Senior High School

DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar in General Science

Quarter 1

Lesson Exemplar

7

Lesson Exemplar for General Science
Quarter 1: Unit 1

Development Team

Writer: Jonnabelle A. Gamino

Consultant: Alfons Jayson O. Pelgone, PhD
Philippine Normal University

Learning Area Specialists: John Cyrus L. Doblada
Danilo G. Soriano, Jr.

Bureau of Learning Delivery
Bureau of Curriculum Development
Bureau of Learning Resources

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Department of Education
BUREAU OF LEARNING DELIVERY

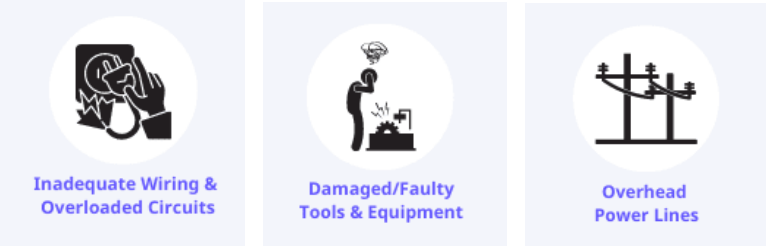
LESSON EXEMPLAR			
Learning Area	General Science	**Grade Level**	11
Semester	First Semester	**Quarter**	1

I. OBJECTIVES *(Identifying the Goals)*	
Content Standard	The learners learn that analysis of electricity generation, consumption patterns, and energy-efficiency practices can lead to better energy supply and management.
Performance Standard	*By the end of the quarter, learners* identify general physics principles and their application in daily life. They use scientific principles to solve problems, make informed decisions, and illustrate the applications of physics for self, society, and the environment. They design simple and compound machines and hydraulic systems to demonstrate application of force, torque, center of mass, and hydraulic-related principles. **They evaluate energy-efficient practices in electricity supply and consumption at home and local businesses** and explore the advantages and drawbacks of light and sound in medical imaging, security, communication, and entertainment.
Learning Competencies	*In this topic, the learners are assumed to have prior knowledge on electric circuit and component, conductors and insulators; and prior skills on safe handling of electrical appliances and devices, and recognizing hazardous electrical conditions.* The learners discuss safety practices in dealing with electrical hazards, such as overloading, damaged insulation, damped electrical condition, faulty wiring and electrocution
II. REFERENCES and MATERIALS (*Selecting Resources and Material*)	References: Institute of Integrated Electrical Engineers of the Philippines. *Philippine Electrical Code, Part I – 2017 Edition*. Taguig City: IIEE, 2017. Accessed May 7, 2025. https://iiee.org.ph:89/uploads/files/898.pdf.

	Jones & Bartlett Learning, *Electrical Inspection Checklist: 2015* (Burlington, MA: Jones & Bartlett Learning, an Ascend Learning Company, 2015), https://samples.jbpub.com/9781284041835/Electrical_Inspection_Checklists.pdf. Rita Joviland. "Electrical Issues Remain Most Common Cause of Fire — BFP Data." *GMA Integrated News*, February 28, 2025. https://www.gmanetwork.com/news/topstories/nation/937689/electrical-issues-remain-most-common-cause-of-fire-bfp-data/story/. *Reading Material* Louisiana Department of Transportation and Development. 2019. *Electrical Safety and Protection*. Louisiana Transportation Research Center. https://www.ltrc.lsu.edu/pdf/STT205-ElectricalSafety.pdf. University of Hawai'i at Mānoa, *OPF Safety Program Manual – Electrical Safety* (Honolulu: Office of Physical Facilities and Grounds, University of Hawai'i at Mānoa, n.d.), https://manoa.hawaii.edu/opf/documents/safety/19%20OPF%20Safety%20Program%20Manual%20-%20Electrical%20Safety.pdf.
(These shall be accomplished per topic)	
III. CONTENT *(Sequencing Content)*	**Utilization of Electricity**
IV. OBJECTIVES *(Setting Clear Objectives and Analyzing the Tasks)*	At the end of the lesson, the learners are able to: 1. Identify common electrical hazards in various settings based on given scenarios and real-life case studies. 2. Demonstrate appropriate electrical safety practices. 3. Reflect on key safety principles and formulate a personal action to promote electrical safety.
IV. PROCEDURES *(Selecting Strategies, Making Meaningful Content, Delivering Lesson and Assessing Learning)*	**ANNOTATION** **Instruction to teacher on how to facilitate the activities.*

