

Republic of the Philippines  
Department of Education  
REGION V - BICOL



REGIONAL MEMORANDUM

No: \_\_\_\_\_

REGIONAL SCIENCE AND TECHNOLOGY FAIR FOR SCHOOL YEAR 2021-2022

To: SCHOOLS DIVISION SUPERINTENDENTS

1. Cognizant to DepEd Memorandum no. 38, s. 2022 entitled National Science and Technology Fair 2022, this Office thru the Curriculum and Learning Management Division (CLMD) shall conduct the **Regional Science and Technology Fair on June 15- 17, 2022** with the theme: **Expanding the Horizon: Futures of STEM**

2. This year's fair continues to empower the youth and cultivate innovation and creativity amid the changing world. It aims to showcase the competence of the learners in addressing community problems for sustainable development and to maximize their potential of being inquisitive and creative in dealing with real-life problems.

3. Due to the restrictions of pandemic, the RSTF shall be done in a hybrid manner. It shall consist of the following events and competitions:

- a. Siyensikula –an original video creation competition
- b. Likha – a Research Proposal Competition
- c. #SteMTokperiments – a TikTok Science Experiment Competition

4. Strict adherence to Inter-Agency Task Force (IATF) protocols at all levels of competition must be observed such as, but not limited to, the mandatory wearing of masks by all participants and members of the Technical Working Group (TWG).

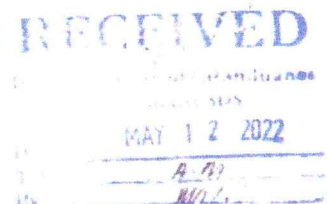
5. Expenses related to the schools and divisions conduct and participation shall be charged against local funds while expenses for the conduct of RSTF 2022 shall be charged from regional funds and CO downloaded subsidy for RSTF 2022.

6. The decision of the Board of Judges in the evaluation and deliberation of entries is final and irrevocable.

7. The documents below are enclosed for the information and guidance of all concerned

- Enclosure 1: Siyensikula - Mechanics
- Enclosure 2: Siyensikula Waiver and Certification
- Enclosure 3: Likha Mechanics and Criteria
- Enclosure 4: Likha Rubrics Evaluation Tool (Screening)
- Enclosure 5: Likha Rubrics Evaluation Tool (Final Judging)
- Enclosure 6: Likha – Project Proposal Template
- Enclosure 7: #SteMTokperiments – Mechanics and Criteria

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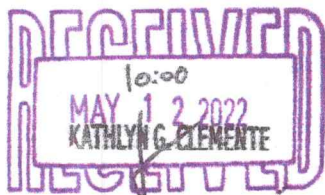
18 MAY 2022

TO: Secondary School Heads  
Senior High School Heads  
All other concerned

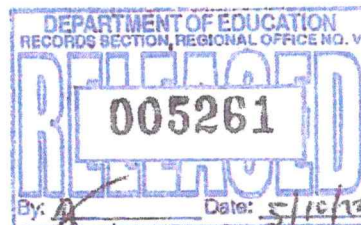
For information, guidance and compliance

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**SUSAN S. COLLANO**  
Schools Division Superintendent

Encl.:  
References:  
To be indicated in the Perpetual Index  
Under the following subjects:  
Regional Science and Technology Fair for School Year 2021-2022



Republic of the Philippines  
Department of Education  
REGION V - BICOL



May 5, 2022

REGIONAL MEMORANDUM

No: 01

REGIONAL SCIENCE AND TECHNOLOGY FAIR FOR SCHOOL YEAR 2021-2022

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RECEIVED

DepEd Division Office of Catanduanes  
Office of the SDS

MAY 12 2022

Date: \_\_\_\_\_  
Time: A.M.  
By: [Signature]

[Handwritten note]



Republic of the Philippines  
**Department of Education**  
REGION V - BICOL

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3. Immediate dissemination of this Memorandum is desired.

