

Fuel Cell Science Education Kits

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

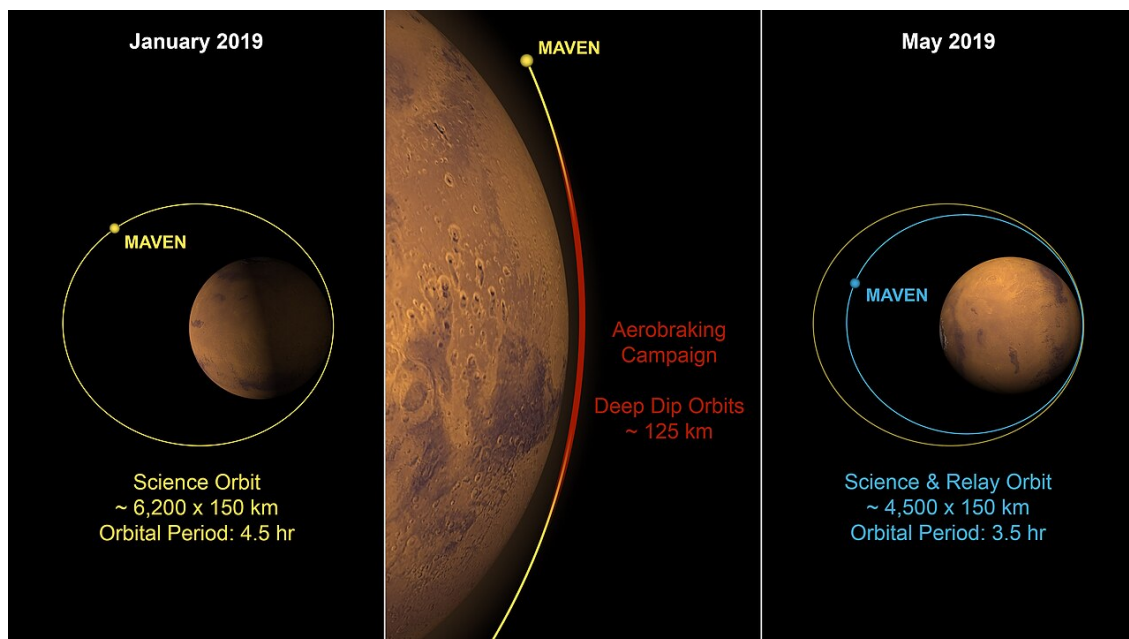


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Fuel cell education kits demonstrate how hydrogen and oxygen combine to generate electricity: electrolyzers split water, fuel cells recombine the gases to power fans, motors and LEDs, closing the clean energy loop visually at the bench.

Key Features

- PEM electrolyser and fuel cell stacks
- Hydrogen and oxygen storage
- Load boards with motors and LEDs
- Water reservoirs and tubes
- Curriculum support materials

Typical Uses in the Workshop

- Demonstrate water electrolysis
- Power loads from stored hydrogen
- Compare fuel cell energy density
- Teach hydrogen energy storage

Safe Operation

1. Fill the reservoirs with distilled water
2. Apply the electrolysis voltage
3. Collect the gases in the tubes
4. Connect the fuel cell to the load
5. Measure the output while it runs

SAFETY NOTES

- Hydrogen is flammable - keep away from flames
- Ventilate the room when operating
- Use only distilled water per the maker
- No bare metal sparks near the cell
- Store the kit empty and dry

Maintenance & Consumables

- Rinse and dry the cells after use
- Check the membrane condition
- Replace O-rings and tubes
- Keep the electrodes clean
- Store protected from dust

Specification & Buying Notes

A complete reversible PEM kit needs little beyond distilled water and a battery. Quality membranes last hundreds of cycles; budget kits degrade fast. Buy the curriculum-ready version.