and functions.	Demonstration was not clear and concise on how to use. Vague explanation of features and functions provided.	Demonstration was not clear and concise on how to use. Vague explanation of features and functions.	Not easy to use. Client would need significant training. No explanation of features and functions provided.	
Functionality (as demonstrated by students)	Fully functional, smooth no pauses or bugs.	Fully functional with one pause or bug.	Mostly functional with several pauses or bugs.	Somewhat functional with many pauses or bugs.	Barely functional. Numerous pauses or bugs.	Barely functional. Numerous pauses or bugs.	Does not function.	
Ease of use (Someone else tries to use the device)	Client was able to use it with no assistance from team.	Client was able to use it with minimal assistance from team.	Client was able to use it with some assistance from team.	Client was able to use it with a lot of assistance from team.	Client could use it with tonal assistance from team.	Client could use it with tonal assistance from team.	Client could not use it at all.	
Next Steps	Team clearly describes the next steps they need to undertake to bring prototype to the client.	Team adequately describes the next steps they need to undertake to bring prototype to the client.	Team somewhat adequately describes the next steps they need to undertake to bring prototype to the client.	Team, with some degree of clarity, describes the next steps they need to undertake to bring prototype to the client.	Team minimally describes the next steps they need to undertake to bring prototype to the client.	Team minimally describes the next steps they need to undertake to bring prototype to the client.	Team does not describe the next steps they need to undertake to bring prototype to the client.	
Potential of Design	The team clearly identifies what steps they will take to create the next iteration of the prototype.	The team adequately identifies what steps they will take to create the next iteration of the prototype.	The team somewhat adequately identifies what steps they will take to create the next iteration of the prototype.	The team inadequately identifies what steps they will take to create the next iteration of the prototype.	The team minimally identifies what steps they will take to create the next iteration of the prototype.	The team minimally identifies what steps they will take to create the next iteration of the prototype.	The team does not identify what steps they will take to create the next iteration of the prototype.	
Presentation (Total: 45 points)								
Communication	<ul style="list-style-type: none"> Speech flows nicely with no pauses Speaks clearly Speaks loudly enough for everyone to hear; changes tone and pace to maintain interest Does not use filler words 	<ul style="list-style-type: none"> Speech includes 1-2 distracting pauses Speaks clearly, not too quickly or slowly Speaks loudly enough for everyone to hear; changes tone and pace to maintain interest Rarely uses filler words (< 3) 	<ul style="list-style-type: none"> Speech includes some distracting pauses Speaks clearly most of the time Speaks loudly enough for the audience to hear most of the time, but may speak in a monotone Occasionally uses filler words (3-5) 	<ul style="list-style-type: none"> Speech includes several distracting pauses Mumbles or speaks too quickly or slowly Speaks too softly to be understood Frequently uses filler words (e.g., uh, um, so, and like—more than 5 times) 	N/A	Did not present speech.		
Speech Organization	Presents ideas and information with excellent effectiveness. Introduction is strong and inviting, body is focused and clearly manipulated, and closing is effective in unifying entire presentation.	Presents ideas and information with competent effectiveness. Introduction is clear and effective, body is focused, and closing assists in unity.	Presents ideas and information with acceptable effectiveness. Presentation has generally effective introduction, organization for body and closing.	Presents ideas and information with passable effectiveness. Organization is only partly effective and transitions are rough.	Presents ideas and information with insufficient effectiveness. Organization is lacking.	Did not present speech.		



