Republic of the Philippines

# Department of Education

REGION IV- A CALABARZON
CITY SCHOOLS DIVISION OF THE CITY OF TAYABAS

**28 August 2024**

DIVISION MEMORANDUM
No. 572 s. 2024

**2024 SCIENCE MONTH CELEBRATION**

To: Assistant Schools Division Superintendent
Chief Education Supervisors
Education Program Supervisors
Heads, Public Elementary and Secondary Schools
All Others Concerned

1. With reference to Presidential Proclamation No. 264 dated September 23, 2002 declaring September as Science Month, this Office, through the Curriculum Implementation Division, announces this year's theme **"Siyensya, Teknolohiya, at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan (Science, Technology, and Innovation: Partner Towards A Strong, Comfortable, and Secure Future)"** with the sub-theme **"Pagbibigay ng mga Solusyon at Pagbubukas ng mga Oportunidad sa Green Economy (Providing Solutions and Opening Opportunities in the Green Economy)"**. Thus, schools are encouraged to conduct their school-based activities integrated in their Science lessons subject to no-disruption-of-classes policy.

2. Supporting the theme, the celebration aims to:
- promote inquiry-based learning and science process skills;
- provide sustained solutions to environmental problems towards creating a 'green' economy; and
- develop/sustain the Science, Technology, Engineering, and Mathematics (STEM) skills framework stipulated in the K to 12/MATATAG Science curricula.

3. Enclosed are the timeline of activities, and suggested activities and their mechanics for their school-based Science Month Celebration.

4. Immediate and widest dissemination of this Memorandum is desired.

For:

**CELEDONIO B. BALDERAS JR.**
Schools Division Superintendent

By:

**HERBERT D. PEREZ**
Assistant Schools Division Superintendent
Officer-In-Charge

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DIVISION MEMORANDUM
No. 572 s. 2024

Encl.: As stated
Reference: Presidential Proclamation No. 264, s.2022
To be indicated in the Perpetual Index
under the following subjects:

SCIENCE MONTH CELEBRATION

CID – 2024 science month celebration
CID0ITN2-000994/August 28, 2024

**Enclosure 1**

## TIMELINE OF ACTIVITIES

| Activity | Target Date of Conduct | Target Participants | Responsible Persons |
|---|---|---|---|
| Quiz Bee | September 6, 13, 20 and 27, 2024 (Catch-Up Friday) | • Key Stage 1: Gr. 3<br>• Key Stage 2: Gr. 4-6<br>• Key Stage 3: Gr. 7-10 | • School Head<br>• School Science Coordinator<br>• Elementary and Secondary science teachers<br>• KS 1-3 learners |
| Poster-Slogan | September 12, 2024 | • Key Stage 1: Gr. 3<br>• Key Stage 2: Gr. 4-6 | • School Head<br>• School Science Coordinator<br>• Elementary teachers<br>• KS 1-2 learners |
| Science TeachTalk | Friday or Saturday of September 2024 | • Key Stage 1: Gr. 3<br>• Key Stage 2: Gr. 4-6<br>• Key Stage 3: Gr. 7-10<br>• Key Stage 4: Gr. 11-12 | • School Head<br>• School Science Coordinator<br>• Elementary and Secondary science teachers<br>• KS 1-4 learners |
| Science Garden | Year-round | • Key Stage 1: Gr. 3<br>• Key Stage 2: Gr. 4-6<br>• Key Stage 3: Gr. 7-10<br>• Key Stage 4: Gr. 11-12 | • School Head<br>• School Science Coordinator<br>• Elementary and Secondary science teachers<br>• KS 1-4 learners |
| Science Exhibit | September 27, 2024 | • Key Stage 1: Gr. 3<br>• Key Stage 2: Gr. 4-6<br>• Key Stage 3: Gr. 7-10<br>• Key Stage 4: Gr. 11-12 | • School Head<br>• School Science Coordinator<br>• Elementary and Secondary science teachers<br>• KS 1-4 learners |
| TugSayAwit | September 27, 2024 | • Key Stage 1: Gr. 3<br>• Key Stage 2: Gr. 4-6<br>• Key Stage 3: Gr. 7-10<br>• Key Stage 4: Gr.11-12 | • School Head<br>• School Science Coordinator<br>• Elementary and Secondary science teachers<br>• KS 1-4 learners |
| TUKLAS: A Research Project Fair | Year-round | • Key Stage 3: Gr. 9-10<br>• Key Stage 4: Gr. 11-12 | • School Head<br>• School Science Coordinator<br>• Elementary and Secondary science teachers<br>• KS 3-4 learners |

