8

DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for TLE

Quarter 4
Lesson
1

Lesson Exemplar for TLE Grade 8
Quarter 4: Lesson 1 (Week 1)
SY/TP 2025-2026

Development Team

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TLE / QUARTER 4/ GRADE 8

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. **Content Standards**	The learners demonstrate an understanding of the signs and symbols of working drawings.
B. Performance Standards	The learners perform simple diagnostics and simple troubleshooting in industrial arts Services.
C. Different Learning Competencies and Objectives	**Learning Competency:** ● Demonstrate mensuration and calculations following safety precautions. **Lesson Objectives:** **1.** Identify the different types of building plans. **2.** Identify the common floor plan and plumbing symbols ● Draw common floor plan symbols **3.** Identify the different electrical, electronic, and auto electrical symbols ● Draw symbols of electronics, electrical, and auto electrical components ***4.*** Identify the different types of circuit diagrams
D. Content	● Working Drawings and Signs and Symbols ● Schematic and Block Diagram
E. Integration	**SDG 9:** Industry Innovation and Structures

II. LEARNING RESOURCES

7 types of architectural plans for your next design. (2022, November 4). Cad Crowd | CAD design services, 3D modeling, 3D animation, CAD drafting, engineering & 3D printing design. https://www.cadcrowd.com/blog/7-types-of-architectural-plans-for-your-next-design/

DailyCivil Team. (2021, November 18). Types of building plans used in construction. DAILY CIVIL. https://dailycivil.com/types-of-building-plans-used-in-construction/

Llc, A. (n.d.). 7 types of architectural planning for your next design. https://www.archimple.com/architectural-planning

Rahman, F. U. (2018, September 21). Different types of building plans. The Constructor. https://theconstructor.org/practical-guide/building-plans-types/24963/

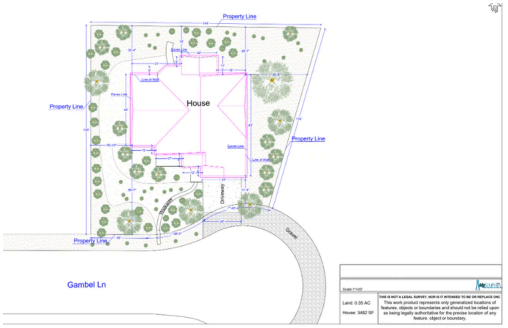
Testbook. (2023, June 20). Circuit Diagram: Definition, components, types, symbols and uses. Testbook. https://testbook.com/physics/circuit-diagram#:~:text=There%20are%206%20types%20of,and%20diagrams%20of%20various%20circuits.

Team, D. (2021, August 21). Types of building plans used in construction. DAILY CIVIL. https://dailycivil.com/types-of-building-plans-used-in-construction/

III. TEACHING AND LEARNING PROCEDURE		NOTES TO TEACHERS
A. **Activating Prior Knowledge**	**DAY 1** **1. Short Review** Let the students write a word or group of words related to HANDICRAFTS (Word Cloud Activity) on the blackboard.  https://thumbs.dreamstime.com/z/handicraft-word-cloud-concept-collage-made-words-vector-illustration-209206325.jpg **2. Feedback (Optional)**	The teacher may also use other activities to review the previous quarter's topic.
B. Establishing Lesson Purpose	**1. Lesson Purpose** Let the students answer the questions below. a. What are the different symbols you observe in your community? b. What is the importance of symbols in our daily lives? **2. Unlocking Content Vocabulary** ● **Plan**- refers to a detailed proposal for achieving something or carrying out a specific task. ● **Symbol-** a mark that represents or stands for an abstract idea. ● **Diagram-** a symbolic representation of information using visualization technique.	The teacher may also ask about the symbols of famous brands. The teacher may add other difficult words that may be encountered on the topic.
C. Developing and Deepening Understanding	**DAY 1** **SUB-TOPIC 1: Different Types of Building Plan** **Common Floor Plan Symbols** **1. Explicitation:** The teacher will ask the students about famous buildings they know. The teacher will process the students' answers by asking the following: a. How was the building built? b. Is planning important in building houses and structures? **2. Worked Example:** **TYPES OF BUILDING PLANS**	The teacher may ask additional questions to process the activity. The teacher will discuss the different types of building plans.

