



Republic of the Philippines

Department of Education

REGION IV- A CALABARZON

CITY SCHOOLS DIVISION OF THE CITY OF TAYABAS

26 November 2025

DIVISION MEMORANDUM

No. **842** s. 2025

2025 DIVISION SCIENCE, TECHNOLOGY AND INNOVATION DAY

To: Assistant Schools Division Superintendent
Chief Education Supervisors
Heads, Public and Private Elementary and Secondary Schools
Heads, Unit/Section
All Others Concerned

1. With reference to the Department of Science and Technology's (DOST) National Science and Technology Week Celebration highlighting the significant contributions of science and technology to national development and serving as platform for heralding Science and Technology (S&T) advocacy in the country, this Office, through the Curriculum Implementation Division, shall conduct the **2025 Division Science, Technology and Innovation Day**, with the theme **"Siyensya, Teknolohiya at Inobasyon: Kabalik at sa Matatag, Maginhawa, at Panatag na Kinabukasan"**. The event shall be conducted on **December 15, 2025**, at **Luis Palad Integrated High School**.

2. Supporting the theme, this event aims to:

- provide opportunities for learners from public and private elementary, junior and senior high schools to showcase their 21st century skills in various contests;
- highlight the significant contributions of science and technology to national development from experts in the fields of agriculture, IT industry, technology, among others; and
- foster collaboration and sharing of best practices among schools and industry partners for sustainable growth in Science and Technology.

3. Thus, all private and public elementary and secondary schools in the Division are encouraged to participate in all the contests **FREE** of registration fee. School delegates' transportation allowance, meals, and incidental expenses shall be charged against local funds or other sources while medals/trophies, meals/token of judges and Technical Working Group, and supplies shall be charged against Local Government Unit (LGU) fund through the Sangguniang Kabataan Federation (SKF) subject to the usual accounting and auditing rules and regulations.


4. Enclosed are the contest mechanics (Enclosure 1), Contest Entry Form (Enclosure 2), Program of Activities (Enclosure 3), and Program Management Team (Enclosure 4). Submission of Contest Entry Form (*in 1 hard copy*), downloadable at <https://tinyurl.com/CntestEntForm>, shall be submitted to the SDO Records Office and online registration of school entries shall be done on/before **09 December 2025** through this link: <https://tinyurl.com/DSTIDOnlineReg>.

5. For questions and clarifications, please contact **Michael Leonard D. Lubiano**, Education Program Supervisor *in-charge of Science*, at michaellleonard.lubiano@deped.gov.ph.
6. Widest dissemination of this Memorandum is desired.

For:

CELEDONIO B. BALDERAS JR.
Schools Division Superintendent

By:


EDWIN R. RODRIGUEZ
Chief Education Supervisor – CID
Officer-in-Charge

Encl.: As stated

Reference: Department of Science and Technology's (DOST) National Science and Technology Week Celebration

To be indicated in the Perpetual Index
under the following subjects:

CONTEST

CID - 2025 division science, technology, and innovation day
CIDI392J-002383/November 26, 2025

Enclosure 1

CONTEST MECHANICS

Title of Contest	On-the-Spot Digital Poster-Slogan	Grade Level:	Category A: Elementary (Grades 1-6) Category B: Secondary (Grades 7-12)
Description of the Activity (What is the importance of this activity in developing learners' skills?)	This contest centers on the 2025 Division Science, Technology and Innovation Day's theme "Siyensya, Teknolohiya at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan" . The contest shall be divided into two categories: elementary and high school levels. The slogan is composed of 4 lines with 5 words per line in Filipino language .		
Duration (How long will the learners work on the activity?)	15 December 2025 (09:00 am – 12:00 noon)		
Driving Question/s (What is the scientific purpose of the activity?)	How will the learners highlight the significant contributions of science and technology to national development from experts in the fields of agriculture, IT industry, technology, among others?		
General Guidelines (How will you conduct the activity in the school?)			
<ol style="list-style-type: none">The contest is categorized into two namely elementary and secondary open to all learners in private and public schools in Tayabas City. The digital-poster slogan shall revolve around the theme "Siyensya, Teknolohiya at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan".This is an individual competition. The creation period is strictly 3 hours only. Participants must stop working immediately when the time is called.All entries must be submitted digitally to a designated folder/email address/platform in the required format before the deadline.All participants will receive certificates. Top three winners for the said contest shall receive medals.			
Digital Poster Creation			
A. Materials & Tools			
<ol style="list-style-type: none">Device: Participants must use their own laptops or computers. Tablets or mobile phones may be allowed if specified, but a laptop/PC is generally recommended for complex digital art.Software: Participants can use any digital illustration/design software they are proficient in (e.g., Adobe Photoshop, Illustrator, Canva Pro, Krita, GIMP, Figma, etc.).<ul style="list-style-type: none"><i>Note:</i> The use of Generative AI tools (like Midjourney, DALL-E) to create the <i>core image assets</i> should be explicitly prohibited or strictly limited and clearly defined in advance to maintain the "on-the-spot" creative nature.Resources: Participants may use royalty-free images, icons, and fonts available online, but they must be prepared to cite their sources if required. Pre-made digital assets (except brushes, textures, or default software elements) created prior to the contest are strictly prohibited.			