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National Engineering Design Competition
MESA Arduino STEM Solutions
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Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 point(s))	Poor/Lacking (1 point)	Not present (0 point(s))	Observation Notes
Content	Shows an excellent degree of understanding of ideas, concepts, themes, and information.	Shows a competent degree of understanding of ideas, concepts, themes, and information. <u>4</u>	Shows an acceptable degree of understanding of ideas, concepts, themes, and information.	Show a passable degree of understanding of ideas, concepts, themes, and information.	Show an unsatisfactory degree of understanding of ideas, concepts, themes, and information.	Did not present speech.	
Visual Aids/Creativity	Overall presentation shows excellent evidence of creativity, leading to a masterful, compelling, and provocative presentation.	Overall presentation shows a strong evidence of creativity, leading to an interesting presentation that affects the audience. <u>4</u>	Overall presentation shows an acceptable level of creativity, leading to a satisfactory and general presentation.	Overall presentation shows some evidence of creativity, leading to a passable presentation that falls somewhat short on detail.	Overall presentation shows little or no evidence of creativity, leading to a dull and prosaic presentation that is lacking in detail.	Did not present speech.	
Eye Contact	Keeps eye contact with audience most of the time; does not use notes or slides.	Sometimes makes eye contact; only glances at notes or slides. <u>5</u>	Makes infrequent eye contact; reads notes or slides most of the time.	Does not look at the audience; reads notes or slides.	N/A	Did not present speech.	
Body Language	• Uses natural movements and gestures • Looks poised and confident	• Uses a few movements appearing natural • Shows some poise and confidence (only a little fidgeting or nervous movement) <u>5</u>	• Uses a few gestures or movements but they do not look natural • Shows some poise and confidence (only a little fidgeting or nervous movement)	• Does not use gestures or movements • Lack poise and confidence (fidgets, stouches, appears nervous)	N/A	Did not present speech.	
Intro of team members	All team members are introduced. <u>5</u>	N/A	Some team members are introduced	N/A	N/A	No team members were introduced.	
Participation	All team members participate for about the same length of time. <u>5</u>	N/A	All team members participate, but not equally.	N/A	N/A	Not all team members participate; only one or two speak.	Did not present.
Time	Presentation finishes within time. <u>5</u>	Presentation finishes within + 1 minute of time limit. <u>5</u>	Presentation finishes within + 2 minute of time limit. <u>5</u>	Presentation finishes within + 3 minute of time limit.		Presentation finishes greater than 4 minute of time limit	Did not present or goes more than 5 minutes over time limit.
Column Totals							
Total							<u>81</u>

32
26
23

Dropbox M5



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Appendix E: Pitch Presentation Rubric

Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor/Lacking (1 point)	Not present (0 points)	Observation Notes
Problem Definition (Total 20 Points)							
Client description	Client base is clearly identified and a complete profile, including information on population size and location, is provided so that observers have no questions about the client base.	Client base is clearly identified and a profile is provided but may be missing a few minor details leaving observers with less than 100% clarity about the client base.	Client base is identified and the profile includes the essential details, but observers need some crucial information for full clarity about the client base.	Client base is mostly identified, but the profile is incomplete and observers need a significant amount of information to be clear about the client base.	Client base is minimally identified and a profile, if included, provides little useful information about the client base.	It is unclear who the client base is and a profile, if included, does not provide any useful information about the client base.	Should talk more about clients
Client Impact	Articulately explains how the client is affected by the problem and includes all necessary data gathered from research and anecdotal information from clients to provide a complete picture.	Explains how the client is affected and includes significant data gathered from research and anecdotal information from clients to provide a clear picture.	Explains how the client is affected and includes data gathered from research and anecdotal information from clients to provide a less than mostly clear picture.	Explains how the client is affected and includes somewhat useful data gathered from research and anecdotal information from clients to provide a less than adequate picture.	Somewhat explains how the client is affected and includes inconsequential data gathered from research and anecdotal information from clients to provide a unclear picture.	Does not explain how the client is affected and data included, if any, is not useful. Anecdotal information from clients is random.	
Problem Description	A clear and complete description is provided, and includes all significant variables or aspects of the problem that need to be addressed.	A clear and almost complete description is provided, and includes most variables of the problem that need to be addressed.	An adequate description is provided, and includes enough variables of the problem that need to be addressed.	An inadequate description is provided, and includes crucial variables of the problem that need to be addressed.	A description is provided, but lacks enough variables of the problem that need to be addressed.	Little to no description is provided. Variables, if included are illegal.	
Current Solutions	All current solutions are listed and a complete breakdown of their weaknesses is provided.	Most of the current solutions are listed and a breakdown of most of their weaknesses is provided.	The essential current solutions are listed and an adequate breakdown of their weaknesses is provided.	A few of the current solutions are listed and an incomplete breakdown of their weaknesses is provided.	Little to none of the current solutions are listed and very little breakdown of their weaknesses is provided.	Current solutions are glossed over, or left out completely. There is no breakdown of weaknesses or breakdown is illogical.	
Product (Total 10 points)	Why did they choose this solution? • How fast is research and design process (for this prototype)?	Team clearly articulates research, design, and testing that led to the prototype.	Team articulates research, design, and testing that led to the prototype.	Team articulates research, design, and testing that led to the prototype, but leaves out a key component.	Team somewhat adequately articulates research, design, and testing that led to prototype.	Team does not discuss research, design, and testing that led to prototype. Information is sparse.	
Advantages	What makes their solution better than others and best for cheap?	Team clearly describes advantages of prototype over other solutions for client citing multiple reasons.	Team clearly describes advantages of prototype over other solutions with some degree of clarity.	Team describes advantages of prototype over other solutions with no clear reason as to why.	Team description of advantages of prototype over other solutions is unclear.	No mention of advantages over other solutions.	