There are several types of building plans used in construction. Let's explore some of them:

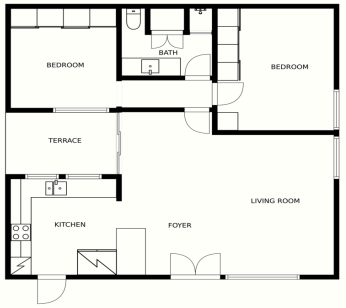
1. Site Plan- is the initial design created for any project, representing the entire layout of the construction site. It includes the location of all buildings and other features on the property. This plan provides an overview of how the structures will be situated on the land.



https://www.mysiteplan.com/cdn/shop/files/Detailed-Site-Plan-Residential-Commercial-Site-Plans_example-7_800x.png?v=1708743037

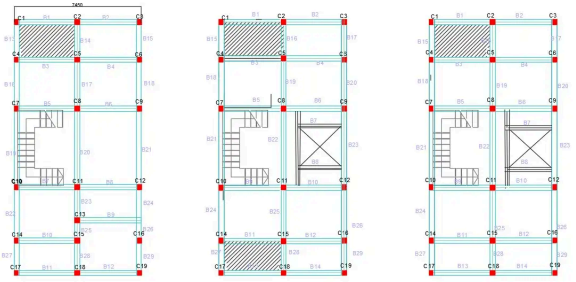
2. Floor Plan- is a scale diagram of the arrangement of rooms in one story of a building. The different types of floor plans are the following:

a. Open Floor Plans: These combine the living space and kitchen into one large room, promoting family togetherness.
b. Closed Floor Plans: Each room is a separate space, offering more privacy.
c. Split-Level Floor Plans: These feature a big open space on one level and bedrooms on a different level, balancing privacy and visibility.



https://community.hubitat.com/uploads/default/c25ee0413e958c3b0425d64eac4111b3cfff7a7d

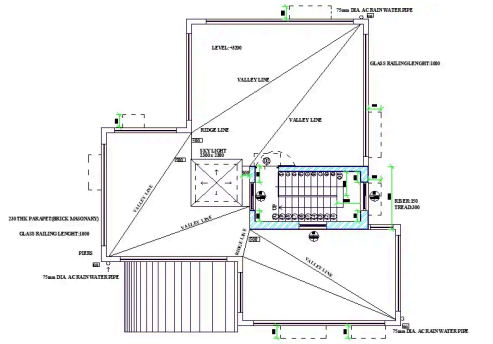
3. Structural Plan- provides a comprehensive view of the building's structural aspects. It includes details about load-bearing walls, columns, beams, and other structural elements.



The teacher can present a sample picture of each type of plan.

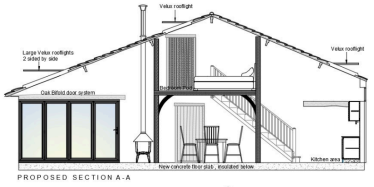
The teacher is encouraged to invite experts like civil engineers and architects to talk or discuss the important concepts of building plans.

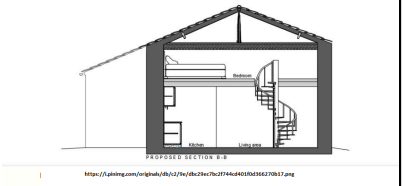
4. Terrace Plan- It focuses on outdoor spaces like balconies, terraces, and rooftops. It outlines the layout, materials, and features of these elevated areas.



https://thumb.cadbull.com/img/product_img/original/Terrace-floor-plan-layout-file-Set-May-2018-06-56-25.png

5. Cross-Section Plan- shows a vertical slice through the building, revealing its internal structure. It helps visualize how different floors and components relate to each other.



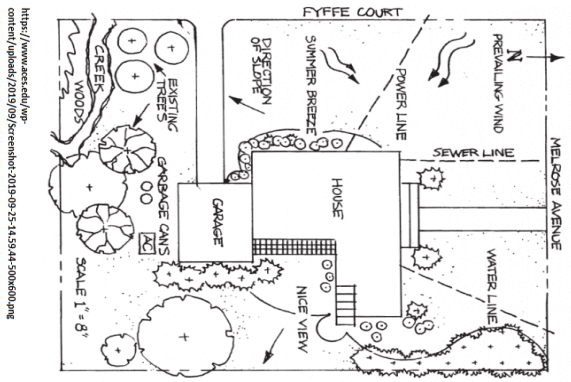


https://i.pinimg.com/originals/db/c2/9e/dbc29ec7bc2f744ad401f0d3562270b17.png

https://i.pinimg.com/736x/14/4e/76/144e762ef57a893f89626eb97e34596b.jpg

6. Elevation Plan are views of the building's exterior from different angles. They showcase architectural details, such as windows, doors, and decorative elements.