**Enclosure 2**

**SUGGESTED ACTIVITIES**

| ***Title of the Activity:*** | *Quiz Bee* | ***Grade Level:*** | 3-10 |
|---|---|---|---|
| **Description of the Activity** (What is the importance of this activity in developing learners' skills?) | This encapsulates a spectrum of scientific domains, such as Life Science, Earth and Space, Materials Science, and Force, Motion, and Energy. Each question is created to assess the understanding of science concepts. Likewise, results of the quiz bee can serve as data to teachers in providing the necessary remediation/enrichment activities to the learners. | | |
| **Final Output** (Expected Result) | Formative Assessment Result | | |
| **Duration** (How long will the learners work on the activity?) | 4 Days (every Friday of September during the conduct of Catch-Up Friday) | | |
| **Driving Question** (What is the scientific purpose of the activity?) | How will the learners develop scientific literacy to become informed and participative citizens who are able to make judgments and decisions regarding applications of scientific knowledge that may have social, health, or environmental impacts? | | |

| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | ***Realization and Learning*** (Learning that took place) |
|---|---|
| **Grade 3**<br>• Classify objects and materials as solid, liquid and gas based on some observable characteristics<br>• Describe changes in materials based on the effect of temperature:<br>1. solid to liquid<br>2. liquid to solid<br>3. liquid to gas<br>4. solid to gas | Ang mga mag-aaral nakapag-obserba ng iba't ibang bagay at mga materyales, nalaman nila kanilang iba't ibang katangian tulad ng hugis, timbang, katiyakan ng lakas ng tunog at kadalian ng daloy. Gamit ang mga katangian, maaari nilang pagsama-samahin ang mga bagay at materyales sa mga solid, liquid, o gas. |
| **Grade 4**<br>• Use information from secondary sources to identify a famous Filipino and / or foreign scientist and their invention/s.<br>• Use information from a home or the local community to identify a science invention and explain its impact on their everyday life<br>• Describe the chemical properties of materials, such as they can be burnt, react with other materials, or are degradable or biodegradable<br>• Describe changes in properties of materials when exposed to certain changes in temperature, such as changes when wood or coal are burned;<br>• Demonstrate ways to minimize harmful changes in materials, such as restriction of burning of waste materials, and care in handling reactive | Learners were able to describe chemical properties of materials and changes to them. They demonstrated an understanding that science processes can solve everyday problems and use creativity and determination to provide examples. They exhibited objectivity and open-mindedness in gathering information related to environmental issues and concerns in the community. |

| | |
|---|---|
| materials<br>• Identify issues and concerns in the local community and how they could be addressed by science, such as the treatment of waste | |
| **Grade 5**<br>• Use the properties of materials whether they are useful or harmful<br>• Investigate changes that happen in materials under the following conditions: presence or lack of oxygen; and application of heat | Learners could critically decide whether these materials are harmful or not. They could also describe ways in which they could use their knowledge of solids and liquids in making useful materials and products. |
| **Grade 6**<br>• Describe the appearance and uses of homogenous and heterogenous mixtures<br>• Describe techniques in separating mixtures such as decantation, evaporation, filtering, sieving, and using magnet | Learners could now describe the appearance of mixtures as uniform or non-uniform and classify them as homogeneous or heterogeneous mixtures. |
| **Grade 7**<br>• Recognize that scientists use models to explain phenomena that cannot be easily seen or detected<br>• Describe the Particle Model of Matter as "All matter is made up of tiny particles with each pure substance having its own kind of particles."<br>• Describe that particles are constantly in motion, have spaces between them, attract each other, and move faster as the temperature increases (or with the addition of heat)<br>• Use diagrams and illustrations to describe the arrangement, spacing, and relative motion of the particles in each of the three states (phases) of matter<br>• Explain the changes of state in terms of particle arrangement and energy changes<br>• Follow appropriate steps of a scientific investigation which includes: a. Aim or problem, b. Materials and equipment, c. Method or procedures, d. Results including data, and e. Conclusion<br>• Identify the role of the solute and solvent in a solution<br>• Express quantitatively the amount of solute present in a given volume of solvent<br>• Identify solutions, which can be found at home and in school and that react with litmus indicator, as acids, bases, and salts | Learners could recognize that scientists use models to describe the particle model of matter. They used diagrams and illustrations to explain the motion and arrangement of particles during changes of state. They demonstrated an understanding of the role of solute and solvent in solutions and the factors that affect solubility. Lastly, they demonstrated skills to plan and conduct a scientific investigation making accurate measurements and using standard units. |
| **Grade 8**<br>• Investigate the relationship between the amount of force applied and the mass of the object to the amount of change in the object's motion<br>• Infer that when a body exerts a force on another, | Learners studied the concept of force and its relationship to motion. They used Newton's Laws of Motion to explain why objects move (or do not |