This section focuses on selecting learner-centered, evidence-based instructional approaches such as problem-based learning, collaborative tasks, interdisciplinary integration, and technology-enhanced instruction. These strategies are intended to foster active engagement, critical thinking, and adaptability across diverse learning pathways. The chosen approaches and methodologies will be reflected through varied and relevant activities and assessments that emphasize real-world relevance and application, thereby enhancing learner engagement and comprehension. **(Each part shall have 2-3 varied activities)**		**In the Annotation, explicitly explain how the IDF is applied in each part of the lesson*
A. Activating Prior Knowledge	1. Activating Prior Knowledge **Option 1. K-W-L Chart** ● The learners are going to fill in the KWL Chart. They will construct the KWL Chart in their notebooks as it serves as their guide as the session goes on. ● For the *What I Know* column, they will be asked about what they know about electrical hazards, electrical safety practices, and their knowledge on basic electric components, and insulators and conductors. It is subdivided into 3 columns. In the *Absolutely Certain* column, the learners will write facts and concepts the student is fully confident about, supported by evidence or prior learning. In the *Somewhat Sure* column they will write ideas that they believe to be true but may need clarification or confirmation. In the *Uncertain or Guessing* column the learners' assumptions or incomplete knowledge that requires further investigations will be written. ● For the *What I want to know* column, they will list questions or scenarios in mind specific on handling electrical hazards.	● ***NOTE FOR TEACHERS:*** *To introduce the lesson, learners will undertake an activity designed to* ***engage and link their previous knowledge*** *related to electrical risks, such as basic information on electrical components and circuits, electrical devices, conductors, and insulators, as well as power, current, voltage and other electrical variables/quantities. The teacher will select an activity from the listed alternatives.* The **KWL Chart** is an exercise that allows learners to enumerate their previous knowledge relevant to the learning competency. It gives the teacher insight into the learners' starting point knowledge. This aligns with the **IDF-relevant** part, as it enables the teacher to understand the learners in order

	<table><tr><td colspan="3">What I **Know**</td><td>What I **Want** to know</td></tr><tr><td>Absolutely Certain</td><td>Somewhat Sure</td><td>Uncertain or guessing</td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table> • After the learners are able to finish filling in the table, the teacher will call volunteer learners to share their answers in class. **Option 2. Hazard Sorting Challenge** • The teacher shall prepare relevant images showing different electrical hazards. The teacher may print or have it compiled in a slideshow presentation.	to contextualize tasks and select proper strategies that cater to their answers on the KWL chart, particularly in the first two columns. • *Note for Teacher: The KWL Chart is a two-part activity. Part 1 (activating prior knowledge) and Part 2 (Generalization). If the teacher selects this activity to activate prior knowledge, the teacher should make sure he/she selects the continuation of the activity in the generalization part to ensure continuity of the activity.* • *The teacher may ask additional responses from learners with different answers. This is a quick way for the teacher to gather general responses from the learners which can be useful to gauge the baseline knowledge that the learners have, and may provide immediate feedback for misconceptions from what the learners have listed in the What I Know Column.* The **HAZARD Sorting Challenge** is a visual and interactive learning tool that is consistent with the **constructivist methods** in IDF. It also primes learners' prior knowledge by

	• The images will be shown to the learners and they shall determine what specific electrical hazard is illustrated. (Images on the following electrical hazards may include overloading, damaged insulation, damped electrical condition, faulty wiring, and electrocution). Here are some sample images:  https://safetyculture.com/topics/electrical-hazards/ • The activity can be done as a class by asking individual learners or in a group to let learners collaborate and discuss their answers with each other. **Option 3: VOLTA (BINGO)** • The learners will create their BINGO card but instead of -the usual BINGO, they will use the word VOLT compose of 4x4 grids. The learners will assign numbers in each cell from 1-16 randomly. The learners may use a page of their notebook or any available paper. • The teacher will prepare 16 questions numbered randomly from 1-16. The teacher will draw a number and the	inducing learners to identify and sort electrical hazards/risks prior to formal learning. • ***NOTE TO TEACHER**: As the teacher facilitates the activity, he/she may also ask the learners about the possible causes of the identified electrical hazards. The teacher should also provide immediate correction for missorted images.* The **VOLT (BINGO) Challenge** gamifies recall and prior knowledge activation. It encourages interaction through a competitive but educational format. The activity also enables the teacher to determine misconceptions and offer immediate feedback to fill learning gaps dynamically before engaging the learners with the topic.

corresponding question will be asked to the learners. The learners will write their answers on a space below the number in their VOLTA card.

- The learners with correct answers can cross out the number on their card. The learners will be able to win the VOLTA challenge once they are able to cross out 4 cells in either horizontal, vertical, or diagonal.
- The teacher will continue to draw numbers and questions until a desired number of winners is reached.

Here is a sample VOLT Card.

V	O	L	T
1	12	11	8
16	2	14	5
6	~~13~~	~~7~~	10
15	3	9	4

Here are sample questions:

7. It refers to any condition that increases the risk of electric shock, fire, or injury due to unsafe wiring, damaged equipment, or improper handling of electrical devices.