7. Landscape Drawing Plan- focus on the outdoor landscape, including gardens, pathways, and green spaces. Landscape plans consider aesthetics, functionality, and environment factors.



Remember, each type of plan serves a specific purpose in the construction process, ensuring that the final building meets both functional and aesthetic requirements.

3. Lesson Activity

Let the students identify them following types of building plan.

1. A scale diagram of the arrangement of rooms in one story of a building.
   F __ __ O R __ L A __
2. This shows the vertical slice through the building, revealing its internal structure.
   C __ O __ S __ E C __ I __ N P __ __ N
3. The initial design created for any project, representing the entire lay out of the construction site.
   __ I T __ P __A __
4. This plan focuses on outdoor spaces like balconies, terraces, and rooftops.
   T __ __ R A __ E P __ A __
5. This provides a comprehensive view of the building's structural elements.
   S __ __ U C __ U R __ __ __ L A __

Answer key:

1. FLOOR PLAN
2. CROSS SECTION PLAN
3. SITE PLAN
4. TERRACE PLAN
5. STRUCTURAL PLAN

DAY 2

SUB-TOPIC 2: COMMON FLOOR PLAN SYMBOLS
PLUMBING SYMBOLS

1. Explicitation

The teacher will let the students identify the names of the following logos.

https://api.triviacreator.com/v1/imgs/quiz/0feiglpsg-0d88ab23-5384-408d-90b5-d32379dbbbfa.jpeg

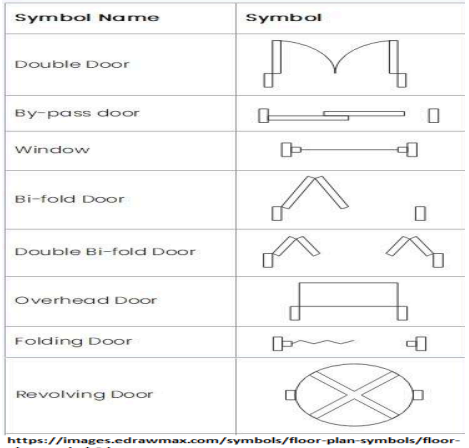
The teacher will process the activity leading to symbols.

2. Worked Example

Floor plan symbols are graphical representations of architectural elements, furniture, appliances, and other features used to create floor plans. Floor plan symbols help to communicate the layout and design of a space, as well as the function and purpose of each element. Some common floor plan symbols are:

1. **Walls**- are thick lines that define the boundaries of a room or a building. Walls can be solid, dashed, or dotted, depending on their type of visibility.

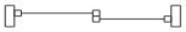
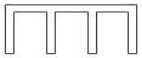
2. **Doors**- are shown as thin lines that intersect with walls. Doors can have different shapes and styles, such as swing, sliding, folding, or revolving. Doors can have symbols that indicate their opening direction, such as an arc or an arrow.



https://images.edrawmax.com/symbols/floor-plan-symbols/floor-plan-symbol-2.jpg

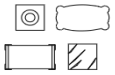
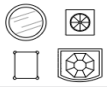
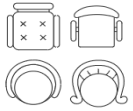
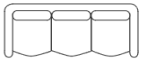
3. **Windows**- are shown as thin lines that are parallel to walls. Windows can have different shapes and sizes, such as rectangular, circular, or irregular. Windows can also have symbols that indicate their type and function, such as casement, awning, or fixed.