- **Internet Access:** Internet access is allowed for research, downloading approved assets, and using cloud-based software, but must not be used to seek external design help or assistance.

B. Technical Specifications

- **Poster Size/Aspect Ratio:** A4 Portrait (210mm x 297mm)
- **Resolution:** Minimum **300 DPI (Dots Per Inch)** for high-quality printing/viewing.
- **Color Mode: RGB** (unless a specific print requirement dictates CMYK).
- **Required Element:** The poster *must* prominently feature the accompanying slogan.
- **File Format for Submission: JPEG/PNG** (high resolution) and, if possible, the **source file** (e.g., PSD, AI, Canva Link) for verification.

Slogan Making

1. The slogan must be a **short, catchy, and memorable phrase** directly relating to the contest theme and summarizing the message of the digital poster.
2. The slogan is composed of **4 lines with 5 words per line in Filipino language**.
3. The slogan must be **original** and created on the spot. Plagiarism shall result in immediate disqualification.
4. The slogan must be an **integral part** of the digital poster design.

Judging Criteria

The entries will be judged based on the following weighted criteria:

Criteria	Percentage Weight (%)
<ul style="list-style-type: none">• Poster Design and Execution <i>Quality of digital art, layout, use of color, typography, and visual impact</i>	40
<ul style="list-style-type: none">• Relevance to the Theme <i>How well the poster and slogan capture and communicate the specified them</i>	30
<ul style="list-style-type: none">• Slogan Creativity and Clarity <i>Originality, catchiness, impact, and how effectively the slogan conveys the main message</i>	20
<ul style="list-style-type: none">• Originality and Creativity <i>Uniqueness of the concept, overall visual style, and execution approach</i>	10
TOTAL	100

Title of Contest	TugSayAwit	Grade Level:	Category A: Elementary (Grades 1-6) Category B: Secondary (Grades 7-12)
Description of the Activity (What is the importance of this activity in developing learners' skills?)	TugSayAwit (Tugtog-Sayaw-Awit) is a term commonly used in the Philippines, especially in educational and cultural contexts, to describe a specific type of creative performance or competition. It is blended (a blend of words) in Filipino that combines three distinct artistic elements. Learners used indigenous and/or recyclable materials, and localized instruments to create their original lyrics and tune anchored on the 2025 Division Science, Technology and Innovation Day's theme "Siyensya, Teknolohiya at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan" .		
Duration (How long will the learners work on the activity?)	15 December 2025 (09:00 am – 12:00 noon)		
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?		
General Guidelines (How will you conduct the activity in the school?)			
<ol style="list-style-type: none">The contest is categorized into two namely elementary and secondary open to all learners in private and public schools in Tayabas City. The contest shall revolve around the theme "Siyensya, Teknolohiya at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan" with the spirit of Christmas season.Each school shall send an entry with a minimum of 10 and maximum of 15 participants per category.The performance must integrate all three components, either in Filipino or in English language or combination of the two, namely:<ul style="list-style-type: none">Tugtog (Music): Live or canned accompaniment is allowed, but the musical arrangement must support the overall performance.Sayaw (Dance): Choreography must be synchronized, thematic, and effectively executed.Awit (Song): The group must actually sing (no lip-syncing). The lyrics must be original and related to the theme.All participants will receive certificates. Top three winners for the said contest shall receive plaque/trophies.			
Performance and Technical Requirements			
<ol style="list-style-type: none">The allotted time for each presentation is minimum of 5 and maximum of 10 minutes only. There will be a deduction of 5 points per minute exceeded.Groups are responsible for bringing their own sound requirements (e.g., USB/CD for accompaniment, microphones, instruments). The set-up time must be minimal or included within the performance time.The song's lyrics must be original and composed by the participating group, focusing on the theme. A copy of the song lyrics must be submitted to the judges/organizers before the competition.Pyrotechnics, fire, smoke, and dangerous materials are strictly prohibited.Props should be outsourced and maintained at no/low cost. Costumes should be appropriate, thematic, and preferably made from recycled or repurposed materials.			