Recycled trash recycling from 8/22

\$40 profit 70 - not clean

20

Tod night speech

Did not send out of world
Send to next level before me



Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor/Lacking (1 point)	Not present (0 points)	Observation Notes
Prototype/Demo (Total: 25 points)							
Demonstration	Demonstrates that easily used by client and is intuitive. Explains all of the features and functions of the prototype.	Demonstration shows that minimal training is needed for client to use. Explains the essential features and functions.	Demonstration was not clear and concise on how to use. Vague explanation of features and functions provided.	Demonstration was not clear and concise on how to use. Vague explanation of features and functions provided.	Not easy to use. Client would need significant training. No explanation of features and functions provided.	Not easy to use. Client would need significant training. No explanation of features and functions provided.	<i>Complicated</i> <i>Disorganized</i> <i>unintelligible</i>
Functionality (as demonstrated by students)	Fully functional, smooth no pauses or bugs.	Mostly functional with one pause or bug.	Mostly functional with several pauses or bugs.	Somewhat functional with many pauses or bugs.	Barely functional. Numerous pauses or bugs.	Does not function.	
Ease of use (Someone else tries to use the device)	Client was able to use it with no assistance from team.	Client was able to use it with minimal assistance from team.	Client was able to use it with some assistance from team.	Client was able to use it with a lot of assistance from team.	Client could use it with total assistance from team.	Client could not use it at all.	<i>Awkward</i> <i>clumsy</i>
Next Steps	Team clearly describes the next steps they need to undertake to bring prototype to the client.	Team adequately describes the next steps they need to undertake to bring prototype to the client.	Team somewhat adequately describes the next steps they need to undertake to bring prototype to the client.	Team, with some degree of clarity, describes the next steps they need to undertake to bring prototype to the client.	Team minimally describes the next steps they need to undertake to bring prototype to the client.	Team does not describe the next steps they need to undertake to bring prototype to the client.	
Potential of Design	The team clearly identifies what steps they will take to create the next iteration of the prototype.	The team somewhat adequately identifies what steps they will take to create the next iteration of the prototype.	The team inadequately identifies what steps they will take to create the next iteration of the prototype.	The team inadequately identifies what steps they will take to create the next iteration of the prototype.	The team minimally identifies what steps they will take to create the next iteration of the prototype.	The team does not identify what steps they will take to create the next iteration of the prototype.	
Presentation (Total: 45 points)							
Communication	<ul style="list-style-type: none"> Speech flows nicely with no pauses Speaks clearly Speaks loudly enough for everyone to hear; changes tone and pace to maintain interest Does not use filler words 	<ul style="list-style-type: none"> Speech includes 1-2 distracting pauses Speaks clearly; not too quickly or slowly Speaks loudly enough for everyone to hear; changes tone and pace to maintain interest Rarely uses filler words (<3) 	<ul style="list-style-type: none"> Speech includes several distracting pauses Speaks clearly most of the time Speaks loudly enough for the audience to hear most of the time, but may speak in a monotone Occasionally uses filler words (3-5) 	<ul style="list-style-type: none"> Speech includes several distracting pauses Mumbles or speaks too quickly or slowly Speaks too softly to be understood Frequently uses filler words (e.g., uh, um, so, and like—more than 5 times) 	N/A	Did not present speech.	
Speech Organization	Presents ideas and information with excellent effectiveness. Introduction is strong and inviting, body is focused and clearly manipulated, and closing is effective in unifying entire presentation.	Presents ideas and information with competent effectiveness. Introduction is clear and effective, body is focused, and closing assists in unity.	Presents ideas and information with acceptable effectiveness. Presentation has generally effective introduction, organization for body and closing.	Presents ideas and information with passable effectiveness. Organization is only partly effective and transitions are rough.	Presents ideas and information with insufficient effectiveness. Organization is lacking.	Did not present speech.	



Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor/Lacking (1 point)	Not present (0 points)	Observation Notes
Content	Shows an excellent degree of understanding of ideas, concepts, themes, and information.	Shows a competent degree of understanding of ideas, concepts, themes and information.	Shows an acceptable degree of understanding of ideas, concepts, themes and information.	Shows a passable degree of understanding of ideas, concepts, themes, and information.	Shows an unsatisfactory degree of understanding of ideas, concepts, themes, and information.	Did not present speech.	
Visual Aids/Creativity	Overall presentation shows excellent evidence of creativity, leading to a masterful, compelling, and provocative presentation.	Overall presentation shows a strong evidence of creativity, leading to an interesting presentation that affects the audience.	Overall presentation shows an acceptable level of creativity, leading to a satisfactory and general presentation.	Overall presentation shows some evidence of creativity, leading to a dull presentation that fails somewhat short on detail.	Overall presentation shows little or no evidence of creativity, leading to a dull and monotonous presentation that is lacking in detail.	Did not present speech.	
Eye Contact	Keeps eye contact with audience most of the time, does not use notes or slides.	Sometimes makes eye contact, only glances at notes, or slides.	Makes infrequent eye contact, reads notes or slides most of the time.	Does not look at the audience, reads notes or slides.	N/A	Did not present speech.	
Body Language	Uses natural movements and gestures	• Uses a few movements appearing natural • Shows some pose and confidence (only a little fidgeting or nervous movement)	• Uses a few gestures or movements but they do not look natural • Shows some pose and confidence (only a little fidgeting or nervous movement)	• Does not use gestures or movements • Lacks poise and confidence (fidgets, slouches, appears nervous)	N/A	Did not present speech.	
Ratio of Team Members	All team members are introduced.	N/A	Some team members are introduced	N/A	N/A	No team members were introduced.	
Participation	All team members participate for about the same length of time.	N/A	All team members participate, but not equally.	N/A	N/A	Not all team members participate, only one or two speak.	
Time	Presentation finishes within time.	Presentation finishes within 1 minute of time limit.	Presentation finishes within + 1 minute of time limit.	Presentation finishes within + 3 minute of time limit.	Presentation finishes greater than 4 minute of time limit.	Did not present or goes more than 5 minutes over time limit.	
Column Totals							
Total	25	24	1	15	25	Great Communication!	22