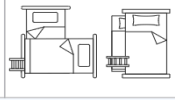
The teacher may also use the cellphone application game **Logo Quiz.**

Symbol Name	Symbol
Glider Window	
Casement Window	
Garden Window	
Sliding Door	
Double Sliding Door	
Sliding Glass Door	

https://images.edrawmax.com/symbols/floor-plan-symbols/floor-plan-symbol-2.jpg

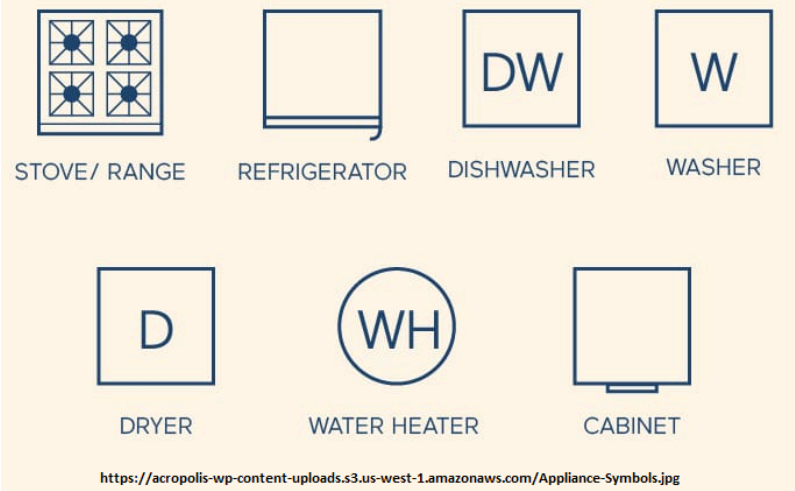
4. **Furniture**-is shown as simplified shapes that represent the size and shape of the object. Furniture can include tables, chairs, sofas, beds, cabinets, and more. Furniture can also have labels that indicate their name and dimensions.

Symbol Name	Symbol
Tea Tables	
Sofa Tables	
Single Seater Chairs	
Three Seater Chair	
Chair with Table	

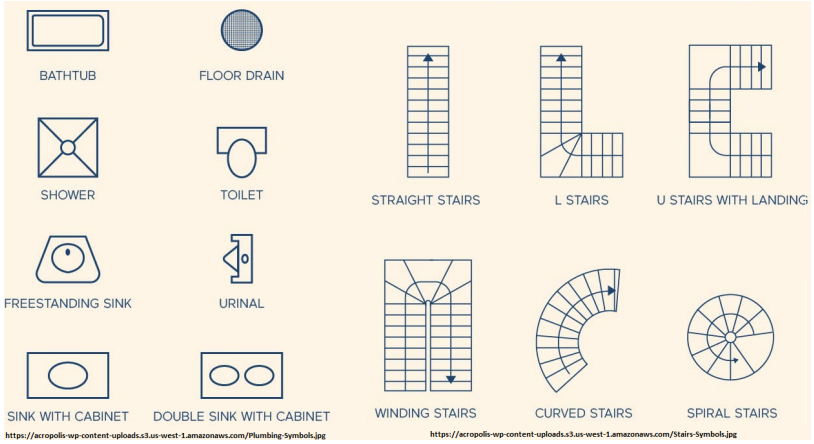
Symbol Name	Symbol
Desks	
Dressing Table	
Cabinet	
Single and Double Bed	
Bunk Beds	

https://edrawcloudpublicus.s3.amazonaws.com/work/864984/2021-12-24/1640313696/main.png

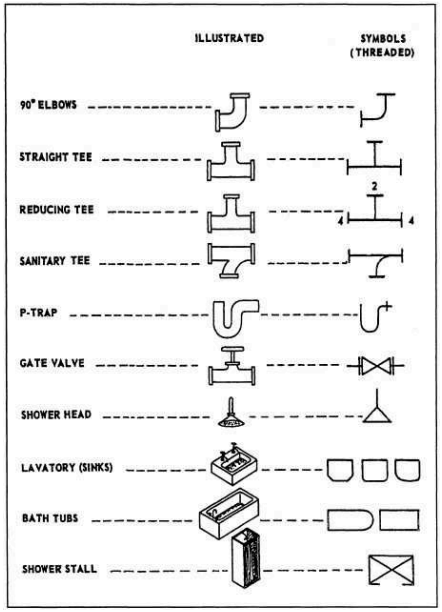
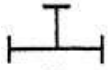
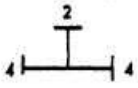
5. **Appliances**- are shown as icons that represent the type and function of the device. Appliances can include stoves, refrigerators, dishwashers, washers, dryers, and more. Appliances can have labels that indicate their name and specifications.