Judging Criteria

The entries will be judged based on the following weighted criteria:

Criteria	Percentage Weight (%)
<ul style="list-style-type: none"> • Theme Relevance & Message <i>How clearly and effectively the performance (song, dance, and music) communicates the contest theme and its message</i> 	30
<ul style="list-style-type: none"> • Integration & Mastery <ul style="list-style-type: none"> ○ Tugtog (Music): Quality and suitability of the accompaniment/live music ○ Sayaw (Dance): Precision, synchronization, energy, and difficulty of the choreography ○ Awit (Song): Voice quality, harmony, and clarity of the lyrics 	30
<ul style="list-style-type: none"> • Choreography & Creativity <i>Originality of the overall concept, creativity in the movements, stage blocking, and effective use of props/costumes</i> 	20
<ul style="list-style-type: none"> • Projection & Overall Impact <i>Stage presence, expression, energy, and the ability of the group to engage and capture the attention of the audience and judges</i> 	20
TOTAL	100

Title of Contest	Robotics Competition and Exhibition	Grade Level:	Category A: Entry-level Category B: Advanced-Level
Description of the Activity (What is the importance of this activity in developing learners' skills?)	Robotics education is crucial for elementary and secondary students as it provides a practical, project-based way to teach STEM (Science, Technology, Engineering, and Mathematics) concepts, build computational thinking , and develop essential 21st-century skills like collaboration and problem-solving.		
Duration (How long will the learners work on the activity?)	5 December 2025 (01:00 pm – 03:00 pm)		
Driving Question/s (What is the scientific purpose of the activity?)	How effectively do Robotics Competitions and Exhibitions serve as a dynamic laboratory for accelerating student learning in the Engineering Design Process, fostering interdisciplinary scientific application, and demonstrating innovative solutions to real-world challenges?		
General Guidelines (How will you conduct the activity in the school?)			
A. Entry-Level <ol style="list-style-type: none"> The focus at this level is on exploration, basic concepts, and building confidence through fun, tangible, and often screen-free or block-based activities. Learners shall perform basic tasks like line tracing, simple coding, etc. to develop fine motor skills and spatial reasoning through physical construction. Tasks for the entry-level shall include, but not limited, to the following: <ul style="list-style-type: none"> Simple Maze Navigation: Program a robot to move through a basic, marked maze. Sumo Bots: Two small robots push each other out of a simple ring (emphasizing basic drive and chassis design). Storytelling/Thematic Challenges: Program the robot to act out a part of a story or perform a choreographed sequence. 			
B. Advanced-level <ol style="list-style-type: none"> The focus shifts to system integration, complex programming, and real-world application in a project-based, interdisciplinary manner. Transitioning from block-based coding to text-based languages like Python, C++, or JavaScript, learners shall go diving into circuits, using microcontrollers (Arduino, Raspberry Pi), and integrating advanced sensors (e.g., ultrasonic, gyroscope, camera vision). Utilizing a formal design process (ideation, prototyping, testing, iteration) and creating clear technical documentation, learners shall apply Physics principles (mechanics, torque, friction) and mathematics (geometry, trigonometry) directly to robot kinematics and sensor data analysis. Tasks for the advanced-level shall include, but not limited, to the following: <ul style="list-style-type: none"> Complex Mission Challenges: FIRST Tech Challenge (FTC) or VEX Robotics Competition—teams design and build complex robots to score points by manipulating objects on a field. Autonomous Navigation: Programming a robot to follow a complex line path, avoid obstacles, or map an area autonomously. 			
Judging Criteria			

The entries will be judged based on the following weighted criteria:

Criteria	Focus	Scoring Method
Objective Completion	Successfully executing the tasks defined by the game (e.g., scoring objects in a goal, navigating an obstacle, collecting data)	Points are assigned for each task completed (e.g., +5 points for placing a cube, +10 points for completing a circuit).
Speed and Efficiency	The time taken to complete the objectives	Time is often the tie-breaker; the fastest successful run wins. Some games assign bonus points for finishing under a specific time limit.
Autonomy Performance	The robot's score during the pre-programmed autonomous period where there is no human control.	Separate points are often awarded for autonomous tasks, which can determine a "bonus winner" for that match.
Penalty Management	Avoiding actions that violate game rules (e.g., exceeding size limits mid-match, damaging the field, illegal contact).	Points are deducted for fouls or rule violations.

Title of Contest	<i>Science Quiz Bowl</i>	Grade Level:	3-12
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 of Science Quarter 1. Each question is created to assess the understanding of science concepts with focus on the least learned competencies. Likewise, results of the quiz bee shall serve as data to teachers in providing the necessary remediation/enrichment activities to the learners.		
Timeline (How long will the learners work on the activity?)	15 December 2025 (09:00 am – 12:00 noon)		
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?		
Covered Science Learning Competencies (based on the current Science K to 10/ Strengthened SHS curriculum guides)		Realization and Learning (Learning that took place)	
Science Grade 3 Quarter 1 <ul style="list-style-type: none"> identify objects, activities, or natural events observed in their local environment that can be explained by science participate in guided science activities by asking questions and tinkering with materials describe the uses of various science equipment and materials used in simple activities, such as a ruler, hand lens, scissors, balloons, modeling clay, and cardboard describe different science process skills used in performing simple science activities, such as observing, predicting, and measuring using units such as millimeter, centimeter, and meter describe the physical properties of solid materials, such as hard, shiny, or stretchable explain that changes in materials can be harmful to living and non-living things in the environment, such as trash disposal, and burning household materials demonstrate proper handling and disposal of materials according to their properties, such as reusing objects, disposing of excess oil into garbage, and recycling paper, plastic or glass 		Learners demonstrated simple science processes to explore common local materials, their physical properties and uses. They participated in guided science activities including simple measurements using units, such as millimeters, centimeters, and meters. They demonstrated safe handling procedures to use equipment and materials.	