  
**GILBERT M. SADSAD**  
Regional Director

To be included in the Perpetual Index

Under the following subject:

CELEBRATIONS AND FESTIVALS

SCHOOLS

SCIENCE EDUCATION

STUDENTS

CONTESTS

CLMD/fbb/cheD  
5/6/2022





Republic of the Philippines  
**Department of Education**  
REGION V - BICOL

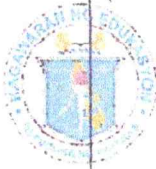
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Enclosure 1:

**SIYENSIKULA MECHANICS**

1. This competition is open to all Junior and Senior High School students from both Public and Private Schools. To ensure that no conflict of ownership will arise on the use of YouTube accounts, **ONLY individual entries are allowed.**
2. The participant must discuss a difficult topic under Physical Sciences, Life Sciences, Mathematics or an Engineering concept in a clear, creative and engaging manner through a video presentation that is not more than three (3) minutes. The participant can discuss the topic in English and/or Filipino.
3. All contents in the video must be original and are owned by the participant. Entries may include personal experiences and thoughtful observations. Videos must reflect that the student has carefully reviewed and examined the topic.
4. All creative visual tools such as animations, simulations, physical demonstrations or visual aids are allowed. Entries with photos which are derivative works will automatically be disqualified.
5. Each division shall send only one (1) official entry to the regional level. It should be properly endorsed by the Schools Division Superintendent through an endorsement letter on or before June 6, 2022. Entries must be submitted via email to [retrov@gmail.com](mailto:retrov@gmail.com)
6. The email shall include: (1) the name of the participant, (2) a YouTube video link attachment of the video entry, (3) a PDF file of the video script along with the references in the Chicago Manual of Style, and (4) Video and Voice Recording Consent, Waiver, Indemnity and Release Form. Non-submission of any of the required documents for the competition category will be disqualified.

*Qp*



Republic of the Philippines  
**Department of Education**  
REGION V - BICOL

Enclosure 2

**CERTIFICATION**

**KNOWN ALL MEN BY THESE PRESENTS**

I, \_\_\_\_\_ of \_\_\_\_\_  
do hereby certify that our entry is of our own and is new and original to the best of our  
knowledge. I, We further certify that we give our permission for DepEd - Division Office of  
Cebu City Development to share the said Videos as supplemental learning  
materials to be used in the classrooms.

I, WITNESS WHEREOF, I We have hereunto set our hands on this \_\_\_\_\_ day  
of \_\_\_\_\_, 2021.

Author/s

Witness

**SUBSCRIBED AND SWORN TO** before me this \_\_\_\_\_ day of \_\_\_\_\_, 2021, at \_\_\_\_\_,  
Philippines, alicant \_\_\_\_\_, exhibiting his/her  
identity as above stated.

Doc. No. \_\_\_\_\_  
Page No. \_\_\_\_\_  
Book No. \_\_\_\_\_  
Series of 2021



Republic of the Philippines  
**Department of Education**  
REGION V - BICOL

Enclosure 3

**Likha – A Full Proposal Research Competition**

**MECHANICS AND CRITERIA**

1. This competition is open to Grade 9-12 students from both Public and Private schools in the country.
2. The first place winner in the division level shall join in the regional level. Only one (1) entry is allowed per category.
3. The four (4) major categories are Life Science, Physical Science, Robotics and Intelligent Machines and Mathematics and Computational Sciences.

	Life Science	Physical	Robotics and Intelligent Machines	Mathematics and Computational Sciences
Category	Individual	Individual	Individual	Individual
	Team	Team	Team	Team

4. The Official entries to the Regional Level Likha Competition should be properly endorsed by the Schools Division Superintendent through an endorsement letter on or before June 6, 2022.
5. Entries must be submitted via email to [rstfrov@gmail.com](mailto:rstfrov@gmail.com) with the subject format: LIKHA\_DIVISION\_CATEGORY (EX LIKHA\_ALBAY\_LS-I)
6. The email should include completely filled-up Project Form and other relevant files in PDF format. Incomplete submission of the required documents may disqualify the division entries.
7. DepEd-RSTF Technical Committee reserves the right to remove, reject or disqualify any entry if it infringes, misappropriates, or violates any rights of any third party including, without limitation, patent, copyright, trademark or right of privacy or publicity.
8. The Project Proposal will be screened according to the following criteria:

CRITERIA	WEIGHT
Originality and Innovation	25%
Technical/Scientific Merit	25%
Community Connection and Impact	25%
Excellence of Method	<u>25%</u>
	100

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9. The Project Proposal will be **judged** according to the following criteria:

<b>Criteria</b>	<b>Description</b>	<b>Weight</b>
Originality and Innovation	The project provides novel and innovative solutions to issues in the environment	20%
Technical/Scientific Merit	Sound scientific basis to generate new knowledge or apply existing knowledge in an innovative manner	20%
Community Connection and Impact	Outcomes are expected to address the issue or problem identified.	20%
Excellence of method	Solution and method proposed and cost effective, viable, timely and relevant.	20%
Presentation	Proponent/s provide/s a clear explanation of the facts, theories, thorough understanding of the expected output of the proposal.	20%
Total		100%

