LEARNING ACTIVITY SHEET
SPECIAL PROGRAM IN ICT 8
TECHNICAL DRAFTING 8

Name of Learner: _____ Date: _____
Grade Level/Section: _____

Architectural and Electrical Terms and Symbols

Background for Learners

In this lesson, you will learn the different Architectural and Electrical Terms and Symbols and Architectural Working Drawing and Electrical Working Drawing

What is Architecture?

- It is the art or science of building; the practice of designing and building structures and especially habitable ones.
- It is the formation or construction resulting from or as if from a conscious act.
- Architecture, is an art and a technique in designing and building. The practice of architecture is employed to fulfill both practical and expressive requirements.

What is the purpose of Architecture?

- It is practice to improve human life.
- Architecture exists to create the physical environment, in which people live, but architecture is more than just the built environment, it's also a part of our culture.

What is Architectural Drawing Symbol?

- Architectural drawing symbols plays an important role in any architecture drawing it helps define elements or sections such as floor levels, lighting types and service locations.

What are Electrical Symbols?

- An electronic symbol is a diagram that is used to represent various electrical functions, such as wires, batteries, resistors, and transistors, in a schematic diagram of an electrical circuit.
- Electrical symbols are used to simplify the drafting of the electrical plan/drawing
- Electrical symbols are standardized throughout the industry. The addition of a line, dot, shading, letters, and numbers gives a specific meaning to a symbol.

Electrical Terms and Definitions:

- **Alternating Current (AC)** — An electric current that reverses its direction many times a second at regular intervals.
- **Ammeter** — it is an instrument for measuring the flow of electrical current in amperes. Ammeters are always connected in series with the circuit to be tested.
- **Ampacity** — The maximum amount of electric current a conductor or device can carry before sustaining immediate or progressive deterioration.
- **Ampere (A)** — A unit of measure of an electric current flowing in a circuit.
- **Circuit** — A closed path in which electrons from a voltage or current source flow. Circuits can be in series, parallel, or in any combination of the two.
- **Circuit Breaker** — An automatic device for stopping the flow of current in an electric circuit. To restore service, the circuit breaker must be reset (closed) after correcting the cause of the overload or failure. Circuit breakers are used in conjunction with protective relays to protect circuits from faults.
- **Conductor** — Any material where electric current can flow freely. Conductive materials, such as metals, have a relatively low resistance. Copper and aluminium wire are the most common conductors.
- **Electrical working drawings**- referred to as wiring diagrams, it provides visual representation describing electrical systems or circuits. They are used to explain the design to electricians to help them install or repair electrical systems.
- **Electrical symbol** – it is a pictograph used in representing various electrical and electronic device.

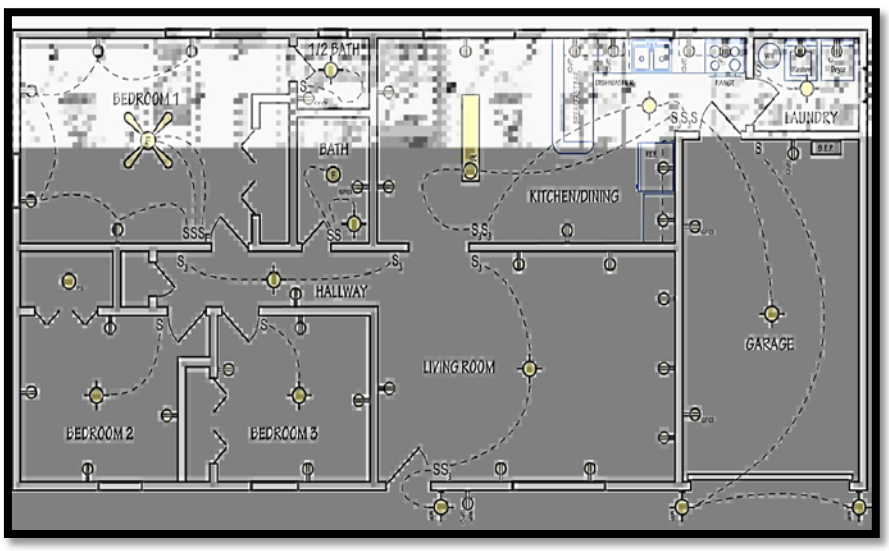
- **Electrical plan**- is a graphical presentation of electrical wiring connections to install in a particular house or building. It indicates the position of electrical fixtures such as convenience outlets, switches, lightings, door bells, and others to be installed.
- **Fuse** — A circuit interrupting device consisting of a strip of wire that melts and breaks an electric circuit if the current exceeds a safe level. To restore service, the fuse must be replaced using a similar fuse with the same size and rating after correcting the cause of failure.
- **Generator** — A device which converts mechanical energy into electrical energy.
- **Ground** — The reference point in an electrical circuit from which voltages are measured, a common return path for electric current, or a direct physical connection to the Earth.
- **Open Circuit** — An open or open circuit occurs when a circuit is broken, such as by a broken wire or open switch, interrupting the flow of current through the circuit. It is analogous to a closed valve in a water system.
- **Parallel Circuit** — A circuit in which there are multiple paths for electricity to flow. Each load connected in a separate path receives the full circuit voltage, and the total circuit current is equal to the sum of the individual branch currents.
- **Wiring diagrams**- it shows the physical connections and layout of electrical circuits in a building or house.