<ul style="list-style-type: none"> • describe how changes in solid materials make them useful, such as when they are shaped, pressed, hammered, joined, or cut • identify the properties and uses of metals used by the local community such as iron, gold, silver, and copper 	
<p>Science Grade 3 Quarter 2</p> <ul style="list-style-type: none"> • use the skills of observing, predicting, and measuring in performing simple guided science activities • observe and describe the difference between living and non-living things and give examples of each that can be found in the local environment • describe the characteristics of living things: they grow, respond, and reproduce • observe and describe the outer body parts of animals, such as head, legs or wings, and identify their role to move and to gather food • observe the outer parts of plants, such as leaves, roots, and stems and identify their role to get water and nutrients from the soil • identify the basic needs of all living things, such as air, food, water, and shelter • observe examples and explain how living things depend on one another and on the environment to meet their basic needs • recognize that there is a need to protect and conserve the environment for living things to survive 	<p>Learners described the basic needs of living things. They explained how the body parts allow them to carry out their daily activities. They recognized the need to protect the environment to ensure that the basic needs of living things can be met. They observed and measured living and non-living things in their local environment. They made models and collages of living things and their basic needs.</p>
<p>Science Grade 4 Quarter 1</p> <ul style="list-style-type: none"> • Use information from secondary sources to identify a famous Filipino and / or foreign scientist and their invention/s. • Use information from a home or the local community to identify a science invention and explain its impact on their everyday life • Describe the chemical properties of materials, such as they can be burnt, react with other materials, or are degradable or biodegradable • Describe changes in properties of materials when exposed to certain changes in temperature, such as changes when wood or coal are burned; • Demonstrate ways to minimize harmful changes in materials, such as restriction of burning of waste materials, and care in handling reactive materials • Identify issues and concerns in the local community and how they could be addressed by science, such as the treatment of waste 	<p>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.</p>

<ul style="list-style-type: none"> • Apply science process skills and attitudes in conducting a guided survey about environmental issues and concerns including grouping and classifying, communicating, and open mindedness 	
<p>Science Grade 4 Quarter 2</p> <ul style="list-style-type: none"> • describe in simple terms how the following human body systems work: muscular, skeletal, digestive, circulatory, and respiratory • observe the root and shoot system in plants and describe why they are important • use a drawing or diagram to classify some Philippine animals and plants, based on their habitat: some live on land (terrestrial), live in water (aquatic) or fly in the air (aerial) • make a list or draw up a table with examples of animals and plants in a particular habitat, such as a garden, rice field, seashore, and mangrove swamp • use flow charts to compare the different stages in the life cycle of animals, such as a butterfly, frog, chicken, and human; • use information from secondary sources to group animals according to the food they eat. Some are: a. plant eaters (herbivores), b. meat eaters (carnivores), and c. plant and meat-eaters (omnivores); • 7. draw a simple food chain using living things from the Philippines and label them as herbivores, carnivores, and omnivores. 	
<p>Science Grade 5 Quarter 1</p> <ul style="list-style-type: none"> • Describe matter as anything that has mass and takes up space; • Identify that matter has (exists in) three states called solids, liquids, and gases; • Describe the properties of solids, liquids, and gases in terms of shape and volume: <ol style="list-style-type: none"> a. solids: definite shape and volume b. liquids: no definite shape; definite volume c. gases: no definite shape or volume; • Identify objects at home and in the classroom as solid, liquid or gas; • Use measuring cylinders or beakers to measure volume using units, such as milliliters (mL), and liters (L); • Describe how changes in temperature cause matter to change in state, such as solid to liquid to gas; • Describe the steps of a simple science investigation: <ol style="list-style-type: none"> a. What is the problem? b. What materials do you need? 	<p>Learners described three states of matter based on properties of shape and volume and identify that heat is involved in changes of state. They planned a simple scientific investigation following appropriate steps and using units such as milliliters, liters, grams, kilograms, and degrees Celsius for measuring.</p>