6. **Other features**- are shown as symbols representing the specific element or system. Other features include stairs, fireplaces, sinks, toilets, showers, bathtubs, outlets, switches, lights, fans, vents, and more.



7. **Plumbing** is the system of pipes, valves, fittings, and fixtures that delivers clean water and removes wastewater from a building. Plumbing is essential for the health and safety of the occupants of the building as well as for the protection of the environment. Plumbing

	codes and standards regulate plumbing systems' design, installation, and operation to ensure their quality and performance. Here are some of the plumbing symbols used in planning.  https://i.pinimg.com/736x/31/14/9a/31149adb485bdf7adca4f88f32a0379d.jpg **3. Lesson Activity** Let the students identify the common symbols used in plumbing. 1.  2.  3.  4.  5.  Let the students complete Worksheet 1, to further apply what they have learned. **DAY 3** **SUB-TOPIC 3: ELECTRICAL SYMBOLS, ELECTRONIC SYMBOLS and AUTO ELECTRICAL SYMBOLS**	The teacher may add more words to facilitate the activity. The teacher is encouraged to use the symbols commonly used in the Philippines. The teacher should also emphasize the American, European, and International Electrotechnical Commission (IEC) symbols in contrast to the ones used in the Philippines. The teacher may also introduce the electrical symbols in the Philippine Electrical Code and Philippine Electronics Code.

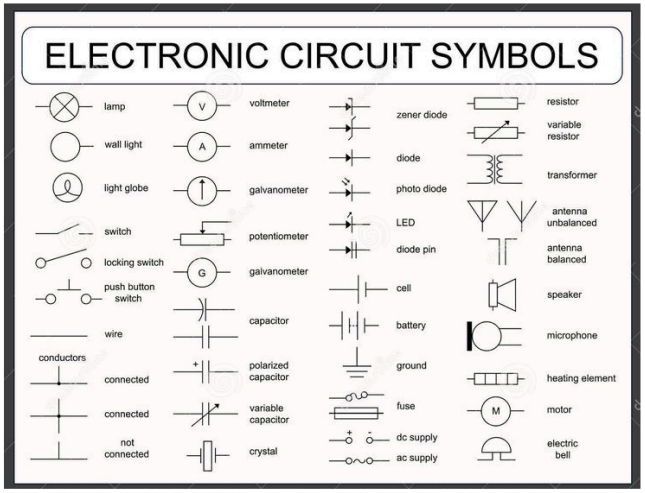
1. Explicitation

The teacher will ask the students to draw on a piece of paper the symbols of the words love, peace, hope, cooperation, and courage.

The teacher will process the activity leading to the topic.

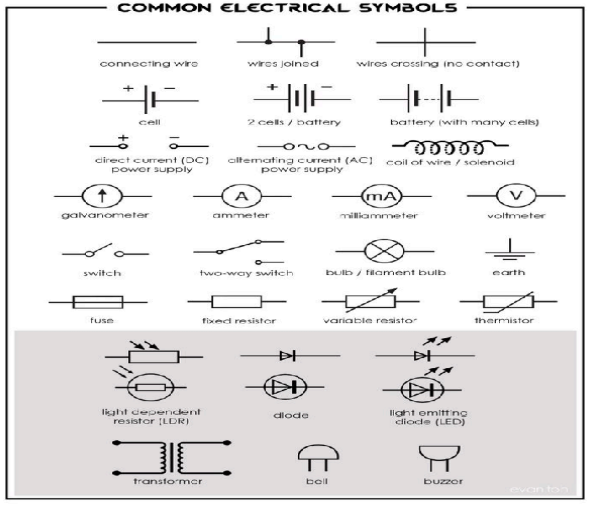
2. Worked Example

Electronics is the branch of science and engineering those designs, constructs, and operates devices and systems that use electric currents or electromagnetic fields. Electronics has applications in many fields, such as communication, computing, medicine, entertainment, and industry. Here are some of the basic electronic components and symbols.



