

General Safety

Name -
Class -
Roll number -

Introduction

Understanding importance of electrical safety, effects of electric current on human body, cause of electrical hazards, personal protective equipments (PPE).

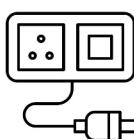
What you know about safety?

Why do we need precaution from hazards?

What do you know about tools?



Start exploring classroom and find electrical devices and power supply wires around you. Fill your observation on the components mentioned in the template as provided by your teacher.



Space for rough work

About the Course and Units

- Unit 1 - General Safety
- Unit 2 - Fundamentals of Electronics and Electrical
- Unit 3 - Simple Mechanics
- Unit 4 - Electromagnetics
- Unit 5 - How things work



This course will help in connecting with real-world problems through day-to-day hands-on activities and provide exposure to the world of skills. For example become a carpenter or engineer.

Lesson aims -

- 1. Identify Importance of safety
- 2. Predict electrical hazards & effect on human body
- 3. Summarize different tools
- 4. To associate with PPE applications

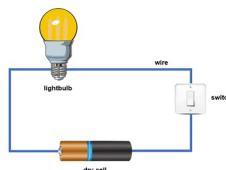


Activity 1

What is Electromechanical?

Electro-Mechanics is a field of engineering which is a combination of Electronics and Mechanics. In this subject, you will learn basic concepts of both the fields like Circuits, Motors, Sensors, Microcontrollers, Drone Technology, and Safety Measures.

Label them :-



Activity 2

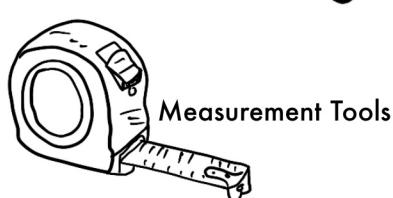
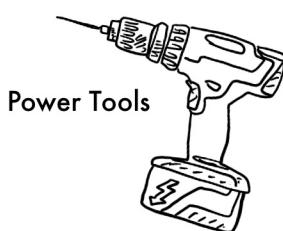
Involvement of electricity in regular life:

The discovery of electric energy led to the creation and the invention of devices that revolutionized its era and the inventions of scientists have contributed to the development and progress of the use of electricity. For example, Thomas Edison invented the light bulb, which is one of the most important inventions in human history.

Imagine a day without any kind of power resources and write down what would a day without any power resources would look like for you -

Activity 3

Types of Tools and Hazards



Why is electrical safety device important at home? All electrical systems have the potential of causing serious burns and even fatality. The voltage of the available electrical current in a household has enough power to cause severe third-degree burns and even cause death by electrocution, which is why it's essential to be aware and take necessary precautions to ensure complete electrical safety, especially if you have children at home.

Examples of safety electrical device will be Fuses, Ground Fault Circuit Interrupters etc.

Fill in the blanks :-

- What kind of hazards are there in your house, or in industries :-
- Overhead P_____ Lines
 - D_____ Tools and Equipment
 - Inadequate W_____ and Overloaded C_____
 - Exposed E_____ Parts
 - Improper G_____
 - Damaged I_____
 - W_____ Conditions



Activity 4

- Repair or Replace Damaged, Cracked, Loose, Faulty Power Cords
- Keep Electrical Devices Away from Sources of Water to Avoid a Potential Shock Hazard
- Unplug Appliances When Not in Use to - Avoid the Risk of Overheating
- Give Your Appliances Proper Space for Air Circulation to Avoid Overheating
- Always Follow Appliance Instructions for Improved Electrical Safety
- Use the Proper Wattage for Lamps and Lighting Fixtures
- Avoid Overloading Outlets

◦Create your own sign board -



Activity 5

Types of PPE and how to wear it:

Individual Defensive Hardware is gear that will safeguard the client against welding or dangers at work.

This can incorporate things, for example,

- Safety helmets
- Ear protection
- High visibility clothing
- Safety footwear and safety harnesses
- Thermal, weather and waterproof clothing
- Respiratory Protective Equipment (RPE).

Personal protective equipment is an integral part of substation safety requirements. It serves to provide adequate protection against hazards of different severity levels that personnel are likely to be exposed during their routine jobs.

Label different parts of the PPE -



Recap

What are electrical safety risks in a lab?

What are electrical safety tips?

What are Distribution Boards?

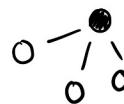
What are Some Tips for Working with Power Cords?

Space for notes -

Reflection

- 1) What is Electrical Supply?
- 2) What are the different Personal Protective Equipment?
- 3) What elements and appliances are found in your classroom?

Space for notes -



For more information scan
the qr code