<p>c. What do you need to do? d. What have you found out/learned?</p> <ul style="list-style-type: none"> Identify and appropriately use units in simple science activities, such as milligrams (mg), grams (g), kilograms (kg), and degrees centigrade (°C); and Plan simple scientific investigations in answering questions, such as “Do gases (like air) or liquids (like water) have mass?”, using appropriate simple science equipment, such as a balance, and a thermometer, with appropriate units. 	
<p>Science Grade 5 Quarter 2</p> <ul style="list-style-type: none"> identify from pictures and labeled diagrams the parts of the digestive system as mouth, gullet, stomach, small intestine, and large intestine, and describe how they work identify from pictures and diagrams the parts of the respiratory system as the nose, windpipe, and lungs, and describe how they work identify from pictures and labeled diagrams the parts of the female reproductive system as ovaries, uterus, and vagina and those of the male reproductive system as the prostate, testis, and penis and describe how they work use a table to show how living things can be classified into groups based on similar characteristics: a. plants including flowering and non-flowering; b. animals including mammals, reptiles, insects, birds, fish, amphibians, and reptiles; c. microorganisms including fungi and bacteria identify which groups of animals reproduce by giving birth to live young, such as mammals, and which reproduce by laying eggs, such as birds and reptiles compare the life cycles of mammals from birth to adulthood, birds from egg to a mature organism, and plants from seed to a young plant, and then to a mature plant describe the purpose of specialized structures in plants, such as rhizomes, tubers, thorns, bulbs, and aerial roots explain how some plants have adapted to unfavorable conditions in the environment, such as lack of rain or floods use information from secondary sources to describe examples of how some animals have changed to better suit their 	<p>Learners described and created models of the body systems whose function is to help humans grow, develop, and reproduce. They used tables to group living things as plants, animals, or microorganisms. They used skills of observation, predicting, measuring, and recording to plan and carry out a simple activity to observe the life cycle of a plant and compare it to the life cycles of animals.</p>

environment, such as mimicry or camouflage	
Science Grade 6 Quarter 1 <ul style="list-style-type: none"> Describe the appearance and uses of homogenous and heterogenous mixtures 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.
Science Grade 6 Quarter 2 <ul style="list-style-type: none"> explain how the organs of each organ system works together explain how the different organ systems work together determine the distinguishing characteristics of vertebrates and invertebrates distinguish how spore-bearing and cone-bearing plants reproduce discuss the interactions among living things and nonliving things in tropical rainforests, coral reefs and mangrove swamp explain the need to protect and conserve tropical rainforests, coral reefs and mangrove swamps 	Learners recognized the vital ecosystems like tropical rainforests, coral reefs, and mangroves provide essential services and regulate the climate highlights our absolute dependency on natural resources. Therefore, protecting and conserving these environments is not just an ecological goal, but a necessary act of self-preservation for current and future human welfare.
Science Grade 7 Quarter 1 <ul style="list-style-type: none"> Recognize that scientists use models to explain phenomena that cannot be easily seen or detected 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." 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) Use diagrams and illustrations to describe the arrangement, spacing, and relative motion of the particles in each of the three states (phases) of matter Explain the changes of state in terms of particle arrangement and energy changes 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 Identify the role of the solute and solvent in a solution Express quantitatively the amount of solute present in a given volume of solvent 	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.

<ul style="list-style-type: none"> Identify solutions, which can be found at home and in school and that react with litmus indicator, as acids, bases, and salts 	
<p>Science Grade 7 Quarter 2</p> <ul style="list-style-type: none"> identify the parts and functions, and demonstrate proper handling and storing of a compound microscope use proper techniques in observing and identifying the parts of a cell with a microscope such as the cell membrane, nucleus, cytoplasm, mitochondria, and chloroplasts recognize that some organisms consist of a single cell (unicellular) like in bacteria and some consist of many cells (multicellular) like in a human differentiate plant and animal cells based on their organelles recognize that cells reproduce through two types of cell division, mitosis and meiosis, and describe mitosis as cell division for growth and repair explain that genetic information is passed on to offspring from both parents by the process of meiosis and fertilization differentiate sexual from asexual reproduction in terms of: a) number of parents involved, and b) similarities of offspring to parents use a labelled diagram to describe the connections between the levels of biological organization to one another from cells to the biosphere describe the trophic levels of an organism as levels of energy in a food pyramid use examples of food pyramids to describe the transfer of energy between organisms from one trophic level to another 	<p>Learners demonstrated understanding of the parts and function of a compound microscope and use this to identify cell structure. They recognized that the cell is the basic unit of life and that some organisms are unicellular and some are multicellular. They explained that there are two types of cell division, and that reproduction can occur through sexual or asexual processes. They used diagrams to make connections between organisms and their environment at various levels of organization. They explained the process of energy transfer through trophic levels in food chains.</p>
<p>Science Grade 8 Quarter 1</p> <ul style="list-style-type: none"> Using a labeled diagram, trace how food travels through the digestive tract and explain how different digestive processes work, including mechanical processing, secretion, digestion, absorption, and elimination; Use models, flow charts, diagrams, and simulations to explain how body systems work together, such as digestion and excretion; Describe how plant organs (leaf, stem, roots) work together as the transport system; 	<p>Learners demonstrated the use of models, flow charts, and diagrams to illustrate how body systems work together for the growth and survival of an organism. They represented patterns of inheritance and predict simple ratios of offspring. They explained that the classification of living things shows the diversity and unity of living things. They described the processes of respiration and</p>