10. Project Format Descriptions:

- a. **Executive Summary**- a brief discussion about the proposal.
- b. **Introduction**- a declaration of the project and its idea and context to explain the goals and objectives to be reached and other relevant information that explains the need for the project and states the aims to describe the amount of work planned for implementation; refers to a simple explanation or depiction of the project that can be used as communication material.
  - **Rationale**- a brief analysis of the problems identified related to the project
  - **Significance**- refers to the alignment to national S&T priorities, strategic relevance to national development and addresses current issues and concerns.
  - **Scientific Basis**- scientific findings, conclusions or assumptions used as justification for the research.
  - **Theoretical Framework**- the structure that summarizes concepts and theories that serve as basis for the data analysis and interpretation of the research data.
  - **Objectives**- statements of the general and specific purposes to address the problem areas of the project.
- c. **Review of Literature** - refers to the following: (a) related researches that have been conducted, state-of-the-art or current technologies from which the project will take off; (b) scientific/technical merit; (c) results of related research conducted by the same Project Leader, if any; (d) Prior Art Search, and; (e) other relevant materials.

- d. **Methodology** - description of the design and engineering solution proposed to address the problem. the (a) variables or parameters to be measured and evaluated or analyzed; (b) treatments to be used and their layout; (c) experimental procedures and design; (d) statistical analysis; (e) evaluation method and observations to be made, strategies for implementation (Conceptual/Analytical framework).
- e. **Expected Output and Potential Impact** - discusses the possible outcome of the project, the target beneficiaries, socio and economic impact
- f. **Workplan and Target Deliverables.** indicates the timeline of activities to be accomplished in the conduct of the project.
- g. **References** - list of reference materials such as journals, designs and patents, and online sources. It should follow Chicago Manual of Style in referencing.

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### LIKHA - RUBRIC EVALUATION TOOL (SCREENING)

CRITERIA	POINT
<b>1. Originality and Innovation (25)</b> 1. Does the project show originality and innovation in terms of a. proposed approach in solving the problem? b. research design? c. research methodology? d. construction or design of a new or improved equipment? 2. Did the research project considered an issue/problem/gap that previous research projects did not addressed? 3. Does the project transforms an idea or solution into a creative, unique and major improvement in the current technology/process/product/technique/design?	
<b>2. a. Technical/Scientific Merit (25)</b> (If an engineering project, please see 2b. Engineering Goals.) 1. Is the problem stated explicitly and concisely? 2. Was the approach to solve the problem supported by relevant, critical and logical related literatures (scientific basis/theoretical framework/mathematical theory)? 3. Did the finalist team cite sufficient number of credible related literatures to provide a solid understanding and pre-requisite information for readers to better understand the research project? 4. Does the finalist team recognize the projects' limitations? 5. Does the analysis of background information with depth? <b>b. Engineering Goals</b> 1. Does the project have a clear objective? 2. Is the objective relevant to the potential user's needs? 3. Is the solution workable? Acceptable to the potential user? Economically feasible? 4. Could the solution be utilized successfully in design or construction of an end product? 5. Is the solution a significant improvement over previous alternatives or application? 6. Will the solution be tested for performances under standardized protocols?	
<b>3. Community Connection and Impact (25)</b> 1. Did the project addressed a relevant research issue? (e.g. food safety, water conservation, cyber security, traffic road congestion, health, disaster mitigation, agriculture and environment and others) 2. Did the student clearly defined the extent on how the research project can potentially benefit and meet the needs of the society? 3. Does the proposed solution gives value, effectiveness and efficiency to their target sector?	
<b>4. Excellence of Method (25)</b> 1. Was the research methods supported by relevant and credible related literatures? 2. Was there an efficient, thorough, valid and reliable procedural plan to attain the research objectives? 3. Are the variables clearly identified and defined? 4. If controls were necessary, did the student recognize their need and will be used correctly? For the extraneous variables, did the student identified methods on how to control such variables? 5. Does the critical elements (e.g. treatments, techniques, protocols, replications, trials) of the research design and methods appropriately developed? 6. Does the project specifically and clearly explained what and how quantitative and qualitative data will be collected? 7. Does the project recognize ethical or safety issues and has adequate plans to manage risks? 8. Does the project include appropriate protocols/procedures for waste disposal and data analysis? 9. Is the proposed timeline/workplan appropriate, achievable, practical and feasible?	
<b>TOTAL</b>	
Signature over printed name of the evaluator	