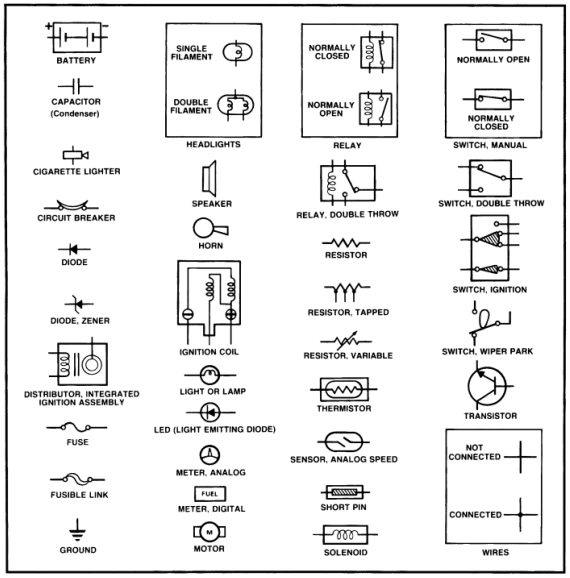
https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F640003797046320809%2F&psig=AOvVaw0ytB9mps08B84YOJjdOSR1&ust=1710046399649000&source=images&cd=vfe&opi=89978449&ved=0CBEQjRxqFwoTCKja4c-K6IQDFQAAAAAdAAAAABAH

Electricity is the flow of electric charge through a conductor. It is one of the most important forms of energy in modern society, powering homes, industries, and transportation. Electricity can be generated from various sources, such as fossil fuels, nuclear power, renewable energy, and batteries. Here are some of the basic electrical symbols and components.



https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F855754366685405183%2F&psig=AOvVaw1TTIFHNW23XA5bjkOeL1S&ust=1710047394640000&source=images&cd=vfe&opi=89978449&ved=0CBEQjRxqFwoTCMiEwoeO6IQDFQAAAAAdAAAAABAH

Auto electrical is a specialized field of automotive service that involves the diagnosis, repair and installation of electrical components and systems in vehicles. Auto electricians work with batteries, alternators, starters, wiring, lighting, sensors, computers and other electronic devices that are essential for the proper functioning of modern cars. Auto electricians need to have technical skills and familiarization of the different auto electrical symbols. Here are some of them.



http://educypedia.karadimov.info/library/toyOH_3.pdf

3. Lesson Activity

Let the students accomplish Worksheet 2.

DAY 4

SUB-TOPIC 4: TYPES OF CIRCUIT DIAGRAMS

1. Explicitation

The teacher will ask the students about the parts and conditions of the circuits. The teacher will process the activity leading to the topic.

2. Worked Example

Circuit diagrams are graphical representations of electrical circuits that use symbols to show the components and connections. Circuit diagrams can design, test, and troubleshoot electrical circuits and communicate a circuit's logic and functionality.

The following are the different types of circuit diagrams:

1. Block Diagram- it represents the main components of a complex system using blocks interconnected by lines. It highlights the function of each component and the flow process.

Parts of the circuit:

- Source
- Path
- Control
- Load

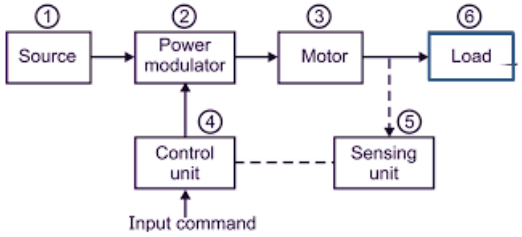
Conditions of Circuit

- Open
- Close
- Shorted
- Grounded

The teacher may use these interactive, open educational resources (OER) as additional references:

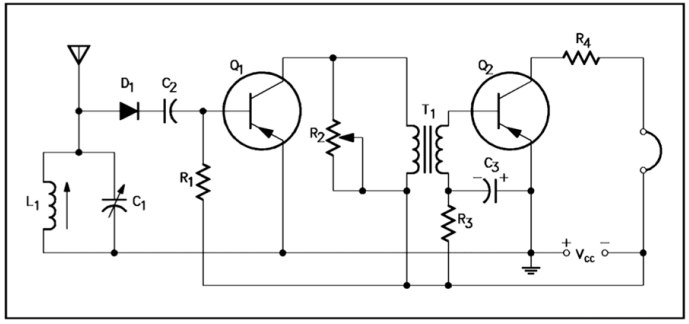
Bartelt, T. (n.d.). *Schematic diagram symbols*. Wisc-Online OER. https://www.wisc-online.com/learn/technical/electronics-dc/dce18318/schematic-diagram-symbols

