Judge's Marking Sheet – Thames Valley Science & Engineering Fair

PART A: SCIENTIFIC THOUGHT - 45 %

Experiment	Innovation	Study	Circle Your Mark
Undertake an investigation to test a scientific hypothesis by the experimental method. At least one independent variable is manipulated; other variables are controlled.	Develop and evaluate new devices, models, theorems, physical theories, techniques, or methods in technology, engineering, computing, natural science, or social science.	Analysis of, and possibly collections of, data using accepted methodologies from the natural, social, biological, or health sciences. Includes studies involving human subjects, biology field studies, data mining, observation and pattern recognition in physical and/or socio-behavioural data.	
Level 1 (low) Mark Range 6 to 15			
Replicate a known experiment to confirm previous findings.	Build a model or device to duplicate existing technology or to demonstrate a well-known physical theory or social/behavioural intervention.	Existing published material is presented, unaccompanied by any analysis.	6 7 8 9 10 11 12 13 14 15
Level 2 (fair) Mark Range 16 to 25			
Extend a known experiment with modest improvements to the procedures, data gathering and possible applications.	Improve or demonstrate new applications for existing technological systems, social or behavioural interventions, existing physical theories or equipment, and justify them.	Existing published material is presented, accompanied by some modest analysis and/or a rudimentary study is undertaken that yields limited data that cannot support an analysis leading to meaningful results.	16 17 18 19 20 21 22 23 24 25
Level 3 (good) Mark Range 26 to 35			
Devise and carry out an original experiment. Identify the significant variables and attempt to control them. Analyse the results using appropriate arithmetic, graphical or statistical methods.	Design and build innovative technology; or provide adaptations to existing technology or to social or behavioural interventions; extend or create new physical theory. Human benefit, advancement of knowledge, and/or economic applications should be evident.	The study is based on systematic observations and a literature search. Appropriate analysis of some significant variable(s) is included, using arithmetic, statistical, or graphical methods. Qualitative and/or mixed methods study should include a detailed description of the procedures and/or techniques applied to gather and/or analyse the data (e.g. interviewing, observational fieldwork, constant comparative method, content analysis).	26 27 28 29 30 31 32 33 34 35
Level 4 (excellent) Mark Range 36 to 45			
Devise and carry out original experimental research in which most significant variables are identified and controlled. The data analysis is thorough and complete.	Integrate several technologies, inventions, social/behavioural interventions or design and construct an innovative application that will have human and/or commercial benefit.	The study correlates information from a variety of peer-reviewed publications and from systematic observations, and reveals significant new information, or original solutions to problems. Same criteria for analysis of significant variables and/or description of procedures/techniques as for Level 3	36 37 38 39 40 41 42 43 44 45

PART B: ORIGINAL CREATIVITY - 25%

Rank 1 (low) Mark Range 6 to 10	Rank 2 (fair) Mark Range 11 to 15	Rank 3 (good) Mark Range 16 to 20	Rank 4 (excellent) Mark Range 21 to 25
The project design is simple with little evidence of student imagination. It can be found in books or magazines.	The project design is simple with evidence of student imagination. It uses common resources or equipment. The topic is a current or common one.	This imaginative project makes creative use of the available resources. It is well thought out, and some aspects are above average.	This highly original project uses a novel approach. It shows resourcefulness and creativity in design, use of equipment, construction and/or the analysis.

Circle Your Mark:

6 7 8 9 10	11 12 13 14 15	16 17 18 19 20	21 22 23 24 25

PROJECT EVALAUTION SUMMARY

TOTAL MARKS	Max	Mark
Part A: Scientific Thought (from page 1)	45	
Part B: Original Creativity (from page 1)	25	
Part C: Visual Display	10	
Part D: Oral Presentation	15	
Part E: Scientific Notebook	5	
Total Mark Awarded to This Project	**100**	

PART C: VISUAL DISPLAY	Max	Mark
Layout logical and self-explanatory.	5	
Exhibit attractive & well constructed.	5	
Total mark for visual display	**10**	

PART D: ORAL PRESENTATION	Max	Mark
Clear, logical, enthusiastic presentation.	5	
Response to questions	5	
Knowledge of the relevant science	5	
Total Mark for Oral Presentation	**15**	

PART E: SCIENTIFIC NOTEBOOK		
Information content / substance	2	
Readability / clarity	2	
Bibliography & citations	1	
Total for Scientific Notebook	**5**	

FEEDBACK FOR THE FINALIST(S)

 Strengths _____

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 Recommendations _____

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Judge's Name (Please Print!)	**Judge's Signature**

Use this form to give a mark to each exhibit, and to assist you in ranking the exhibits assigned to you. This mark will not be used in subsequent rounds of judging. **Return this form to the Chair of your Judging Team.**