

Rubrics to Grade or Score the Projects/Products for MRSM Tunas Saintis. These rubrics are developed by following the judging criteria from INTEL-ICEF Science Fair

| Criteria | | Scoring Guide Standards | | | | |
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| Criteria | Criteria breakdown | 5 = Exemplary | 4 = Proficient | 3 = Competent | 2 = Well developed | 1 = Developing |
| Creativity/Originality in research questions | Question leads to effective & reliable way in solving authentic problems | Research questions lead to highly effective & highly reliable ways of solving authentic problems | Research questions lead to effective & reliable ways of solving authentic problems | Research questions partially lead to effective & reliable ways of solving authentic problems | Research questions does not lead to effective & reliable ways of solving authentic problems | Research questions are not specified or unclear. |
| | Question leads to new ways of data analysis/ its interpretation,/new ways of using instruments/design of new instruments | Research questions absolutely & convincingly lead to new gadgets or new ways of data analysis/ its interpretation,/new ways of using instruments/design of new instruments | Research questions lead to new ways of data analysis/ its interpretation,/new ways of using instruments/design of new instruments | Research questions partially lead to new gadgets or new ways of data analysis/ its interpretation,/new ways of using instruments/design of new instruments | Research questions does not convincingly lead to new ways of data analysis/ its interpretation,/new ways of using instruments/design of new instruments | Research questions doesn't lead to new ways of data analysis/ its interpretation,/new ways of using instruments/design of new instruments |
| Engineering Thought | Objectives & Relevance to User's Needs | Objectives are clearly stated & highly relevant to User's needs | Objectives are stated & relevant to user's needs | Objectives are stated but partially relevant to user's needs | Objectives are stated and slightly relevant to user's needs | Objectives are partially stated and not relevant to user's needs |
| | Is the solution workable? Utilize by potential users? Can this solution used efficiently for major improvement of the final product? | Solution offered is highly workable and can definitely be utilized. It is a highly efficient way to improve the final product. | Solution offered is workable and can be utilized. It is an efficient way to improve the final product. | Solution offered is workable and can be utilized. It is a partially efficient way to improve the final product. | Solution offered is workable but with partial utilization. It is a partially efficient way to improve the final product. | Solution offered is minimally workable and cannot be utilized. It is not an efficient way to improve the final product. |
| Thoroughness | Tested on prototype and tested the efficiency in real situation. Reference on the research | Prototype has been tested more than 3 times by different authorities and validated for its high efficiency in real situation. More than 3 research references were cited. | Prototype has been tested twice by different authorities and validated for its high efficiency in real situation. Only 2 research references were cited. | Prototype has been tested once by only one authority and validated for its efficiency in real situation. Only 1 research references were cited. | Prototype has been tested once by only one authority and validated for its efficiency in real situation. No research references were cited. | Prototype has not been tested once by an authority to validate its efficiency in real situation. No research references were cited. |
| | Ability to complete investigation, confirm/validate conclusion via experiment replication, awareness of other approaches, time to complete investigation reasonable, aware of scientific literature related to investigation | Investigation was completed and the conclusion was confirmed/validated by more 3 than experimental replications. Awareness of other approaches is highly evident. The investigation was completed within reasonable time. Awareness of scientific literature related to investigation is highly evident. | Investigation was completed and the conclusion was confirmed/validated with 2 experimental replications. Awareness of other approaches is evident. The investigation was completed within reasonable time. Awareness of scientific literature related to investigation is evident. | Investigation was completed but the conclusion was confirmed/validated by only 1 experimental replications. Awareness of other approaches is partially evident. The investigation was completed within reasonable time. Awareness of scientific literature related to investigation is partially evident. | Investigation was completed but the conclusion was not confirmed/validated with experimental replications. Awareness of other approaches is minimally evident. The investigation was completed within reasonable time. Awareness of scientific literature related to investigation is minimally evident. | Investigation was not completed. Awareness of other approaches is not evident. Awareness of scientific literature related to investigation is not evident. |
| Skills | Ability to utilize required instruments, computational skills, observational skills, access to supervision, equipments | Investigations utilized more than the required instruments. Computational skills & observational skills are highly evident. Investigations performed without requiring supervision from anyone. | Investigations utilized the required instruments. Computational skills & observational skills are proficiently evident. Investigations performed with minimal supervision. | Investigations utilized the required instruments. Computational skills & observational skills are competently evident. Investigations performed with some supervision. | Investigations utilized the required instruments. Computational skills & observational skills are evident. Investigations performed with substantial supervision. | Investigations utilized few of the required instruments. Computational skills & observational skills are minimally evident. Investigations performed with maximum supervision. |
| Clarity | Ability to verbally explain & visually show the relationship between hypothesis/objectives, problem statement, procedures, results & conclusion | Verbal explanation & visual display of the investigation and the relationship between hypothesis/objectives, problem statement, procedures, results & conclusion are highly convincing and extremely coherent | Verbal explanation & visual display of the investigation and the relationship between hypothesis/objectives, problem statement, procedures, results & conclusion are proficiently convincing and coherent | Verbal explanation & visual display of the investigation and the relationship between hypothesis/objectives, problem statement, procedures, results & conclusion are competently convincing and coherent. | Verbal explanation & visual display of the investigation and the relationship between hypothesis/objectives, problem statement, procedures, results & conclusion are partially convincing and somewhat coherent. | Verbal explanation & visual display of the investigation and the relationship between hypothesis/objectives, problem statement, procedures, results & conclusion are not convincing and fragmented. |
| Teamwork | Ability to clearly outline each team member's role, contribution & involvement. Each member is able to show understanding of investigation | Each team member's role, contribution & involvement are clearly outlined and described. Each member is able to clearly show understanding of the whole investigation process & outcomes. | Each team member's role, contribution & involvement are outlined and described. Each member is able to show understanding of the whole investigation process & outcomes. | Each team member's role, contribution & involvement are outlined and described. Each member is able to show partial understanding of the whole investigation process & outcomes. | Each team member's role, contribution & involvement are partially outlined and described. Only few team members are able to show understanding of the whole investigation process & outcomes. | Each team member's role, contribution & involvement are vaguely outlined and described. The team is not able to show understanding of the whole investigation process & outcomes. |