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|---|---|
| an equal amount of force is exerted back on it<br>• Identify and explain the factors that affect potential and kinetic energy<br>• Investigate the effect of temperature to the speed of sound<br>• Explain the hierarchy of colors in relation to the energy of visible light<br>• Differentiate between heat and temperature at the molecular level<br>• Infer the relationship between current and voltage<br>• Explain the advantages and disadvantages of series and parallel connections in homes<br>• Explain the functions of circuit breakers, fuses, earthing, double insulation, and other safety devices in the home | move) the way they do (as described in Grade 7). They also realized that if force is applied on a body, work can be done and may cause a change in the energy of the body. Likewise, learners realized that transferred energy may cause changes in the properties of the object. They related the observable changes in temperature, amount of current, and speed of sound to the changes in energy of the particles. |
| **Grade 9**<br>• Explain how the respiratory and circulatory systems work together to transport nutrients, gasses, and other molecules to and from the different parts of the body<br>• Infer how one's lifestyle can affect the functioning of respiratory and circulatory systems<br>• Explain the different patterns of Non-Mendelian inheritance<br>• Relate species extinction to the failure of populations of organisms to adapt to abrupt changes in the environment.<br>• Differentiate the basic features and importance of photosynthesis and respiration | Learners learned about the relationship of respiratory and circulatory systems of the human body. The could also explain the different patterns of Non-Mendelian inheritance and related species extinction to the failure of populations of organisms to adapt to abrupt changes in the environment. |
| **Grade 10**<br>• Describe and relate the distribution of active volcanoes, earthquake epicenters, and major mountain belts to Plate Tectonic Theory<br>• Describe the different types of plate boundaries<br>• Explain the different processes that occur along the plate boundaries<br>• Describe the possible causes of plate movement<br>• Enumerate the lines of evidence that support plate movement | Learners discovered that volcanoes, earthquake epicenters, and mountain ranges are not randomly scattered in different places but were located in the same areas. This led to an appreciation of plate tectonics—a theory that binds many geologic processes such as volcanism and earthquakes. |
| **Mechanics** (How will you conduct the activity in the school?) | |
| 1. The Science Quiz Bee is an individual contest open to all learners in Key Stages 1-4. For Grades 1-2, Science Quiz Bee will be conducted only to schools offering Special Science Elementary School (SSES) program.<br>2. Each teacher should select a representative from each section to participate in their school-initiated quiz bee. Teachers are encouraged to develop questions based on the 2016 K to 12 Science and MATATAG curricula for Quarter 1 only.<br>3. The quiz bee has three rounds: **BEGINNER (1 point)**, **INTERMEDIATE (3** | |

**points)**, and **ADVANCED (5 points)**. Each round is composed of 10 questions only. Questions to be discussed are of objective type. Teachers can use creative ways to allow learners display their answers.