13. It is a non-conductive material (such as rubber or plastic) that covers electrical wires to prevent accidental contact with live current.

	2. Establishing the Purpose of the Lesson After the conduct of the activities in activating prior knowledge, the teacher will ask the learners about the relevance of having knowledge on electricity and recognizing electrical hazards. **Option 1. Quote to Ponder** ● The teacher will share the quote: "Electricity powers life—awareness keeps it safe." ● The learners will ponder on the quote and write their reflections on their notebook, using the guide: 1. The quote talks about _____. 2. The quote reminds me of _____. 3. My insights on the quote for people is/are _____. 4. My insights on the quote for events is/are _____. 5. My insights on the quote for actions is/are _____. ● Selected or volunteer learners will share their reflections in class. **Option 2: News Reflection** ● This activity will be done in groups. The teacher will provide copies of news related with electrical hazards to each group. ● The news can be from the local community. ● Before the learners gather by group, the teacher will also share the discussion questions as guide for the learners as they read the news. ● Here is a sample news article that can be used by the teacher. Rita Joviland. "Electrical Issues Remain Most Common Cause of Fire — BFP Data." *GMA Integrated News*, February 28,	This segment of the lesson emphasizes the IDF principle of making learning objectives **clear and relevant.** The "**Quote to Ponder**" activity makes learners think about the meaning and personal **relevance** of electrical safety, making the lesson emotionally engaging and values-based. It fosters deeper thinking and relates the content to real-world responsibility and awareness. ● ***NOTE TO TEACHER****: The teacher may provide addendums to strengthen learners' insights.* The "**News Reflection**" option incorporates **current events**—namely fire incidents due to electrical problems—providing learners with a **tangible, real-world context** for why the lesson is important. This enhances their **motivation and situational awareness.** ● ***NOTE TO TEACHER:*** *The teacher may* ***use local news articles in the***

	2025. The news is about the report of the Bureau of Fire Protection in connection with the Fire Prevention Month. Discussion Questions: a. What are the possible causes of the electrical hazard or accident described in the news? b. Were there any warning signs before the accident occurred? c. How did the electrical issue affect the people and property involved? d. What electrical safety practices could have prevented the incident? **Option 3: Unlocking Content Vocabulary: Flip and Define** ● The learners will explore key vocabulary related to electrical safety that they will come across to understand electrical hazards, prevention strategies, and emergency responses. ● The learners will be given a set of terms related to electrical safety (e.g. electricity, conductor, power source, electrocution, short circuit, faulty wiring, safety switch, grounding, Personal Protective Equipment, Fire Safety), and a set of definitions/descriptions. ● The learners will match the terms with their corresponding definitions correctly. ● This can be done individually or collaboratively where learners race to match the terms and definitions correctly.	***community*** *relevant with electrical hazards.* ● *The teacher may provide follow up questions or leading questions for a more in-depth discussion.* Moreover, "**Flip and Define**" assists vocabulary learning, a necessary aid for conceptualizing in technical fields such as electrical safety. In preparing all learners for key words prior to jumping into more content, this activity is an added support for cognitive preparation and in adherence to scaffolding and constructivist practices of the IDF. The three activities prepare learners to notice the importance of the lesson and, thereby, engage with the central content in a more meaningful way. ● ***NOTE TO TEACHER****: Since learners will be racing to correctly match the terms with their definitions, consider using a* ***timer*** *to create a sense of urgency and engagement. The responses will be*

		*reviewed **only after the allotted time has elapsed**, ensuring all groups complete the task before checking.* • *The teacher may get relevant vocabulary or terms from the reading materials provided in the reference list section of the LE.*
B. Instituting New Knowledge	1. Presenting Examples **Option 1: Shock Awareness** • The teacher will present scenarios using a slideshow presentation or printed materials to enhance student engagement. If digital or printed resources are unavailable, the teacher may read the text aloud or assign a student to do so. • The learners will reflect on given scenarios and answer the guide questions. The scenarios given are about common habits/practices that may cause electrical hazards. Here are sample scenarios with images (The teacher may opt to create and add more scenarios) *Scenario 1. A resident in Barangay Maliwanag get electrocuted while fixing exposed wiring on a flooded area. A neighbor rushes to help by grabbing him directly.* a. What can be the cause of electrocution of the worker? b. What should the coworker have done differently? c. How can the community leaders ensure safety in handling electricity among the residents?	This part is intended to enhance learners' critical thinking and awareness skills regarding electrical hazards. The Presenting Examples section has two options: Shock Awareness and Hazard Hunt, both of which are based on real-world uses of safety measures. In Option 1: **Shock Awareness,** the teacher presents learners with **real-life situation** samples of electrical dangers. This teaching approach demonstrates a **constructivist** stance in that learners develop knowledge through reflective thinking and situated problems. From an instructional design perspective, this falls into the **Design and Implementation phase of the ADDIE model** since the activity is designed to deeply engage learners and support discussion-based learning. • ***Note to Teacher.** To further support visualization, the teacher can incorporate*

