



Brief schedule of Two-Day Workshop

on

Bright Futures: Empowering Educators Through Hands-On LED Repair and Energy Conservation

Day 1 and 2: Fundamentals, Safety, Testing and Simple Assembly

Day	Time	Session Title	Activity Type	Resources Required	Learning Outcome
Day-I	9:00-11:00	Registration and Inaugural Session			
	11:00-11:45	Session 1: Introduction to LED Technology	Lecture & Discussion	Projector, Whiteboard, Sample LED components	Understanding of Semiconductors, P-N Junctions, and LED advantages (efficiency, lifespan).
	11:45-1:00	Session 2: Electrical Safety & Tool Handling	Critical Safety Demo	Safety glasses, Multimeters, Soldering Iron.	Strict adherence to electrical and soldering safety protocols.
	1:00-2:00	Lunch			
	2:00-3:00	Hands-on 1: Basic Circuit Assembly	Practical	Basic Circuit Kits, Resistors, Button Cells, Breadboards (or simple pre-drilled PCBs).	Ability to connect components correctly, understanding of polarity and current limiting resistors.
	3:00-4:00	Hands-on 2: Introduction to Soldering	Practical	Soldering stations, Solder wire, Flux, Fume extractors.	Mastering basic soldering technique (tinning, wetting, joint formation).
	4:00-4:45	Concluding Session			



Day	Time	Session Title	Activity Type	Resources Required	Learning Outcome
Day-II	9:00-11:00	Registration and Inaugural Session			
	11:00-11:45	Session 1: Introduction to LED Technology	Lecture & Discussion	Projector, Whiteboard, Sample LED components	Understanding of Semiconductors, P-N Junctions, and LED advantages (efficiency, lifespan).
	11:45-1:00	Session 2: Electrical Safety & Tool Handling	Critical Safety Demo	Safety glasses, Multimeters, Soldering Iron.	Strict adherence to electrical and soldering safety protocols.
	1:00-2:00	Lunch			
	2:00-3:00	Hands-on 1: Basic Circuit Assembly	Practical	Basic Circuit Kits, Resistors, Button Cells, Breadboards (or simple pre-drilled PCBs).	Ability to connect components correctly, understanding of polarity and current limiting resistors.
	3:00-4:00	Hands-on 2: Introduction to Soldering	Practical	Soldering stations, Solder wire, Flux, Fume extractors	Mastering basic soldering technique (tinning, wetting, joint formation).
	4:00-4:45	Concluding Session			