4. All answers must be spelled correctly to be considered correct for those without options. Use of calculators is not allowed.
5. Each participant will start with zero score at the start. The accumulation of points all throughout the quiz bee will be cumulative.
6. In case of a tie, a clincher round, composed of 5 questions, will be given with two points each for each correct answer. The scores will be added to the partial score of the competing contestant to determine the winner.
7. Answers that require units must be complete. No units of measurement will not be considered as a correct answer.
8. For the duration of the quiz bee, each participant should stay in a private (quiet and undisturbed) room. Only the participant can stay in the said room and shouldn't be accompanied by anyone.
9. No one is allowed to go outside of their private rooms once the quiz bee has started unless official breaks are called by the Quiz Master.
10. Non-compliance to the rules would result to automatic disqualification from the quiz bee.
11. Certificates of Recognition and Medal will be given to the 1st, 2nd, and 3rd placers.

| ***Title of the Activity:*** | *Poster-Slogan* | ***Grade Level:*** | 3-6 |
|---|---|---|---|
| ***Description of the Activity*** (What is the importance of this activity in developing learners' skills?) | This activity focuses on the 2024 Science Month Celebration with the theme *"Siyensya, Teknolohiya, at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan (Science, Technology, and Innovation: Partner Towards A Strong, Comfortable, and Secure Future)"* with the subtheme *"Pagbibigay ng mga Solusyon at Pagbubukas ng mga Oportunidad sa Green Economy (Providing Solutions and Opening Opportunities in the Green Economy)"*. Target participants to this activity are the Key Stage 1 (Grade 3) and Key Stage 2 (Grades 4-6) learners. For Key Stage 1, the slogan will use Filipino language, while English language for Key Stage 2. The slogan is composed of **4 lines with 5 words per line**. | | |
| ***Final Output*** (Expected Result) | Poster-Slogan | | |
| ***Duration*** (How long will the learners work on the activity?) | 1 Day (September 12, 2024) | | |
| ***Driving Question/s*** (What is the scientific purpose of the activity?) | How will the learners provide environmental solution and create opportunity towards *Green Economy*? | | |

| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | ***Realization and Learning*** (Learning that took place) |
|---|---|
| **Grade 3**<br>• Classify objects and materials as solid, liquid and gas based on some observable characteristics<br>• Describe changes in materials based on the effect of temperature:<br>1. solid to liquid<br>2. liquid to solid<br>3. liquid to gas<br>4. solid to gas | Gamit ang mga katangian, maaari nilang pagsama-samahin ang mga bagay at materyales sa mga solid, liquid, o gas sa paglikha ng mga posibleng solusyon sa nararamdamang problemang pangkapaligiran sa ating mundo. |
| **Grade 4**<br>• Use information from a home or the local community to identify a science invention and explain its impact on their everyday life<br>• Describe the chemical properties of materials, such as they can be burnt, react with other materials, or are degradable or biodegradable<br>• Demonstrate ways to minimize harmful changes in materials, such as restriction of burning of waste materials, and care in handling reactive materials<br>• Identify issues and concerns in the local community and how they could be addressed by science, such as the treatment of waste | Learners were able to exhibit objectivity and open-mindedness in gathering information related to environmental issues and concerns in the community. Likewise, through their poster-slogan, the learners could create awareness in promoting viable solutions to promote *Green Economy.* |
| **Grade 5**<br>• Use the properties of materials whether they are useful or harmful | Learners could promote environmental awareness in classifying useful and |

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| • Investigate changes that happen in materials under the following conditions: presence or lack of oxygen; and application of heat | harmful materials towards sustainable future. |
| **Grade 6**<br>• Describe the appearance and uses of homogenous and heterogenous mixtures<br>• Describe techniques in separating mixtures such as decantation, evaporation, filtering, sieving, and using magnet | Based on the appearance and uses of mixtures as uniform or non-uniform and classification as homogeneous or heterogeneous mixtures, learners were able to promote awareness and benefits of being a 'Green' economy country. |