Architectural Terms and Definitions

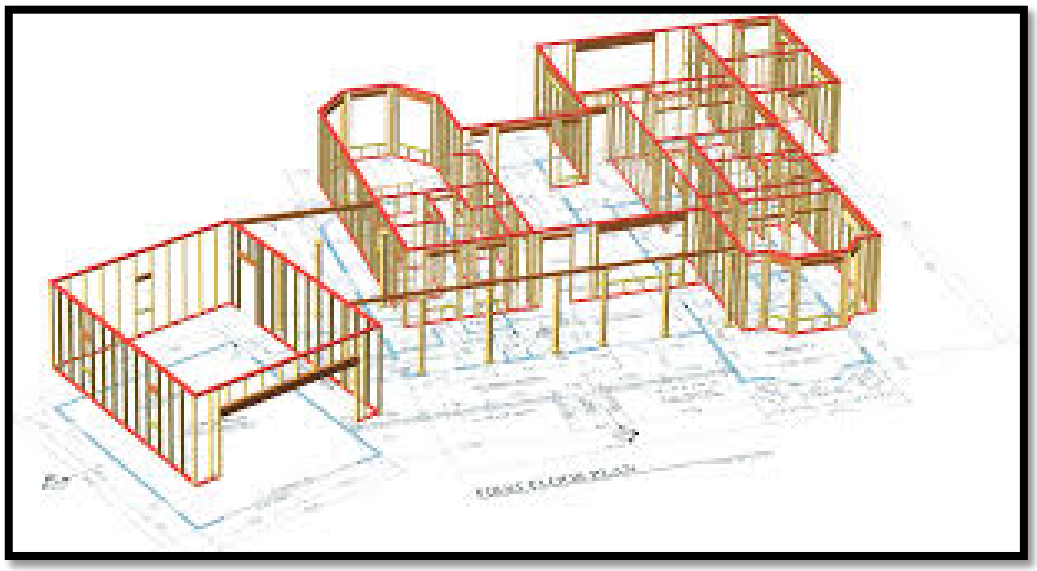
- **Architectural working drawings-** shows the details and measurements needed for the Architect/builder to construct the building but also to plan the construction process.
- **Architecture -** The art or practice of designing and constructing buildings.
- **Aisle** - A passage or corridor parallel to the nave of a church or an ancient basilica and separated from it by columns or piers.
- **Altar** - A table like structure for the celebration of the Sacraments in a Christian church; for sacrifice or offerings in antiquity.
- **Balconet** - A false balcony, or railing at the outer plane of a window.
- **Canopy** - A projecting roof structure that shelters an entrance.
- **Casemen** - A single window sash hinged on one side that swings open.

- **Column** - A support pillar, usually round, found on porches and as a decorative detail.
- **Coping** - The capping at the top of a wall for protection from weather elements.
- **Cornice** - A cornice is the finished edge of the roof where it meets the exterior wall, of varying sizes, sometime plain, but often decorative and marked by brackets.
- **Elevation** – it is referred to the orthographic projection of the exterior face of a building.
- **Façade** - The exterior faces of a building, often used to refer to the wall in which the building entry is located.
- **Floor Plan** - A floor plan refers to the actual layout of the building, with dimensions, notes, and any other details needed for construction.
- **Masonry** - A type of construction using stone, brick, tile or concrete block using mortar.
- **Program** - "Program" is a word architects throw around a lot as it refers to your big-picture project. When an architect asks, "What's your program?" they want to know your wish list—a description of what you want out of a project and what you're willing to pay for.
- **Scale** - scale refers to how the sizes of different architectural elements relate to one another.
- **Site plan** – is a type of drawing used by architects, landscape architects and engineers.

