Stepping Stone:

You need to know...

- Basic Circuit Theory (current- voltage- resistance).
- Series and parallel circuits.
- Electric components (resistor- led- capasitor...).

You will be able to...

- Understand the concept of automation and its benefits.
- Enhance practical skills in building and testing electrical circuits.
- Recognise different types of sensors and their applications.

let's Think

How can the use of LED lighting, occupancy sensors, and load balancing reduce energy consumption in a modern building?

Explore

do it

Design an efficient lighting system for the houses in your city that maximizes energy savings and minimizes power consumption.

Watch it..

Let's watch this video to understand more about light systems in smart homes.

Scan Here!

https://drive.google.com/drive/search?q=smart%20home

Read about it

Read this article to understand How do smart lights work?

https://www.philips-hue.com/en-us/explore-hue/what-is-smart-lighting

Scan Here!

Assessment

Focus

Choose the correct answer:

1. What is the primary technology used in smart lighting bulbs?

A) Incandescent.
B) Fluorescent.
C) LED.
D) Halogen.

2. Which of the following is NOT a typical feature of smart lighting systems?

A) Remote control.
B) Color changing.
C) Energy monitoring.
D) Sound amplification.

3. How do smart lights typically connect to a home network?

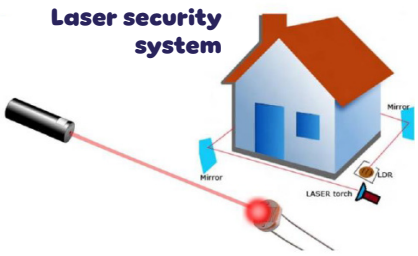
A) Ethernet cable.
B) Wi-Fi.
C) Bluetooth.
D) Both (B&C).

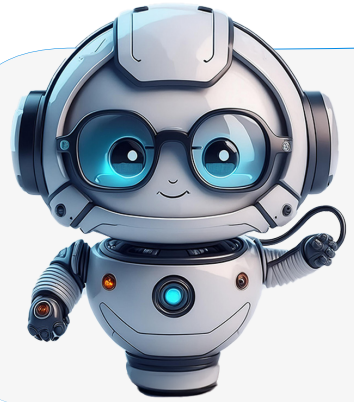
Practice

Create a smart lighting system that includes sensors capable of detecting sound or motion, allowing the lights to automatically turn on when needed.

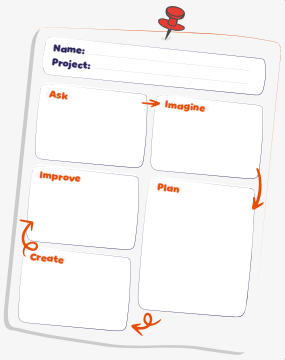
Challenge

Try to make a laser alarm system to secure your home.





After we added energy sources in our city let's go back to the EDP and add it in create part.



Now I can...

- Recognise different types of sensors and their applications.
- Enhance practical skills in building and testing electrical circuits.
- Understand the concept of automation and its benefits.
- Build smart light system.