**Mechanics** (How will you conduct the activity in the school?)

1. This activity focuses on the theme *"Siyensya, Teknolohiya, at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan (Science, Technology, and Innovation: Partner Towards A Strong, Comfortable, and Secure Future)"* with the subtheme *"Pagbibigay ng mga Solusyon at Pagbubukas ng mga Oportunidad sa Green Economy (Providing Solutions and Opening Opportunities in the Green Economy)"*.
2. Target participants to this activity are the Key Stage 1 (Grade 3) and Key Stage 2 (Grades 4-6) learners. For Key Stage 1, the slogan should use Filipino language, while English language for Key Stage 2. The slogan is composed of 4 lines with 5 words per line only.
3. Learners are encouraged to use the following materials:
   - Half white cartolina/A4-sized paper (8.27" x 11.69") whichever is available
   - Coloring materials: oil pastel/craypas/crayons, marker, ink, or watercolor
4. The criteria for judging are as follows:

| | | |
|---|---|---|
| • Creativity | - | 30% |
| • Overall presentation | - | 30% |
| • Relevance to the theme | - | 20% |
| • Originality | - | 20% |
| **Total** | | **100%** |

| ***Title of the Activity:*** | Science TeachTalk | ***Grade Level:*** | 3-12 |
|---|---|---|---|
| ***Description of the Activity*** (What is the importance of this activity in developing learners' skills?) | This activity is a lively discussion that provides deeper insights on technology news and innovations, along with animated explanations that raise awareness about the latest technology topics and environmental issues such as Robotics Intelligence, Climate Change, Reducing Carbon Footprints, Natural/Manmade Disasters, among others. Likewise, topics to be discussed shall be anchored on the 2024 Science Month Celebration theme and subtheme promoting sustainable and *'green'* economy. | | |
| ***Final Output*** (Expected Result) | Seminar Matrix; Pledge of Commitment | | |
| ***Duration*** (How long will the learners work on the activity?) | 1 day (any Friday or Saturday of September 2024) | | |
| ***Driving Question/s*** (What is the scientific purpose of the activity?) | How will the learners develop awareness on the latest trend in technology and solutions to environmental issues and provide possible solutions? | | |
| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | | ***Realization and Learning*** (Learning that took place) | |
| **Grades 3-12** All Science learning competencies stipulated in the 2016 K to 12 Science and MATATAG curricula | | Learners were able to develop awareness on the latest trend in technology and possible solutions to local/international environmental issues. | |

**Mechanics** (How will you conduct the activity in the school?)

1. Each school can decide on the possible topic that may serve as the focus of the seminar. Topics such as Robotics Intelligence, Climate Change, Reducing Carbon Footprints, among others, are the latest trends in Science.
2. Seminar can be conducted after class between Monday to Thursday or Catch-Up Friday subject to *no-disruption-of-schools* policy (DO 009, s.2005). You may opt to do it on Saturday provided that the parents have given consent to their children.
3. All safety and health protocols should be followed during the conduct of this activity.

| ***Title of the Activity:*** | Science Garden | ***Grade Level:*** | |
|---|---|---|---|
| ***Description of the Activity*** (What is the importance of this activity in developing learners' skills?) | This activity is designed to encourage every school to promote *'green'* economy by understanding the importance of science gardens with medicinal plants. This activity is developed for elementary and secondary learners to seize opportunity to explore and to discover the treasures in their own school yard. Lastly, science garden promotes discovery and experiential learning which cannot be found inside the classroom. | | |
| ***Final Output*** (Expected Result) | Science Garden | | |
| ***Duration*** (How long will the learners work on the activity?) | Year-round preparation and implementation | | |
| ***Driving Question/s*** (What is the scientific purpose of the activity?) | How will the school promote *'Green' Economy* developing learners' environmental awareness and science process skills? | | |
| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | | ***Realization and Learning*** (Learning that took place) | |
| **Grades 3-12** All Science learning competencies stipulated in the 2016 K to 12 Science and MATATAG curricula | | Learners were able to appreciate the importance of promoting *'green' economy* in schools and to appreciate Nature's gifts through establishing Science garden. | |

**Mechanics** (How will you conduct the activity in the school?)

1. Form a School Garden Committee. A garden committee makes decisions about how a school's garden will look, what it will be used for, and how it will operate. Whatever model you choose, the committee should ideally consist of 5-10 members representing the following areas: school's administration, teaching staff, YES-O officers, parents, and community volunteers.
2. Determine goals for your garden. Once you have your committee in place, determining goals for your garden is an important next step. Schools build gardens for different reasons such as promoting medicinal plants, saving native flora of the community, outsourcing for school income generating projects, among others.
3. Find your ideal school site. Now that you know the main purposes for your garden, review available sites and determine which one is right for your needs.
4. Plan and design your site. Working with a garden or landscape designer is often beyond the reach of schools sticking to a bare bones budget, yet it can also be a way to save costs in the long term. To begin, talk with other schools in the division that already have successful gardens and ask who helped them with their design. If your garden will be small—just a few beds—the main question you'll need to answer is where to locate those beds and how to place them. For larger gardens, there are other important considerations.