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**LIKHA - RUBRIC EVALUATION TOOL (FINAL JUDGING)**

CRITERIA	POINT
<p>1 Originality and Innovation (20)</p> <ol style="list-style-type: none"> <li>1 Does the project show originality and innovation in terms of                             <ol style="list-style-type: none"> <li>a proposed approach in solving the problem?</li> <li>research design?</li> <li>research methodology?</li> <li>construction or design of a new or improved equipment?</li> </ol> </li> <li>2 Did the research project considered an issue/problem/gap that previous research projects did not address?</li> <li>3 Does the project transforms an idea or solution into a creative, unique and major improvement in the current technology/process/product/technique/design?</li> </ol>	
<p>2 a Technical/Scientific Merit (20)</p> <p>(If an engineering project, please see 2b Engineering Goals)</p> <ol style="list-style-type: none"> <li>1 Is the problem stated explicitly and concisely?</li> <li>2 Was the approach to solve the problem supported by relevant, critical and logical related literatures (scientific basis/theoretical framework/mathematical theory)?</li> <li>3 Did the finalist team cite sufficient number of credible related literatures to provide a solid understanding and pre-requisite information for readers to better understand the research project?</li> <li>4 Does the finalist team recognize the projects' limitations?</li> <li>5 Does the analysis of background information with depth?</li> </ol> <p>b Engineering Goals</p> <ol style="list-style-type: none"> <li>1 Does the project have a clear objective?</li> <li>2 Is the objective relevant to the potential user's needs?</li> <li>3 Is the solution workable? Acceptable to the potential user? Economically feasible?</li> <li>4 Could the solution be utilized successfully in design or construction of an end product?</li> <li>5 Is the solution a significant improvement over previous alternatives or application?</li> <li>6 Will the solution be tested for performance under standardized protocols?</li> </ol>	
<p>3 Community Connection and Impact (20)</p> <ol style="list-style-type: none"> <li>1 Did the project addressed a relevant research issue? (e.g. food safety, water conservation, cyber security, traffic/road congestion, health, disaster mitigation, agriculture and environment and others)</li> <li>2 Did the student clearly defined the extent on how the research project can potentially benefit and meet the needs of the society?</li> <li>3 Does the proposed solution gives value, effectiveness and efficiency to their target sector?</li> </ol>	
<p>4 Excellence of Method (20)</p> <ol style="list-style-type: none"> <li>1 Was the research methods supported by relevant and credible related literatures?</li> <li>2 Was there an efficient, thorough, valid and reliable procedural plan to attain the research objectives?</li> <li>3 Are the variables clearly identified and defined?</li> <li>4 If controls were necessary, did the student recognize their need and will be used correctly? For the extraneous variables, did the student identified methods on how to monitor and keep these variables constant?</li> <li>5 Does the critical elements (e.g. treatments, techniques, protocols, replications, trials) of the research design and methods appropriately developed?</li> <li>6 Does the project specifically and clearly explained what and how quantitative and qualitative data will be collected?</li> <li>7 Does the project recognize ethical or safety issues and has adequate plans to manage risks?</li> <li>8 Does the project include appropriate protocols/procedures for waste disposal and data analysis?</li> <li>9 Is the proposed timeline/work-plan appropriate, achievable, practical and feasible?</li> </ol>	
<p>5 Presentation (20)</p> <ol style="list-style-type: none"> <li>1 How clearly and concisely does the finalist or team discussed his/her project and explain the rationale and procedures? Watch out of memorized speeches that reflect little understanding of principles</li> <li>2 Does the written material reflect the finalist's or team's understanding of the research proposal?</li> <li>3 Are the important phases of the project presented in an orderly manner?</li> <li>4 How clearly is the rationale presented?</li> <li>5 How clearly are the research methods presented?</li> <li>6 Did the student used presentation resources as guide?</li> <li>7 Is the presentation professional with the use of colors, fonts and graphics?</li> <li>8 Did the student speaks clearly, maintains eye contact and uses appropriate scientific language?</li> <li>9 Did the student provided clear, detailed and accurate answers to the questions given?</li> </ol>	
<p>TOTAL</p> <p>Signature over printed name of the Judge</p>	

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**LIKHA - PROJECT PROPOSAL TEMPLATE**