	Scenario 2. You noticed that a single electrical outlet in your classroom is powering multiple devices-computers, a projector, a fan, and a phone charger. You feel the outlet is unusually warm to touch. a. What dangers could arise from this situation? b. What immediate action should be taken? c. How can overloading of outlets be prevented in daily use? **Option 2: Hazard Hunt (Phase 1-Spot the Danger)** ● The learners will be grouped. Each group will be assigned to an area in the school. They will explore the assigned environment to identify potential electrical hazards, assess risks and propose safety measures. (The areas may include classroom, restrooms, laboratories, canteen, library, and others) ● The learners will look for signs of potential hazards using the checklist: (*the checklist may be modified*, additional items may be accessed through the Jones & Bartlett Learning, *Electrical Inspection Checklist: 2015* (Burlington, MA: Jones & Bartlett Learning, an Ascend Learning Company, 2015), https://samples.jbpub.com/9781284041835/Electrical_Inspection_Checklists.pdf. ● The learners will only be completing the Phase 1 (Spot the Danger). The Phase 2 (Power Up Safety) will be completed in a later part of the lesson.	*GIFs, images, or illustrations that depict the described scenarios, helping learners better imagine and relate to the context for deeper understanding.* In **Option 2: Hazard Hunt**, learners are divided into groups and given different locations in the school to scan for possible electrical hazards. Utilizing a step-by-step checklist, they identify environmental conditions such as overloaded plug points, frayed cables, electrical appliances around water, and the presence of safety measures like fire extinguishers. Once they have made their inspection, learners suggest methods to repair or avoid the identified hazards and report their findings to the class. This activity prioritizes **inquiry and experience-based learning**, both characteristic of **constructivist pedagogy**, through direct engagement with the environment and cooperative problem-solving by learners. In the ADDIE model, this activity is supportive of the **Development and**

PHASE 1 (Spot the Danger)		PHASE 2 (Power Up Safety)		
Inspection Items	**Documentation (Attach photo)**	**Risk Level (Low/Medium/High)**	**Suggested Actions**	**Responsible Person**
A. Outlets and Wires				
☐ Overloaded sockets				
☐ Damaged/exposed wires				
☐ Flickering lights				
B. Appliances and devices				
☐ Overheating appliances				
☐ Tangled or unsafe extension cords				
☐ Unplugged unused devices				
C. Environmental Risks				
☐ Electrical items near water/ damp area				
☐ Wires and devices placed unsafely				
☐ Improper ventilation for electrical equipment				
D. Emergency Readiness				
☐ Working fire extinguisher nearby				
☐ Emergency contact availability				
☐ Placed Electrical Safety Procedures				
E. Other Hazards				

- The learners will share their observations in class.

Evaluation stages. This activity engages learners in significant discovery while allowing teachers to gauge comprehension through student presentations and recommendations.

- ***NOTE TO TEACHER****: Since this part focuses on presenting examples, the HAZARD HUNTING activity will be done in 2 phases. For the first phase, the learners should focus only on identifying potential hazards using the checklist. If this activity is selected, make sure that the Phase 2 will be accomplished to ensure the continuity and the relevance of this activity.*

	Discussion Questions: a. What were the most common electrical hazards identified during the inspection? b. Were there any hazards that surprised you or that you hadn't considered before? c. What do you think is the importance of correctly identifying hazards? 2. Discussing New Concept In this part, the teacher may provide learners with reading materials that they can use in the conduct of the selected activity. **Option 1. Safety Drill Role Play** ● The learners will be grouped into groups of 4-5. Each group will act out a scenario involving an electrical safety issue and electrical safety practices. ● They will be given themes to act out. *(Overloading, damaged insulation, damped electrical condition, faulty wiring and electrocution)* ● They will be provided with a reading material as basis for their role play. *Some reading materials are provided in the Reference List of this LE.* ● The preparation which includes reading of materials and planning scenarios is suggested to be conducted outside of the time schedule during vacant periods.	Moving into concept development, **Option 1: Safety Drill Role Play** provides learners with the opportunity to enact scenarios involving common electrical hazards. Each group is assigned a specific theme and must act out the event, submit an incident report, and explain the safety failure and response. This method enhances understanding through embodiment, reflection, and peer feedback. It also allows the teacher to provide **immediate corrective feedback**, helping to **address misconceptions early**. Awarding recognition for outstanding performance adds a motivational element, encouraging deeper participation. This task reflects the **Implementation and Evaluation** stages of the ADDIE model, as it directly applies new concepts and offers feedback loops. It also