| ***Title of the Activity:*** | Science Exhibit | ***Grade Level:*** | 3-12 |
|---|---|---|---|
| ***Description of the Activity*** (What is the importance of this activity in developing learners' skills?) | This activity showcases learners' outputs, either individually or by group, as part of the performance tasks in Science. This includes poster-slogan, localized Science materials, inventions, investigatory projects, and the like. This enables the school to encourage learners to continuously develop their 21st century competencies including science process skills and Science, Technology, Engineering, and Mathematics (STEM) skills. | | |
| ***Final Output*** (Expected Result) | Science learners' portfolio (poster-slogan, inventions, investigatory projects, etc.) | | |
| ***Duration*** (How long will the learners work on the activity?) | Year-round | | |
| ***Driving Question/s*** (What is the scientific purpose of the activity?) | How will the learners share their Science learner portfolio to promote 21st century skills such as communication and creativity? | | |
| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | | ***Realization and Learning*** (Learning that took place) | |
| **Grades 3-12** All Science learning competencies stipulated in the 2016 K to 12 Science and MATATAG curricula | | Learners were educated and engaged, individually or by group, by showcasing and explaining concepts, discoveries, innovations, and experiments. | |

**Mechanics** (How will you conduct the activity in the school?)

1. Facilitate participation. To encourage the involvement of learners, it is best to leave the organization, management, and selection of activities in their hands, always with the guidance of several teachers in charge. Younger students can also be apprentices of the "organizers," students in higher grades, thus promoting social relations in the school.
2. Prepare and decorate the space. It is fundamental that the environment of the fair looks different and it is evident, at first sight, that this is a special event. Put banners on the walls, hang science themed garlands, include posters with portraits of great scientists, etc.
3. Getting the maximum number of participants is key. Involving families and friends will garner greater participation, and will mean that students feel more motivated.
4. Schedule a list of creative and experiential workshops in the most economical way possible. Maximize the available Science and Mathematics equipment or invite school alumni that may give small talks during Science exhibit.

| ***Title of the Activity:*** | TugSayAwit | ***Grade Level:*** | 3-12 |
|---|---|---|---|
| ***Description of the Activity*** (What is the importance of this activity in developing learners' skills? | This activity is a combination of music (tugtog), dance (sayaw), and song (awit) dubbed *TugSayAwit.* Learners used indigenous and/or recyclable materials, and localized instruments to create their original lyrics and tune anchored on the 2024 Science Month Celebration theme and subtheme. This activity hones learners' teamwork, creativity, resourcefulness, and science process skills. | | |
| ***Final Output*** (Expected Result) | TugSayAwit original composition (lyrics and tune)<br>TugSayAwit indigenized and localized music instruments | | |
| ***Duration*** (How long will the learners work on the activity?) | 1 day (September 27, 2024) | | |
| ***Driving Question/s*** (What is the scientific purpose of the activity?) | How can learners showcase creativity, ingenuity, resourcefulness, and science process skills in promoting sustainable and green economy? | | |

| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | ***Realization and Learning*** (Learning that took place) |
|---|---|
| **Grades 3-12**<br>All Science learning competencies stipulated in the 2016 K to 12 Science and MATATAG curricula | Learners were able to apply the learned science concepts and developed science process skills and to showcase 21st century skills in promoting sustainable and green economy |

**Mechanics** (How will you conduct the activity in the school?)

1. TugSayAwit competition is suggested to be conducted during the culminating activity of the 2024 Science Month Celebration.
2. Each grade level/section is required to send an entry with a minimum of **15** and maximum of **20** participants.
3. The allotted time for each presentation is **5 to 7 minutes**.
4. TugSayAwit is in consonance with the environmental campaign focusing on the contestant's creative tune and music.
5. Localized costume and props should be coming from scrap objects such as plastics, old newspapers, among others. Props must be only hand props.
6. Selected teachers will serve as tabulators of the result.
7. Three (3) judges/experts will be chosen which can be teachers teaching other subject areas as part of collaborative and integrative approach in Science.
8. The criteria for judging are as follows:

| | | |
|---|---|---|
| ✓ Mastery | - | 30% |
| ✓ Coordination | - | 25% |
| ✓ Localized Costume/Props | - | 15% |
| ✓ Stage Presence | - | 10% |
| ✓ Science Implication | - | 20% |
| **Total** | | **100%** |

9. All participants will receive certificates. Top three winners for the said contest will receive trophies and certificates.