**(1) PROJECT PROFILE**

Project Title: \_\_\_\_\_  
Names of Project Proponent/s: \_\_\_\_\_  
Region: \_\_\_\_\_ Division: \_\_\_\_\_  
School: \_\_\_\_\_ Grade Level: \_\_\_\_\_  
Project Duration (number of months): \_\_\_\_\_  
Email: \_\_\_\_\_ Contact number: \_\_\_\_\_

**(2) CATEGORY OF RESEARCH**

- \_\_\_\_\_ Physical Science
- \_\_\_\_\_ Life Science
- \_\_\_\_\_ Robotics and Intelligent Machines
- \_\_\_\_\_ Mathematics and Computational Sciences

**(3)**

- \_\_\_\_\_ Individual
- \_\_\_\_\_ Team

**(4) THEME**

- \_\_\_\_\_ Food Safety
- \_\_\_\_\_ Water Conservation
- \_\_\_\_\_ Renewable Energy
- \_\_\_\_\_ Cyber Security
- \_\_\_\_\_ Traffic / Road Congestion
- \_\_\_\_\_ Health
- \_\_\_\_\_ Disaster Mitigation
- \_\_\_\_\_ Agriculture and Environment
- \_\_\_\_\_ Others (please specify)

**(5) EXECUTIVE SUMMARY (not to exceed 200 words)**

**(6) INTRODUCTION**

**(6.1) RATIONALE/SIGNIFICANCE (not to exceed 300 words)**

**(6.2) SCIENTIFIC BASIS/THEORETICAL FRAMEWORK/MATHEMATICAL THEORY INVOLVED**

**(6.3) OBJECTIVES**

General  
Specific:

**(7) REVIEW OF LITERATURE**

**(8) METHODOLOGY**

**(9) EXPECTED OUTPUTS AND POTENTIAL IMPACTS**

**(10) WORK PLAN AND TARGET DELIVERABLES**

**(11) REFERENCES**

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Republic of the Philippines  
**Department of Education**  
REGION V - BICOL

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Enclosure 7:

**#StemTOKPERIMENTS - A TIKTOK SCIENCE EXPERIMENT COMPETITION MECHANICS**

1. This competition is open to all Junior and Senior High School students from both Public and Private Schools in the country.
2. There will be two categories (a) Junior High School (b) Senior High School. The video entry should feature only one (1) Tiktok user. Each division shall send only one (1) entry per category. They should be properly endorsed by the Schools Division Superintendent on or before the deadline of submission of entry.
3. The participant must design an experiment proving or applying a Scientific concept, theory or law in a cheerful, lively and creative manner through a Tiktok video that is not more than one (1) minute.
4. The participant can explain the topic/concept in English or Filipino.
5. The Tiktok Video must use the hashtags #SCITOKPERIMENTS and #RSTF2022 in uploading the video entry in Tiktok.
6. All contents and audio in the TikTok video must be original and are owned by the participant/s. All creative visual tools such as animations, simulations, physical demonstrations, or visual aids are allowed. The contestant will be held accountable to any issues that may arise with regard to the originality and accuracy of the content.
7. The following TikTok video format are highly recommended: File size: The video should be up to 287.6 MB in size for iOS, or 72 MB on Android. Orientation: TikTok is formatted to be viewed on a smartphone, so vertical video is best. Dimensions: TikTok video dimensions should be 1080x1920. Aspect ratio: The aspect ratio should be that of a standard smartphone screen, 9:16. 1:1 is also possible, but it won't take up the whole screen. File type: TikTok supports .mp4 and .mov files.
8. Entries must be submitted via email to rstfrov@gmail.com not later than June 6, 2022 with a subject format: "#SCITOKEXPERIMENTS\_DIVISION\_ENTRYNO.\_"
9. The email should include: (1) the name/s of the participant/s, (2) Tiktok video link attachment of the video entry, and (3) a pdf file of the video script along with the references in Chicago Manual of Style. Non-submission of any of the required documents of the competition entry will automatically be disqualified.
10. DepEd-RSTF Regional Technical Working Committee reserves the right to remove, reject, or disqualify any entry if it, (a) violates the terms of service and privacy policy of Tiktok, and (b) infringes, misappropriates, or violates any rights of any third party including, without limitation, patent, copyright, trademark or right of privacy or publicity.

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Republic of the Philippines  
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12. Entries submitted to "#SCITOKEXPERIMENTS do not represent DepEd and the RSTF Technical Working Group.

13. The Tiktok Video will be judged according to the following criteria:

Criteria	Percentage
Creativity and Originality	30%
Delivery/Execution	30%
Accuracy of Content	<u>40%</u>
Total	100%

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