	• The Role-Play Performance should only be within 3-5 minutes time frame. • After presenting, they will also need to submit an Incident report Form and explain their findings in class. • The teacher should reinforce correct safety procedures and provide immediate corrective feedback on misconceptions if any. • The teacher may award "Safety Awards" such as best Incident Investigation, Most Realistic Role-Play, Best Safety Solution *Sample Incident Report Form (This may be modified/ contextualized)* Date: _____ Time: _____ Location: _____ Reported by: _____ Description of the Incident: (*Briefly explain what happened)* Identified Hazard/s: ☐ Exposed wires ☐ Overloaded outlet ☐ Wet area near electrical source ☐ Faulty wiring ☐ Other: _____ Actions taken: (*What was done to address the hazard?)* Suggested Prevention: (*How can this be avoided in the future?)* Signature: _____ Reviewed by: _____	exemplifies **active learning and situated cognition**, where learners apply theoretical knowledge in simulated real-world settings. • *NOTE TO TEACHER: Ensure **proper time management** for the role-play activity, as extended performances may take up excessive class time if not **monitored and guided effectively**. Set clear **time limits** for preparation, presentation, and discussion to keep the session **structured and engaging** without unnecessary delays.* • *Some reading materials are provided in the Reference List of this LE. The teacher may use them or contextualize the reading materials provided.*

	Option 2: Toolbox Talk Presenter ● The learners will be grouped into five. The learners will explain and demonstrate key electrical safety topic on *Overloading, damaged insulation, damped electrical condition, faulty wiring and electrocution*. ● The learners will research and prepare a short explanation and demonstration related to their assigned topic. ● The learners may use visual aids, props or models where applicable to effectively demonstrate or talk about the safety practice on the electrical hazard assigned to them. ● After each Toolbox Talk Presenter, the teacher should engage the class with questions to test understanding of the learners and to reinforce learning. 3. Developing Mastery **Option 1: Checkpoint Activity: Electrical Safety Quick Check** ● The learners' mastery of electrical hazards and safety practices will be assessed through a structured yet quick formative assessment. ● The learners will match each electrical hazard in column A with the correct safety practice in Column B.	**Option 2: Toolbox Talk Presenter** takes a more research-oriented and presentation-based approach. Learners prepare a brief talk and demonstration on an assigned hazard using visual aids or props. The activity integrates **inquiry-based learning** and **peer teaching**, allowing learners to construct and share their understanding. This task reflects the **Development and Implementation** stages of instructional design and encourages **metacognition**, as learners must research, simplify, and explain safety procedures clearly to others. The final phase transitions into reinforcing and assessing the learners' understanding of the new concepts. In **Option 1: Electrical Safety Quick Check**, a structured formative assessment is administered. Learners match electrical hazards with the appropriate safety responses. This exercise is simple yet effective for checking **basic comprehension and recall**, and it supports the **Evaluation phase** of ADDIE. It also provides diagnostic insight into which concepts need further clarification before moving forward.

	Sample items (*The teacher may modify and provide additional items)* Column A 1. Overloading sockets 2. Damaged insulation on wires 3. Wet electrical conditions 4. Faulty wiring 5. Electrocution risk Column B 1. Keep electrical appliances away from water sources. 2. Avoid plugging too many devices into one outlet. 3. Ensure all wirings are properly installed and maintained. 4. Use insulated wires and check for damage regularly. 5. Do not touch someone experiencing electric shock-turn off the power source first. **Option 2: If-Then (Think-Pair-Share)** ● Learners will identify electrical hazards, discuss it with their peers and propose safety solutions using the Think-Pair-Share strategy. ● Each pair will be given a list of "If" scenario describing an electrical hazard. Afterwards, they each will write "Then" safety practice. ● The partners will exchange answers for each scenario and discuss between them their reasoning and evaluate each other's solution. They may revise their responses based on peer feedback. ● Selected learners present their If-Then output. ● The teacher facilitates discussion, clarify misconceptions and reinforce key safety practices.	**Option 2: If-Then (Think-Pair-Share)** offers a deeper, collaborative assessment strategy. Learners receive a list of hazard scenarios ("If") and must formulate appropriate safety solutions ("Then"), working with a partner to evaluate and refine their answers. Selected pairs share their work with the class, and the teacher leads a discussion to consolidate understanding. This strategy blends **formative assessment with peer learning**, reinforcing knowledge through **social interaction and reflection**. In instructional design terms, this reinforces the **Evaluation and Feedback loop**,