<ul style="list-style-type: none"> • Represent patterns of inheritance of a simple dominant/ recessive characteristic through generations of a family; • Predict simple ratios of offspring genotypes and phenotypes in crosses involving dominant/recessive gene pairs; • Describe the importance of the six-kingdom system and the three-domain system of classification of living things; • Explain why humans are classified under Class Mammalia and the Order Primates; • Using flow charts and labeled diagrams explain the role of plants and animals in the cycles of nature, such as the carbon, oxygen, and water cycles; • Describe the process of Photosynthesis and Respiration, and identify its raw materials needed and products; • Using information from secondary sources identify the different parts of the cell where photosynthesis and respiration occur; • Plan a scientific investigation to verify the raw materials needed for photosynthesis. 	<p>photosynthesis and plan and record a scientific investigation to verify the raw materials needed. They used flow charts and diagrams to explain cycles in nature.</p>
<p>Science Grade 8 Quarter 2</p> <ul style="list-style-type: none"> • develop a timeline for the historical background of the development of the current Atomic Model that identifies tiny particles as atoms • draw the structure of an atom in terms of the nucleus and electron shells • differentiate the subatomic particles protons, neutrons, and electrons in terms of their symbol, mass, charge, and location within an atom • describe the properties of pure substances as: a. having fixed chemical composition, examples of which are elements and compounds, and b. that all the atoms of an element have a unique number of protons; • discuss the significant contributions of early scientists in the development of the periodic table; • identify the names and symbols of the first 20 or several common elements of the periodic table • explain that the arrangement of elements in the periodic table as 7 periods and 18 groups is based on their atomic structure and chemical properties, such as reactivity • explain that the electron structure of an atom determines its position on the periodic table 	<p>Learners demonstrated an understanding of the structure of the atom and how our understandings have changed over time. They drew models of the atom and use tables to represent the properties of subatomic particles. They demonstrated their knowledge and understanding of the periodic table by identifying the elements, their symbols, their valence electrons, and their positions within the groups and periods. They designed and/or created timelines or documentaries as interesting learning tools.</p>

<ul style="list-style-type: none"> calculate the number of protons, neutrons, and electrons in the atom of several elements, such as aluminum explain that the elements within a group in the periodic table have the same number of valence electrons 	
<p>Science Grade 9 Quarter 1</p> <ul style="list-style-type: none"> 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 Infer how one's lifestyle can affect the functioning of respiratory and circulatory systems Explain the different patterns of Non-Mendelian inheritance Relate species extinction to the failure of populations of organisms to adapt to abrupt changes in the environment. Differentiate the basic features and importance of photosynthesis and respiration 	<p>Learners learned about the relationship of respiratory and circulatory systems of the human body. They 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.</p>
<p>Science Grade 9 Quarter 2</p> <ul style="list-style-type: none"> describe how the Bohr model of the atom improved Rutherford's atomic model explain how the Quantum Mechanical Model of the atom describes the energies and positions of the electrons explain the formation of ionic and covalent bonds recognize different types of compounds (ionic or covalent) based on their properties such as melting point, hardness, polarity, and electrical and thermal conductivity explain properties of metals in terms of their structure; explain how ions are formed; explain how the structure of the carbon atom affects the type of bonds it forms recognize the general classes and uses of organic compounds use the mole concept to express mass of substance determine the percentage composition of a compound given its chemical formula and vice versa 	<p>Learners demonstrated understanding of how matter behaves is built upon models, evolving from the Bohr's quantized orbits to the Quantum Mechanical Model's probability fields, which fundamentally dictate how atoms interact to form diverse substances through ionic and covalent bonding. This microscopic understanding of atomic structure and bonding allows us to predict the macroscopic properties of materials—from the conductivity of metals to the complexity of organic compounds—and quantify chemical reactions using concepts like the mole.</p>
<p>Science Grade 10 Quarter 1</p> <ul style="list-style-type: none"> Describe and relate the distribution of active volcanoes, earthquake epicenters, and major mountain belts to Plate Tectonic Theory 	<p>Learners discovered that volcanoes, earthquake epicenters, and mountain ranges are not randomly scattered in different places but were located in the same</p>

<ul style="list-style-type: none"> • Describe the different types of plate boundaries • Explain the different processes that occur along the plate boundaries • Describe the possible causes of plate movement • Enumerate the lines of evidence that support plate movement 	<p>areas. This led to an appreciation of plate tectonics—a theory that binds many geologic processes such as volcanism and earthquakes.</p>
<p>Science Grade 10 Quarter 2</p> <ul style="list-style-type: none"> • compare the relative wavelengths of different forms of electromagnetic waves • cite examples of practical applications of the different regions of EM waves, such as the use of radio waves in telecommunications • explain the effects of EM radiation on living things and the environment • predict the qualitative characteristics, (orientation, type, and magnification) of images formed by plane and curved mirrors and lenses • apply ray diagramming techniques in describing the characteristics and positions of images formed by lenses • identify ways in which the properties of mirrors and lenses determine their use in optical instruments (e.g., cameras and binoculars); • demonstrate the generation of electricity by movement of a magnet through a coil • explain the operation of a simple electric motor and generator 	<p>Learners demonstrated understanding of how the Electromagnetic Spectrum spans vast differences in wavelength, which dictates both the practical applications of waves—from radio communication to X-ray imaging—and their potential biological and environmental effects. Furthermore, they grasped the principles of light reflection and refraction using mirrors and lenses to predict image characteristics, and the fundamental relationship between magnetism and electricity that powers motors and generators.</p>
<p>Grade 11 General Science: Physics</p> <ul style="list-style-type: none"> • Identify various ways physics enhances our quality of life across different areas, including household activities, health and safety, work productivity, and leisure • Compare and contrast translational and rotational motion in terms of their respective linear and angular quantities • Demonstrate through simple activities the relationship between linear and angular quantities • apply concepts of translational and rotational motion to design and build prototypes of efficient simple and compound machines • Explain the characteristics of efficient simple and compound machines • Explain how simple hydraulic systems use fluid principles to enhance simple and compound machines • Identify applications of Archimedes' principle and Pascal's principle in various 	<p>Learners identified general physics principles and their applications in daily life. They used scientific principles to solve problems, made informed decisions, and illustrated the applications of physics for self, society, and the environment. They evaluated energy-efficient practices in electricity supply and consumption at home and local businesses and explored the advantages and drawbacks of light and sound in medical imaging, security, communication, and entertainment.</p>