Natalia Hussain - 2018
Drapco M/S



Appendix E: Pitch Presentation Rubric

Problem Definition (Total 20 Points)	Pitch Presentation Exceptional (5 points)	Pitch Presentation Excellent (4 points)	Pitch Presentation Good (3 points)	Pitch Presentation Fair (2 points)	Pitch/Packaging (1 point)	Not present (0 points)	Observation Notes
Client description	Client base is clearly identified and a complete profile, including information on population size and location, is provided so that observers have no questions about the client base.	Client base is clearly identified and a profile is provided but may be missing a few minor details leaving observers with less than 100% clarity about the client base.	Client base is identified and the profile includes the essential details, but observers need some crucial information for full clarity about the client base.	Client base is identified, but the profile is incomplete and observes need a significant amount of information to be clear about the client base.	Client base is minimally identified and a profile, if included, provides little useful information about the client base.	It is unclear who the client base is and a profile, if included, does not provide any useful information about the client base.	
Client Impact	Articulately explains how the client is affected by the problem and includes all necessary data gathered from research and anecdotal information from clients to provide a complete picture.	Explains how the client is affected and includes significant data gathered from research and anecdotal information from clients to provide a clear picture.	Explains how the client is affected and includes somewhat useful data gathered from research and anecdotal information from clients to provide a less than adequate picture.	Explains how the client is affected and includes essential data gathered from research and anecdotal information from clients to provide a mostly clear picture.	Somewhat explains how the client is affected and includes inconsequential data gathered from research and anecdotal information from clients to provide a unclear picture.	Does not explain how the client is affected and data included, if any, is not useful! Anecdotal information from clients is random.	
Problem Description	A clear and complete description is provided, and includes all significant variables or aspects of the problem that need to be addressed.	A clear and almost complete description is provided, and includes most variables of the problem that need to be addressed.	An adequate description is provided, and includes enough variables of the problem that need to be addressed.	A inadequate description is provided, and is missing crucial variables of the problem that need to be addressed.	A description is provided, but lacks enough variables of the problem that need to be addressed to understand the problem.	Little to no description is provided. Variables, if included are illogical.	
Current Solutions	All current solutions are listed and a complete breakdown of their weaknesses is provided.	Most of the current solutions are listed and a breakdown of most of their weaknesses is provided.	The essential current solutions are listed and an adequate breakdown of their weaknesses is provided.	A few of the current solutions are listed and an incomplete breakdown of their weaknesses is provided.	Little to none of the current solutions are listed and very little breakdown of their weaknesses is provided.	Current solution are glossed over or left out completely. There is no breakdown of weaknesses or breakdown is illogical.	
Product (Total: 10 points)	Team clearly articulates why they chose this solution? How has their research and design process led to this prototype?	Team adequately articulates research, design, and testing that led to the prototype.	Team articulates research, design, and testing that led to the prototype.	Team somewhat adequately articulates research, design, and testing that led to the prototype but leaves out a key component.	Team articulates research, design, and testing that led to prototype. Information is sparse.	Team does not discuss research, design, and testing.	
Advantages	Team clearly describes advantages of prototype over other solutions for client citing multiple reasons.	Team describes advantages of prototype over other solutions with some degree of clarity.	Team describes advantages of prototype over other solutions with no clear reason as to why.	Team description of advantages of prototype over other solutions is unclear.	No mention of advantages over other solutions.		

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Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor/Lacking (1 point)	Not present (0 points)	Observation Notes
Prototype/Demo (Total: 25 points)							
Descriptiveness • Shows how client will use it	Demonstrates that easily used by client and is intuitive. Explains all of the features and functions of the prototype.	Demonstrates that easily used by client and is mostly intuitive. Explains most of the features and functions.	Demonstration shows that minimal training is needed for client to use. Explains the essential features and functions. ✓	Demonstration shows that some training is needed for client to use. Explains some of the features and functions.	Demonstration was not clear and concise on how to use. Vague explanation of features and functions.	Not easy to use. Client would need significant training. No explanation of features and functions provided.	
Functionality (as proclaimed by student(s))	Fully functional, smooth no pauses or bugs.	Fully functional with one pause or bug. ✓	Mostly functional with several pauses or bugs.	Somewhat functional with many pauses or bugs.	Barely functional. Numerous pauses or bugs.	Does not function.	
Ease of Use (Someone else tries to use the device)	Client was able to use it with no assistance from team.	Client was able to use it with minimal assistance from team. ✓	Client was able to use it with some assistance from team.	Client was able to use it with a lot of assistance from team.	Client could use it with total assistance from team.	Client could not use it at all.	
Next Steps • What happens next in order to bring the device to the client? • Scalability	Team clearly describes the next steps they need to undertake to bring prototype to the client.	Team adequately describes the next steps they need to undertake to bring prototype to the client. ✓	Team somewhat adequately describes the next steps; they need to undertake to bring prototype to the client.	Team, with some degree of clarity, describes the next steps they need to undertake to bring prototype to the client.	Team minimally describes the next steps they need to undertake to bring prototype to the client.	Team does not describe the next steps they need to undertake to bring prototype to the client.	
Potential of Design • What would be next iteration look like?	The team adequately identifies what steps they will take to create the next iteration of the prototype.	The team somewhat adequately identifies what steps they will take to create the next iteration of the prototype. ✓	The team inadequately identifies what steps they will take to create the next iteration of the prototype.	The team inadequately identifies what steps they will take to create the next iteration of the prototype.	The team minimally identifies what steps they will take to create the next iteration of the prototype.	The team does not identify what steps they will take to create the next iteration of the prototype.	
Presentation (Total: 45 points)							
Communication	<ul style="list-style-type: none"> Speech flows nicely with no pauses Speaks clearly Speaks loudly enough for everyone to hear; changes tone and pace to maintain interest Does not use filler words 	<ul style="list-style-type: none"> Speech includes 1-2 distracting pauses Speaks clearly, not too quickly or slowly Speaks loudly enough for everyone to hear; changes tone and pace to maintain interest Rarely uses filler words (<3) 	<ul style="list-style-type: none"> Speech includes some distracting pauses Speaks clearly most of the time Speaks loudly enough for the audience to hear most of the time, but may speak in a monotone Occasionally uses filler words (3-5) 	<ul style="list-style-type: none"> Speech includes several distracting pauses Mumbles or speaks too quickly or slowly Speaks too softly to be understood Frequently uses filler words (e.g., uh, um, so, and like—more than 5 times) 	N/A	Did not present speech.	
Speech Organization	Presents ideas and information with excellent effectiveness. Introduction is strong and inviting, body is focused and clearly manipulated, and closing is effective in unifying entire presentation. ✓	Presents ideas and information with competent effectiveness. Introduction is clear and effective, body is focused, and closing assists in unity.	Presents ideas and information with acceptable effectiveness. Presentation has generally effective introduction, organization for body and closing.	Presents ideas and information with passable effectiveness. Presentation is only partly effective and transitions are rough.	Presents ideas and information with insufficient effectiveness. Organization is lacking.	Did not present speech.	