	Here are sample "if" scenarios 1. **If** an extension cord is overloaded with multiple high-power devices, **Then**... 2. **If** water spills near an exposed electrical wire, **Then**... 3. **If** someone tries to fix an electrical issue without turning off the main power supply, **Then**...	ensuring learners move from surface knowledge to deeper application and analysis.
C. Demonstrating Knowledge and Skills	1. Finding Practical Application **Option 1: Case Study** ● Learners will be given real case studies about electrical safety incidents. They will analyze the cases, evaluate causes, and propose practical solutions based on learned concepts. Here are some Case Studies they may work on: *(The teacher may provide other additional case studies)* 1. Bsafe incident case study 04: Death of electrician due to electrocution: Electrical accident (February 27, 2021). https://britanniapandi.com/2021/02/bsafe-incident-case-study-04-death-of-electrician-due-to-electrocution/ 2. Contractor sustains electric shock after failure to isolate power supply. https://www.hse.gov.uk/electricity/overhead/isolate.htm 3. Worker received shock whilst using a pressure water washing machine. https://www.hse.gov.uk/electricity/maintenance/washingmachine.htm	To assess applied understanding, learners are encouraged to find **practical applications** of electrical safety concepts through three compelling options. **Option 1: Case Study** engages learners in authentic, real-world incident analysis. Learners review actual documented cases from credible safety organizations, such as the HSE and Britannia P&I. By answering structured guide questions, they identify the hazards, root causes, consequences, and possible preventive measures. This task activates **higher-order thinking skills**, particularly analysis and evaluation, as defined in Bloom's Taxonomy. It also embodies the **Evaluation and Application phases** in the **ADDIE model**, where learners move beyond knowledge recall to solving problems drawn from real-life contexts. This activity reinforces **constructivist learning**, as learners connect theoretical knowledge with real-world

	4. An Invisible Threat: The Lived Experiences EIM Learners On Electrical Precautionary Measures: A Qualitative Study. https://www.scribd.com/document/668796943/An-Invisible-Threat-The-Lived-Experiences-EIM-Learners-on-Electrical-Precautionary-Measures-A-Qualitative-Study Case Study Report Question Guides: *General Question:* How do electrical hazards arise, what impact do they have, and what preventive measures can be taken to ensure safety? *Probing Questions:* 1. What electrical hazard is present in the case? 2. What were the contributing factors that led to the unsafe situation? 3. How did the hazard affect the individuals, property or community in the case? 4. What safety protocols should have been followed to prevent this hazard? 5. If this situation happened in a school or home, what precautions would you implement? **Option 2. Hazard Hunt (Phase 2-Power Up Safety)** ● This is a continuation activity. ● The group used by the learners from the Phase 1 will be used. The learner shall collaboratively assess the risk level of the	implications, and it builds their **risk assessment and decision-making competencies**—key skills in Electrical Installation and Maintenance (EIM) training. **Option 2: Hazard Hunt (Phase 2 - Power Up Safety)** Building on their observations from Phase 1, learners will **collaboratively** assess the severity of identified electrical hazards and determine appropriate risk levels (Low, Medium, High). They will then propose

identified risks in Phase 1. The following will be used as guide for their risk level assessment:

Low Risk- Minimal Danger, can be easily managed with basic precautions.

Medium Risk- Moderate danger, could lead to injury or equipment damage if left unchecked.

High Risk- Severe danger, poses an immediate risk of electrocution, fire, or equipment failure.

- After assessing the risks level, the learners shall suggest actions and identify responsible person.

PHASE 1 (Spot the Danger)		**PHASE 2 (Power Up Safety)**		
Inspection Items	**Documentation (Attach photo)**	**Risk Level (Low/Medium/High)**	**Suggested Actions**	**Responsible Person**
E. Outlets and Wires				
☐ Overloaded sockets				
☐ Damaged/exposed wires				
☐ Flickering lights				
F. Appliances and devices				
☐ Overheating appliances				
☐ Tangled or unsafe extension cords				
☐ Unplugged unused devices				
G. Environmental Risks				

corrective actions and identify responsible persons for addressing these hazards. This **hands-on** approach fosters teamwork, **analytical thinking**, and **real-world problem-solving** while emphasizing the importance of active risk management in maintaining electrical safety.

- ***NOTE TO TEACHER:*** *The teacher should ensure a* ***smooth transition*** *from* ***Phase 1: Spot the Danger*** *to* ***Phase 2: Power Up Safety*** *by guiding learners in reassessing the hazards they previously identified. They will facilitate group collaboration in* ***classifying risk levels****, suggesting safety actions, and assigning responsibility. The teacher must oversee documentation accuracy, encourage active discussion, and reinforce practical safety awareness to ensure continuity and effective learning.*

☐ Electrical items near water/ damp area				
☐ Wires and devices placed unsafely				
☐ Improper ventilation for electrical equipment				
H. Emergency Readiness				
☐ Working fire extinguisher nearby				
☐ Emergency contact availability				
☐ Placed Electrical Safety Procedures				
E. Other Hazards				

- The learners will share their observations in class.

Discussion Questions:

a. Which hazards pose the greatest risk?
b. How did you determine whether an issue was low, medium, or high risk?
c. What simple actions can reduce electrical hazards found during inspection?
d. How can schools, homes, or businesses improve their electrical safety practice?