<p>contexts, such as home, community, businesses, and transportation</p> <ul style="list-style-type: none"> • Design simple practical activities or models to determine how variations in physical properties, such as shape, mass, and volume, affect an object's ability to float in a fluid • Discuss safety practices in dealing with electrical hazards, such as overloading, damaged insulation, damp electrical conditions, faulty wiring, and electrocution • Propose ways to minimize energy loss and energy wastage in homes, schools, local businesses, and other parts of society • Discuss properties of light and sound waves related to communications technology, navigation, medicine, and entertainment • Identify innovations related to sound and light, such as soundproofing, sound amplifiers, LEDs, holograms, and lasers 	
<p>Grade 12 Physical Science</p> <ul style="list-style-type: none"> • Give evidence for and describe the formation of heavier elements during star formation and evolution • Explain how the concept of atomic number led to the synthesis of new elements in the laboratory • Determine if a molecule is polar or non-polar given its structure • Relate the polarity of a molecule to its properties • Describe the general types of intermolecular forces • Explain the effect of intermolecular forces on the properties of substances • Explain how the structures of biological macromolecules such as carbohydrates, lipids, nucleic acid, and proteins determine their properties and functions • Use simple collision theory to explain the effects of concentration, temperature, and particle size on the rate of reaction • Define catalyst and describe how it affects reaction • Determine the limiting reactant in a reaction and calculate the amount of product formed • Describe how energy is harnessed from different sources: a. Fossil fuels, b. Biogas, c. Geothermal, d. Hydrothermal, e. Batteries, f. Solar cells, and g. Biomass 	<p>Learners exhibited their understanding in matter, motion, electricity, magnetism, light, and the universe from ancient times to the present; applications of physics and chemistry concepts in contexts such as atmospheric phenomena, cosmology, astronomy, vision, medical instrumentation, space technology, drugs, sources of energy, pollution and recycling, fitness and health, and cosmetics.</p>

- From product labels, identify the active ingredient(s) of cleaning products used at home; and
- Give the use of the other ingredients in cleaning agents

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

1. The Science Quiz Bowl is an individual contest open to all learners in Key Stages 1-4 specifically covering the First and Second Quarters' learning competencies in Science 3-10, General Science 11, and Physical Science.
2. Each school should select a representative from each grade level to participate in the contest.
3. The quiz bowl has three rounds: BEGINNER (1 point; timed for 10 seconds), INTERMEDIATE (3 points; timed for 30 seconds), and ADVANCED (5 points; timed for 60 seconds). Each round is composed of 10 questions only with BEGINNER and INTERMEDIATE rounds in multiple choices while ADVANCED round with terms or exact answer/s.
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 contestants 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 the designated room free of disturbance from his/her coach. He/she must bring his/her own chalk and illustration board (3 inches (W) x 12 inches (L), and tissues for answering.
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. In case of clarification to answers, the coach/contestant should present valid corrections coming from reliable sources such as books, modules, and other references.
11. Non-compliance to the rules would result to automatic disqualification from the quiz bee.
12. All participants will receive certificates. Top three winners for the said contest shall receive medals.

Enclosure 2

CONTEST ENTRY FORM

2025 Division Science, Technology and Innovation Day

Theme: *"Siyensya, Teknolohiya at Inobasyon: Kabalikat sa Matatag, Maginhawa, at Panatag na Kinabukasan"*

December 15, 2025

School: _____ School ID: _____

School Head: _____ Contact Number: _____

Contest	Name of Contestant/s	Grade and Section	Coach/es	Coach DepEd/non-DepEd Email Address	Coach Contact Number	Coach/es Facebook Name
Science Quiz Bowl						
On-the-Spot Digital-Poster Slogan						
TugSayAwit	1.					
	2.					
	3.					
	4.					
	5.					
	6.					
	7.					
	8.					
	9.					
	10.					
	11.					
	12.					
	13.					
	14.					
	15.					
Robotics Competition and Exhibition	1.					
	2.					
	3.					
	4.					
	5.					
	6.					
	7.					
	8.					
	9.					
	10.					