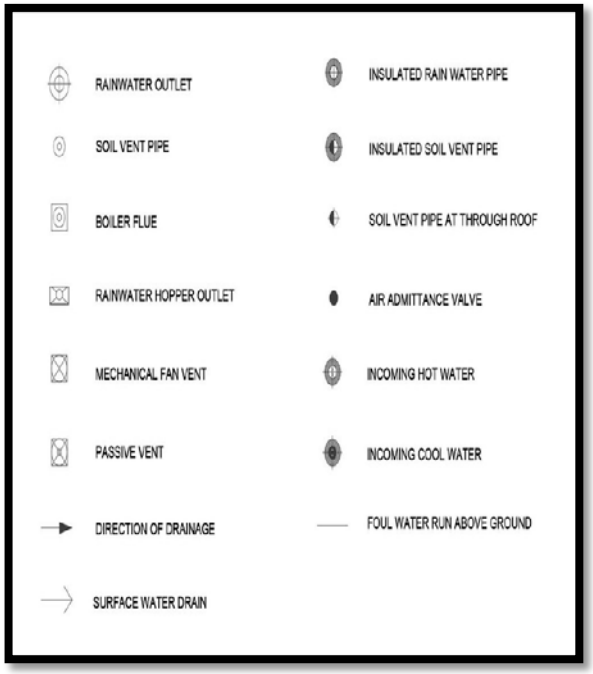
Sample of Electrical Working Drawing

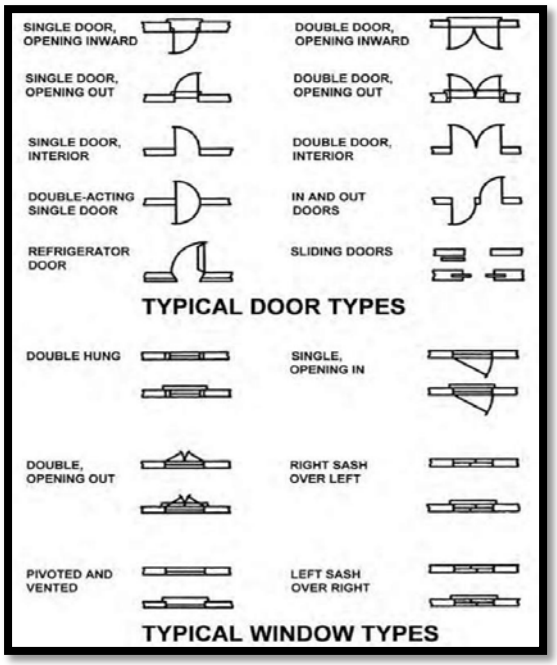


Sample of Architectural Working Drawing

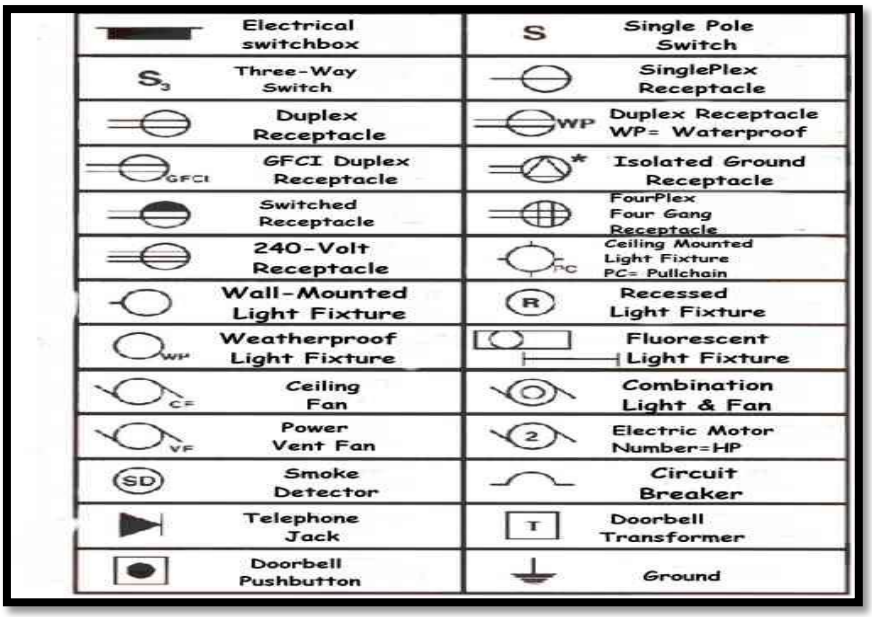


Sample of Architectural Symbols





Sample of Electrical Symbols



ACTIVITY:

Write your answers in a one whole sheet of paper

Activity 1: Identification: Write your answer on the space provided.

1. It is a practice to improve human life.
2. Is a pictograph used in representing various electrical and electronic device.
3. Referred to as wiring diagrams
4. Shows the details and measurements needed for the Architect/builder to construct the building but also to plan the construction process.
5. An electronic symbol is a diagram that is used to represent various electrical functions,

Activity 2: Draw the Architectural Symbol or Electrical Symbol

1. Direction of Drainage
2. 240 –Volt Receptacle
3. Rain water outlet
4. Ground
5. Single Door Interior
6. In and Out Doors
7. Doorbell Pushbutton
8. Single Opening In
9. Three-way Switch
10. Electrical Switchbox

Activity 3.

Draw a simple Architectural Drawing base on your dream house

Activity 4.

Draw a simple Electrical Drawing base on the electrical diagram of your house

REFLECTION:

_____

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References:

Website:

https://www.google.com/search?q=basic+architectural+symbols

https://www.google.com/search?q=house+electrical+symbols&tbm

https://www.athenskey.com/architecture-terms.html

https://testguy.net/content/200-Basic-Electrical-Terms-and-Definitions#Alternating_Current_(AC)

https://www.google.com/search?q=what+is+an+architectural+working+drawing

Note: the output may vary depending on the students skills in illustrating and the materials used.

Prepared by: **CHRISTOPHER JOHN A. FERNANDEZ**

Name of Writer

Noted by: **LABERNE A. LADIGNON JR.**

Division ICT Coordinator/ OIC EPS