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|---|---|---|---|
| ***Title of the Activity:*** | TUKLAS: A Research Project Fair | ***Grade Level:*** | 9-12 |
| ***Description of the Activity*** (What is the importance of this activity in developing learners' skills?) | This activity is a DepEd-recognized national competition showcasing STEM research competitions that provides opportunities for Junior and Senior High School learners to present their research projects based on their field of interest and/or real-world problems, issues, and concerns. | | |
| ***Final Output*** (Expected Result) | Science Investigatory Project (SIP) model and IMRAD-type manuscript | | |
| ***Duration*** (How long will the learners work on the activity?) | Year-round preparation and implementation | | |
| ***Driving Question/s*** (What is the scientific purpose of the activity?) | How will the learners apply inductive reasoning and science process skills in developing possible solutions to real-world problems, issues, and concerns based on their field of interest? | | |

| ***Target Learning Competencies*** (based on the 2016 Science K to 10 and MATATAG Curricula) | ***Realization and Learning*** (Learning that took place) |
|---|---|
| **Grades 9-12**<br>All Science learning competencies stipulated in the 2016 K to 12 Science and MATATAG curricula | Learners were able to apply the learned science concepts and developed science process skills in providing solutions to real-life problems including environmental issues, and other concerns. |

**Mechanics** (How will you conduct the activity in the school?)

1. The competition is open to Grades 9-12 learners of both public and private high schools in the Philippines who have not reached the age of 20 on or before May 1 of the current school year. Learners may work individually or in teams with 2-3 members from the same school.
2. Each learner is only allowed to submit one (1) research project in one (1) of the four (4) research categories namely: (1) Life Science, (2) Physical Science, (3) Robotics and Intelligent Machines, and (4) Mathematics and Computational Sciences. The project should include no more than 12 months of continuous research and should not include research activities performed before January of the previous school year. (e.g., For school year 2023-2024 with the target opening of classes on August 2023 and ISEF on May 2024, research projects may be accomplished within 1-12 month/s starting from January 2023 to January 2024).
3. The top three (3) winners in each category of TUKLAS will be screened by the division Scientific Review Committee (SRC) and qualifiers will advance to the Division Science and Technology Fair (DSTF). First placers in each category in the Regional Science and Technology Fair (RSTF) will be screened by the national SRC. The qualifiers will advance to the National Science and Technology Fair (NSTF).
4. First and second placers in each category in the Regional Science and Technology Fair (RSTF) will be screened by the national SRC. The qualifiers will advance to the National Science and Technology Fair (NSTF).
5. Attached is the individual score sheet showing the criteria in judging the contests.


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**INDIVIDUAL SCORE SHEET**
**(Life and Physical Science, Robotics and Intelligent Machine, and Mathematics and Computational Science)**

| TUKLAS Category | RESEARCH PROJECT TILE | CRITERIA | | | | | TOTAL (100%) |
|---|---|---|---|---|---|---|---|
| | | Creative Ability (30%) | Scientific Thought (30%) | Thoroughness (15%) | Skill (15%) | Clarity (10%) | |
| Life Science (Individual) | | | | | | | |
| Life Science (Team) | | | | | | | |
| Physical Science (Individual) | | | | | | | |
| Physical Science (Team) | | | | | | | |
| Robotics and Intelligent Machine (Individual) | | | | | | | |
| Robotics and Intelligent Machine (Team) | | | | | | | |
| Mathematics and Computational Science (Individual) | | | | | | | |
| Mathematics and Computational Science (Team) | | | | | | | |

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*Signature Over Printed Name*
**JUDGE**
Date Signed: _____



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