School Head
(Signature Over Printed Name)

Enclosure 3

PROGRAM OF ACTIVITIES

**Part I. Preliminary/
Opening
07:30 am-09:00 am**

Registration
Prayer
National Anthem
Bagong Pilipinas Hymn
CALABARZON March
Division of Tayabas Hymn
Opening Remarks

**CID personnel / SK Federation
AVP**

Gener C. Delos Reyes
Principal IV, LPIHS

Inspirational Messages

Celedonio B. Balderas, Jr.
Schools Division Superintendent

Hon. Ren Miguel S. Obdianela
*President, Sangguniang Kabataan Federation
(SKF) of Tayabas City*

Hon. Anthony A. Lim
City Mayor, City of Tayabas

Rationale and Objectives

Edwin R. Rodriguez
Chief Education Supervisor, CID

**Contest Mechanics and
Presentation of Judges**

Michael Leonard D. Lubiano
Education Program Supervisor – Science

09:00 am-09:15 am

Health Break

**Part II.
Contest Proper
09:15 am-
12:00 noon**

Science Quiz Bowl
Room Venue: TBA

**On-The-Spot Digital
Poster Slogan**

Room Venue: TBA

TugSayAwit

Venue: LPIHS covered court

12:00 noon – 01:00 pm

Lunch Break

01:30 pm-03:00 pm

Robotics Competition and Exhibition

Venue: LPIHS covered court

03:00 pm-03:30 pm

Health Break

**Part III.
Closing
(04:00 pm)**

Awarding of Certificates

- Judges
- Technical Working
Group members

Awarding of Winners

- **Science Quiz Bowl**
- On-the-Spot Digital-
Poster Slogan
- TugSayAwit
- Robotics Competition
and Exhibition

Closing Remarks

Herbert D. Perez, CESO VI
Assistant Schools Division Superintendent

Enclosure 4

PROGRAM MANAGEMENT TEAM

Overall Chairperson: **CELEDONIO B. BALDERAS JR.**
Schools Division Superintendent

Honorary Chairperson: **Hon. REN MIGUEL S. OBDIANELA**
President, Sangguniang Kabataan Federation of Tayabas City

Co-chairpersons: **HERBERT D. PEREZ, CESO VI**
Assistant Schools Division Superintendent

EDWIN R. RODRIGUEZ
Chief Education Supervisor, Curriculum Implementation Division

Committee	Person/s In-charge	Terms of Reference
Program Preparation/ Completion Report and Over-all L&D Management including (Logistics)	Michael Leonard D. Lubiano	<ul style="list-style-type: none"> • Prepares the Program Design and other requirements. • Coordinates with the LGU on other activity requirements. • Prepares and submits activity completion report/documentary requirements to LGU upon activity completion
QAME	Montano L. Agudilla, Jr.	<ul style="list-style-type: none"> • Prepares evaluation tool and conduct QATAME and gathers feedback. • Analyzes harvested feedback and recommended solutions and forwards to concerned units/offices.
Welfare Officers	SDO Tayabas City/LPIHS nurses	<ul style="list-style-type: none"> • Ensure observance/compliance of health protocols including but not limited to conduct of training. • Administer first aid and health services during the event. • Ensure the provision of proper handling, storage, and serving of foods and food packs' disposals.

DIVISION MEMORANDUM

No. 842 s. 2025

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Support	<p>Mikael Sandino T. Andrey Joseph Jay U. Aureada Christian J. Bables Jerome A. Chavez Edna T. Eclavea Louie L. Fulleo Mildred Z. Galleno Sherwin C. Quesea Richelle F. Quintero Generosa F. Zubieta Marvin J. Rosales Jerome A. Javin Sangguniang Kabataan Federation (SKF)</p>	<ul style="list-style-type: none"> Facilitate/supervise the contests Report any incidents to the activity focal person Prepare the presentations for the training. Take pictures/videos from the opening until closing programs. Ensure/s that sound system and projectors are properly set up. Manage/s unexpected system glitches.
Registration Certificate and	<p>Erison T. Albis Ermelo C. Escobiñas Mary Margaret C. Quesea Jessica T. Fortuny Nizza A. Merto</p>	<ul style="list-style-type: none"> Prepare Certificate of Participation and Appearance for the judges, TWG members, coaches and contestants Ensure that registration meals and attendance sheets are properly and completely accomplished
Food and Venue	<p>Sangguniang Kabataan Federation (SKF)</p> <p>Select LPIHS Science Teachers</p>	<ul style="list-style-type: none"> Distribute the food to the judges and technical working group members Ensure the readiness of venue/rooms Assist the hosts during the awarding ceremony Coordinate with the activity focal person as to any issues and concerns
Moderators	<i>To be determined</i>	<ul style="list-style-type: none"> Coordinate with the Activity Proponent regarding the contents and flow of the activity Host the Program (Opening, Implementation, and Closing/Awarding)