

Solar Panel Demonstration Kits with Multimeters

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping



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Solar demonstration kits pair small photovoltaic panels with multimeters, loads and mounting stands so students measure voltage, current and power under different light, angle and shade conditions, learning renewable energy by experiment.

Key Features

- Mono or polycrystalline panels
- 5-50 W demonstration sizes
- Tables, loads and mounting stands
- Multimeters and leads included
- Variable light or angle rigs

Typical Uses in the Workshop

- Measure solar panel output vs light
- Test angle and shading effects
- Charge and power small circuits
- Teach renewable energy science

Safe Operation

1. Set the panel in the test light
2. Measure open circuit voltage
3. Measure short-circuit current briefly
4. Clip in the load and read power
5. Change angle and observe the readings

SAFETY NOTES

- Panels produce current in light - avoid shorting
- Keep the panel away from water
- Protect the multimeter probes
- Do not look at the sun through optics
- Connect loads within the panel rating

Maintenance & Consumables

- Keep the panel face clean
- Store panels flat and protected
- Replace damaged connectors
- Check the multimeter batteries
- Restock the connecting leads

Specification & Buying Notes

Kits with angle-adjustable stands and a small load set give the most teaching value. Quality panels last outdoors; cheap mono cells crack in the frame. Add a data logger for trends.