Bartelt, T. (n.d.). *Assembling a circuit from a schematic diagram.*



https://www.google.com/url?sa=i&url=https%3A%2F%2Ftratenor.es%2F%3Fo%3Dblock-diagram-of-an-electrical-drives-xx-P2LpO9CE&psig=AOvVaw0yldvYmuuIpmH3ye_AOseY&ust=1710050832100000&source=images&cd=vfe&opi=89978449&ved=0CBEQjRxqFwoTCNC6ouma6IQDFQAAAAAdAAAAABAI

2. Schematic Diagram- depicts electrical components using standardized symbols. It shows connections, switches, resistors, and other components.



https://www.google.com/url?sa=i&url=https%3A%2F%2Fwiki.testguy.net%2Ft%2Felectrical-drawings-and-schematics-overview%2F67&psig=AOvVaw1Q_Zsh67GVH_N3ZpgShQj7&ust=1710051022932000&source=images&cd=vfe&opi=89978449&ved=0CBEQjRxqFwoTCKi1nMWb6IQDFQAAAAAdAAAAABAD

3. Pictorial Diagram- uses simple images of components. It provides a visual representation of the circuit. It is less detailed than schematic diagrams.

Wisc-Online OER. https://www.wisc-online.com/learn/technical/electronics-dc/dce7004/assembling-a-circuit-from-a-schematic-diagram

The teacher should also demonstrate the conversion of a diagram to another diagram

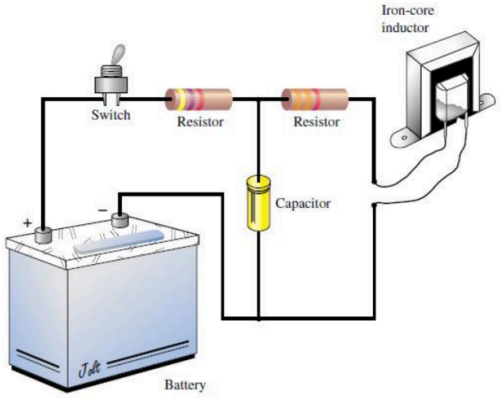
- a pictorial diagram to a schematic diagram
- a schematic diagram to an actual wiring diagram (especially in a wiring board layout)

The teacher may also use the single-line diagram found in most electrical floor plans, particularly the one being used in the Philippines.

The teacher may also introduce other electrical diagrams, like ladder diagrams, wiring diagrams (actual wiring/connection diagrams), riser diagrams, etc.

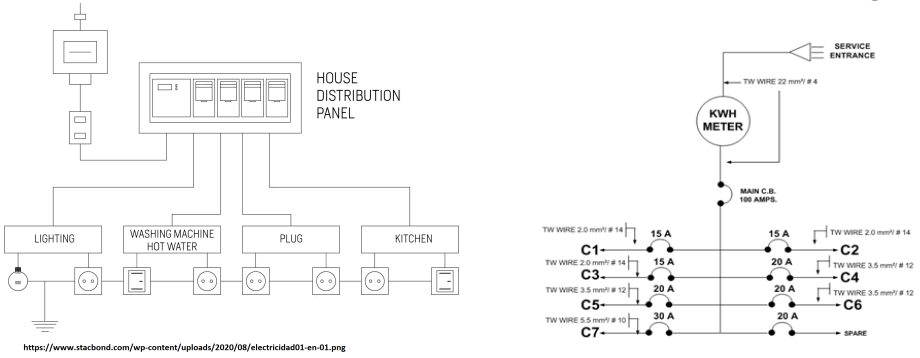
The teacher may present this video to support the demonstration.

PAANO GUMAWA NG SCHEMATIC DIAGRAM AT ACTUAL WIRING DIAGRAM.. ELECTRICAL INSTALLATION AND MAINTENANCE. https://youtu.be/mCKRcIglS-U?si=8imaa_a-Iy5BCbtk



https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.chegg.com%2Fhomework-help%2Fquestions-and-answers%2F1-draw-schematic-circuit-pictorial-diagram-iron-core-inductor-switch-resistor-resistor-cap-q45273453&psig=AOvVaw3_Ex5m9uN4Fnw-G9avkghP&ust=1710051185725000&source=images&cd=vfe&opi=89978449&ved=0CBEQjRxqFwoTCOC4plqc6IQDFQAAAAAdAAAAABAD

4. Single Line Diagram (One-Line Diagram)- represents an entire electrical system using a single line. This type of diagram is usually used in power distribution systems. Single line diagram simplifies complex networks for better understanding.