Option 3. Philippine Electrical Code (PEC)- Guide for Crafting Electrical Safety Protocols in School, Home, Community.

- The teacher may access the Philippine Electrical Code using the link: https://iiee.org.ph:89/uploads/files/898.pdf, or

Option 3: Philippine Electrical Code (PEC) provides a regulatory lens, pushing learners to examine the **formal framework that governs electrical safety in the Philippines**. By

	through the Institute of Integrated Electrical Engineers of the Philippines website. • To facilitate student understanding, the teacher will provide a concise summary of key PEC provisions, focusing on hazard prevention, electrical standards, and best practices relevant to schools, homes, and communities. • After the discussion, learners will collaboratively draft a list of Electrical Safety Protocols, applying what they have learned to propose practical solutions for reducing risks in different settings (school, home, community) 2. Making Generalization **Option 1: KWL Continuation** • The learners will continue filling the last part of their KWL Chart- What I Learned column. In this part, they will summarize key takeaways from the lesson using the table:	exploring the PEC, learners analyze legal and professional standards, understand the significance of code compliance, and evaluate common violations and risks. This task fosters **information literacy and ethical awareness**, key aspects of professional preparation in technical-vocational education. From an IDF perspective, this aligns with the **Design and Evaluation stages**, as learners apply their knowledge within the framework of established guidelines, bridging the gap between theory and workplace safety standards. The lesson then transitions to **synthesis and personal integration of learning**. In **Option 1: KWL Continuation**, learners revisit and complete their KWL Chart, specifically the "What I Learned" section. This structured reflection promotes **metacognitive development**, helping learners consolidate their understanding and visualize their learning progress. It also strengthens **self-assessment skills**, which are crucial in technical and safety-focused education. The KWL activity aligns with the **Evaluation stage** in the ADDIE model, serving as a low-stakes yet powerful reflective assessment tool.

Key Concepts	**What I Learned**	**Reflection Prompt**
Electrical Hazards	*New risks I discovered are …*	*What are hazards you didn't know before?*
Safety Practices	*I can improve electrical safety by …*	*What safety rules do you now understand better?*
Prevention Strategies	*The best way to prevent accidents is …*	*What actions will you take at home, school, or in the community?*
Real-World Applications	*Electrical safety matters because …*	*How does this knowledge apply to daily life?*

	Option 2: Safety Commitment • The learners will state one personal action they will take to improve electrical safety practices in their lives guided by a summary of key takeaways they learned during the session. *SAFETY COMMITMENT* *I commit to practicing and promoting electrical safety by:* 1. *Identifying hazards such as …* 2. *Following safety protocols like ….* 3. *Reporting issues by …* 4. *Educating others through …* 5. *Adopting safe habits like …* *Signature: _____* *Date: _____* 3. Evaluating Learning **Option 1: 321 Exit Ticket** • Learners will reflect on their learning about electrical hazards and safety practices before leaving the lesson. They will use the 321 Exit Ticket: 3- Things you learned- Key Takeaways from the discussion 2- Things you found interesting- concepts, facts or real-world applications that stood out. 1- Question you still have-any unclear points or topics you would like to explore further.	**Option 2: Safety Commitment** further reinforces generalization by inviting learners to express a **personal action plan** grounded in their learning. By committing to a specific behavior change—whether at school or at home—learners are encouraged to internalize their knowledge and apply it in their daily lives. This task empowers learners to view themselves as **agents of safety**, not just passive receivers of instruction. It taps into **affective learning domains**, making the educational experience more meaningful and transformative. Finally, learners evaluate their learning through two summative strategies. **Option 1: 3-2-1 Exit Ticket** offers a **quick yet reflective assessment**, prompting learners to list three takeaways, two interesting points, and one remaining question. This method supports **formative assessment** by giving teachers real-time insight into learners' comprehension and lingering uncertainties. It also encourages

	Option 2: CONCEPT CHECK • Create a 5-item quiz to gauge learners' mastery of the lesson. • The items should be more scenario-based, if possible, to elicit learners' mastery on safety practices. • The teacher may use electronic tools (Google Forms, Kahoot, etc.) to make it more engaging. *Sample quiz items:* 1. You notice multiple high-power appliances plugged into the same extension cord. What is the safest action to take? a. Ignore it unless sparks appear. b. Add another extension cord to balance the load. c. Continue using it, but avoid touching the wires. d. Unplug unused devices and redistribute appliances to different outlets. 2. A classmate brings a damaged phone charger with exposed wires. What safety advice should they follow? a. Use the charger only in emergency situations. b. Repair it with electrical tape and check if it still works. c. Continue using it but hold the cord carefully while charging. d. Replace the charger to avoid potential electrical shocks or short circuits.	**student voice**, allowing learners to express curiosity and request clarification. **Option 2: Concept Check Quiz** is a more formal evaluation method. The 5-item quiz, especially if **scenario-based**, ensures learners have grasped not just factual content but the application of safety protocols in context. Using digital tools like **Kahoot or Google Forms** also makes this assessment more interactive and appealing to digital-native learners. From an IDF standpoint, this task fits into the **Evaluation phase** and provides essential feedback data for both learners and teachers to identify mastery levels or instructional gaps. • **NOTE FOR TEACHERS.** *To maximize instructional time and avoid redundant activities, the teacher* ***may skip the 3-2-1 Exit Ticket and Concept Check Quiz*** *if learners have already demonstrated* ***sufficient mastery*** *through their* ***KWL chart and Safety Commitment outputs****. This decision should be based on a careful assessment of learners' understanding and ability to apply electrical safety concepts effectively.*

