

**HWA CHONG INSTITUTION (HIGH SCHOOL)
PROJECTS COMPETITION 2014**

**CATEGORY 12 : Engineering Science (Focusing mainly on Engineering and Technology)
JUDGING RUBRICS**

Oral Presentation of Learning Journey

CRITERIA	PROJECT (70%)					SCORE		
	1-2	3-4	5-6	7-8	9-10	P	S	F
Problem identification and definition	The identification and/or definition of the problem are unclear .	The problem is identified and defined briefly with little depth and detail.	The problem is clearly and identified and defined with some depth and detail.	The problem is clearly and objectively identified and defined with adequate depth and detail.	The problem is clearly and objectively identified and defined with great depth and detail.	✓	✓	✓
Information gathering on problem and current situation	Fails to gather information, or obtains it from inappropriate sources. No connection made between information gathered and the problem.	Gathers information from limited sources. Little connection made between information gathered and the problem.	Gathers some information from various sources. Some connection made between information gathered and the problem.	Gathers sufficient resources and information from various sources. Sufficient connection made between information gathered and the problem.	Gathers a broad spectrum of resources and information. Good connection made between information gathered and the problem.	✓	✓	✓
Identification and definition of solution design	Solution design goal(s), parameter(s), and constraint(s) are just listed with no detail.	Solution design goal(s), parameter(s), and constraint(s) are briefly listed and explain with little detail.	Solution design goal(s), parameter(s), and constraint(s) are briefly listed and explain with some detail.	Solution design goal(s), parameter(s), and constraint(s) are adequately listed and explain with adequate detail.	Solution design goal(s), parameter(s), and constraint(s) are clearly listed and explain with great detail.	✓	✓	✓
Application of specific content knowledge in solution design	Technical understanding of the problem and/or the solution design are not supported with references to any content knowledge	Technical understanding of the problem and the solution design are supported with little references to some content knowledge.	Technical understanding of the problem and the solution design are supported with some references to relevant content knowledge.	Technical understanding of the problem and the solution design are appropriately substantiated with adequate references to relevant content knowledge.	Technical understanding of the problem and the solution design are clearly substantiated with in-depth references to relevant content knowledge.		✓	✓
Testing/ Implementation of solution design	The testing/ implementation procedure targeted at design goal(s) is formulated with no details. The testing/ implementation process is not sound and/or lacks rigour.	The testing/ implementation procedure targeted at design goal(s) is formulated with little details. The testing/ implementation process is somewhat sound but lacks rigorous.	The testing/ implementation procedure targeted at design goal(s) is clearly formulated with some details. The testing/ implementation process is somewhat sound and rigorous.	The testing/ implementation procedure targeted at design goal(s) is clearly formulated with adequate details. The testing/ implementation process is sound with adequate rigour.	The testing/ implementation procedure targeted at design goal(s) is clearly and objectively formulated with great details. The testing/ implementation process is effective and with great rigour.		✓	✓
Analysis of the solution design based on testing/ implementation process	No or inappropriate evaluation of effectiveness of solution design with little/no references to data collected during testing/ implementation process. Limitations and areas of improvement to solution design are briefly stated.	Little evaluation of effectiveness of solution design with little references to data collected during testing/ implementation process. Able to explain limitations and areas of improvement to solution design clearly with little details.	Some evaluation of effectiveness of solution design with some references to data collected during testing/ implementation process. Able to explain limitations and areas of improvement to solution design clearly with some details.	Adequate evaluation of effectiveness of solution design with adequate references to data collected during testing/ implementation process. Able to explain limitations and areas of improvement to solution design clearly with adequate details..	Critical evaluation of effectiveness of solution design with in-depth references to data collected during testing/ implementation process. Able to explain limitations and areas of improvement to solution design clearly with great details.		✓	✓

Implications and recommendation	An overall summary of the implications on the recommendation for proceeding with the solution design and solving the problem is not included.	An overall summary of the implications on and recommendation for proceeding with the solution design and solving the problem is included with little details	An overall summary of the implications on and recommendation for proceeding with the solution design and solving the problem is included with some details.	An overall summary of the implications on and recommendation for proceeding with the solution design and solving the problem is included with adequate details	An overall summary of the implications on and recommendation for proceeding with the solution design and solving the problem is included with great details.				✓
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PRESENTATION (15%)						SCORE		
CRITERIA	1	2	3	4	5	P	S	F
Delivery	Unclear speech, read directly from notes or screen all the time, irritating speech pattern, does not capture audience attention. Not all members presents.	Speak clearly in standard English some of the time, read from notes or screen most of the time, able to hold audience attention some of the time. All members present.	Speak clearly in standard English most of the time, read from notes or screen some of the time, able to hold audience attention most of the time. All members present.	Speak clearly in standard English most of the time, only read from notes or screen occasionally , able to hold audience attention all the time . All members present.	Speak clearly and distinctly in standard English all the time, does not read from notes or screen, able to capture audience attention all the time and provokes participation . All members present.		✓	✓
Organisation of content	Content is confusing . Illogical flow of ideas. Difficult for audience to follow. Does not utilise any visual aids and props effectively.	Content is somewhat organised. Audience is able to follow through little of the ideas presented. Visual aids and props do not illustrate ideas well.	Content is adequately organised. Audience is able to follow through some of the ideas presented. Visual aids are used do illustrate ideas..	Content is well organised. Audience is able to follow through most of the ideas presented. Effective use of visual aids and props to illustrate ideas clearly .	Content is well organised. Logical flow of ideas. Ideas are clearly conveyed to the audience. Creative and effective use of visual aids and props to illustrate ideas clearly.		✓	✓
Response to questions	Unable to response relevantly to any of the questions.	Able to response to some of the questions. Answers are relevant but contain little elaboration of ideas.	Able to response to all the questions. Answers are relevant and elaborated with some details.	Able to answer response to all the questions. Answers are relevant and elaborated with adequate details.	Able to response to all the questions. Answers are relevant, well thought out and elaborated on with great details.		✓	✓

Video Presentation of Learning Journey

VIDEO PRESENTATION (15%)						SCORE		
CRITERIA	1-2	3-4	5-6	7-8	9-10	P	S	F
Content	Learning journey is poorly documented.	Learning journey is fairly documented.	Learning journey is adequately documented.	Learning journey is fairly well documented in the video.	Learning journey is well documented in the video.			✓
Organisation	Video is poorly organized for most portions. Difficult to follow the progressions of ideas for most portions. Explanation shows no effort.	Video is fairly organized for some portions. Difficult to follow the progressions of ideas for most portions. Explanation shows little effort.	Video is adequately organized for some portions. Difficult to follow the progressions of ideas for some portions. Explanation shows some effort.	Video fairly well organized for most portions. Fairly easy to follow the progressions of ideas. Good explanation shows good effort.	Video is well organized for most portions. Easy to follow the progression of ideas. Excellent, well thought out explanation shows superior effort.			✓
Creativity & Elements of Design	Poor sense of design. Videos and pictures are not clear. Most transitions are inappropriate .	Fair sense of design. Videos and pictures are in focus . Some transitions are inappropriate .	Adequate sense of design. Videos and pictures are in focus . Transitions are mostly appropriate.	Good sense of design. Videos and pictures are clear and in focus Transitions are appropriate .	Excellent sense of design. Video and pictures are of good quality. Transitions are smooth and appropriate .			✓