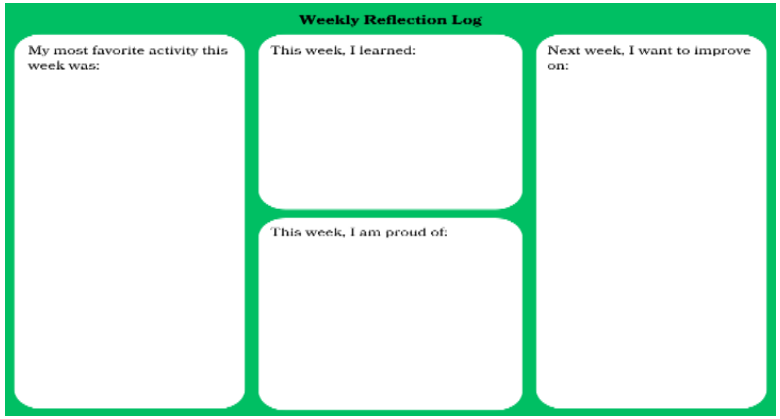


https://www.stacbond.com/wp-content/uploads/2020/08/electricidad01-en-01.png

A single-line diagram in an electrical floor plan

3. Lesson Activity

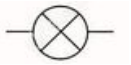
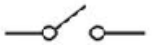
Diagramming Activity: The teacher will demonstrate thoroughly before the learners perform worksheet number 3.

D. Making Generalizations	**1. Learners' Takeaways** What are the different types of building plans? What are the types of circuit diagrams? What is the importance of the use of symbols in the industry? **2. Reflection on Learning** The students will accomplish the weekly reflection log.  	

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION		**NOTES TO TEACHERS**
A. Evaluating Learning	**1. Formative Assessment** **Multiple choice Quiz:** Students will take the 10-item test. 1. It is a scale diagram of the arrangement of rooms in one story of a building. A. floor plan B. site plan C. structural plan D. terrace plan 2. What do you call the plan that shows the views of the building's exterior from different angles? A. elevation plan B. site plan C. structural plan D. terrace plan 3. This plan provides a comprehensive view of the building's structural aspects. A. floor plan B. site plan C. structural plan D. terrace plan 4. What type of diagram represents an entire system using a single line? A. block diagram C. schematic diagram B. pictorial diagram D. single line diagram	**Answer Key:** 1. A 2. A 3. C 4. D 5. C 6. 90° elbow 7. stove/ range 8. lamp 9. switch 10. fuse

<table>
<tr><td></td><td colspan="3">5. This diagram represents the electrical/ electronic components and their connections using standardized symbols.
A. block diagram C. schematic diagram
B. pictorial diagram D. single line diagram

Identify the name of component of the following symbols.

6.  7.  8.  9.  10. 

2. Homework (Optional)</td><td></td></tr>
<tr><td rowspan="5">B. Teacher's Remarks</td><td>Note observations on any of the following areas:</td><td>Effective Practices</td><td>Problems Encountered</td><td rowspan="5">The teacher may take note of some observations related to the effective practices and problems encountered after utilizing the different strategies, materials used, learner engagement and other related stuff.

Teachers may also suggest ways to improve the different activities explored/ lesson exemplar.</td></tr>
<tr><td>strategies explored</td><td></td><td></td></tr>
<tr><td>materials used</td><td></td><td></td></tr>
<tr><td>learner engagement/ interaction</td><td></td><td></td></tr>
<tr><td>others</td><td></td><td></td></tr>
<tr><td>C. Teacher's Reflection</td><td colspan="3">Reflection guide or prompt can be on:
▪ <u>principles behind the teaching</u>
What principles and beliefs informed my lesson?
Why did I teach the lesson the way I did?
▪ <u>students</u>
What roles did my students play in my lesson?
What did my students learn? How did they learn?
▪ <u>ways forward</u>
What could I have done differently?
What can I explore in the next lesson?</td><td>Teacher's reflection in every lesson conducted/ facilitated is essential and necessary to improve practice. You may also consider this as an input for the LAC/Collab sessions.</td></tr>
</table>