<table>
<tr><td></td><td>4. Additional Activities
These are enrichment, reinforcement, or remediation activities designed to support diverse learners. These can be extension work, research tasks, or differentiated exercises.</td><td></td></tr>
<tr><td>V. ASSESSMENT
(Assessing Learnings)</td><td colspan="2">
Summative Assessment
Option 1. Performance task: Electrical Safety Protocol
The learners will create electrical safety protocol on different settings of their choice based on the identified potential electrical hazards. The components of their protocol may include clear guidelines for prevention, emergency response, and maintenance. This activity is a refinement of their activity on PEC. In addition, the identification of hazards for the Safety Electrical Safety Protocol may be based on the Hazard Hunt Activity.
Sample Scoring Rubric:

This is an AI generated scoring rubric which was carefully evaluated and modified by the author to ensure that target skills are assessed.
The teacher may modify the sample rubric and may collaboratively develop it with the learners

<table>
<tr><th>Criteria</th><th>Excellent (10 points)</th><th>Proficient
(7-9 points)</th><th>Developing (4-6 points)</th><th>Needs Improvement (1-3 points)</th></tr>
<tr><td>Identification of Hazards</td><td>Clearly identifies electrical hazards for chosen setting with thorough explanations.</td><td>Identifies most hazards, but some may need further clarification</td><td>Identifies only basic hazards without detailed explanation.</td><td>Minimal hazard identification with vague descriptions.</td></tr>
<tr><td>Emergency Response Plan</td><td>Detailed, practical steps for handling emergencies; clear action items.</td><td>Emergency response outlined, but some steps lack clarity.</td><td>Response plan is present but lacks effectiveness</td><td>Emergency response is vague or missing.</td></tr>
<tr><td>Maintenance & Long-Term Safety</td><td>Comprehensive maintenance plan ensuring ongoing electrical safety.</td><td>Maintenance plan addresses key concerns but could be improved.</td><td>Maintenance suggestions are present but lack depth.</td><td>No clear plan for long-term electrical safety.</td></tr>
</table>
</td></tr>
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Option 2. Written Work:

During a classroom activity, a student accidentally touches a damaged electrical outlet while plugging in a projector. The student receives a mild electric shock, and nearby classmates notice the incident.

1. What is the FIRST action that should be taken to ensure the student's safety?
    a. Immediately pull the student away from the outlet.
    b. Turn off the power source before assisting the student.
    c. Give the student water and wait for them to recover.
    d. Continue the activity and report the incident later.
2. If you were present during this incident, how would you apply electrical safety practices to assist the student while ensuring the safety of others? (2 pts.)
3. What measures should schools take to prevent similar electrical hazards, and how would these improvements enhance overall safety in the learning environment? (2 pts.)

Answer Key

1. - **b.** Turn off the power source before assisting the student. *Turning off the power source eliminates the electrical hazard, preventing further injury to the student or others nearby. This ensures a safer environment for providing assistance.*
2. Answer may vary. Expected answers*: I would ensure that no one else touches the student or the outlet until the power is off. After turning off the power source, I would check the student's condition and seek medical assistance if needed. I would also alert a teacher or school staff immediately.*
3. Answer may vary. Expected answers*: Schools should conduct regular electrical safety inspections, repair damaged outlets, and install protective covers on sockets. Providing electrical safety training to students and staff would raise awareness and minimize risks, creating a safer learning environment.*

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VI. REFLECTION *(Feedback and Continuous Improvement)*	*This section presents the key highlights and challenges encountered by both teachers and learners during the teaching-learning process throughout the unit. It also includes the adjustments made by the teacher to improve instruction.*

Prepared by:

JONNABELLE A. GAMINO
Special Science Teacher 1
SDO-ISABELA/REGION 02
Aurora Senior High School

Reviewed by:

ALFONS JAYSON O. PELGONE PhD
Philippine Normal University

Approved by:

JOHN CYRUS L. DOBLADA
Learning Area Specialist
Bureau of Learning Delivery
Teaching and Learning Division