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Pitch Presentation	Exceptional (5 points)	Excellent (4 points)	Good (3 points)	Fair (2 points)	Poor/Failing (1 point)	Not present (0 points)	Observation Notes:
Content:	Shows an excellent degree of understanding of ideas, concepts, themes, and information.	Shows a competent degree of understanding of ideas, concepts, themes, and information.	Shows an acceptable degree of understanding of ideas, concepts, themes, and information.	Show a possible degree of understanding of ideas, concepts, themes, and information.	Show an unsatisfactory degree of understanding of ideas, concepts, themes, and information.	Did not present speech.	
Visual Aids/Creativity:	Overall presentation shows excellent evidence of creativity, leading to a masterful, compelling, and provocative presentation.	Overall presentation shows strong evidence of creativity, leading to an interesting presentation that affects the audience.	Overall presentation shows an acceptable level of creativity, leading to a satisfactory general presentation.	Overall presentation shows some evidence of creativity, leading to a passable presentation that falls somewhat short on detail.	Overall presentation shows little or no evidence of creativity, leading to a dull and prosaic presentation that is lacking in detail.	Did not present speech.	
Eye Contact:	Keeps eye contact with audience most of the time; does not use notes or slides.	Sometimes makes eye contact, only glances at notes or slides.	Makes infrequent eye contact; reads notes or slides most of the time.	Does not look at the audience; reads notes or slides.	N/A	Did not present speech.	
Body Language:	<ul style="list-style-type: none"> • Uses natural movements and gestures • Looks poised and confident 	<ul style="list-style-type: none"> • Uses a few movements appearing natural • Shows some poise and confidence (only a little fidgeting or nervous movement) 	<ul style="list-style-type: none"> • Uses a few gestures or movements but they do not look natural • Shows some poise and confidence (fidgets, slouches, appears nervous movement) 	<ul style="list-style-type: none"> • Does not use gestures or movements • Lacks poise and confidence (fidgets, slouches, appears nervous) 	N/A	Did not present speech.	
Intro of team members:	All team members are introduced	N/A	Some team members are introduced	N/A	N/A	No team members were introduced.	
Participation:	All team members participate for about the same length of time	N/A	All team members participate, but not equally.	N/A	Not all team members participate; only one or two speak.	Did not present.	
Time:	Presentation finishes within time.	Presentation finishes within + 1 minute of time limit.	Presentation finishes within + 2 minute of time limit.	Presentation finishes within + 3 minute of time limit.	Presentation finishes greater than 4 minute of time limit.	Did not present or goes more than 5 minutes over time limit.	
Column Totals:							
Total:	92						

34
28
30
2