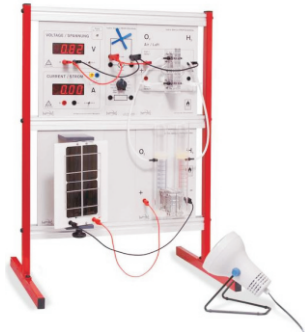


Wind, Solar & Hydrogen Bundles

Green-Ed™



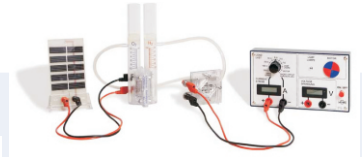
Think Green
Act Green
Be Green!



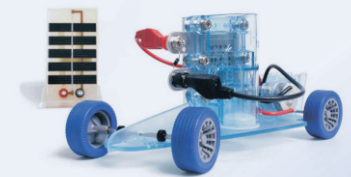
Dr FuelCell™ Professional



07-WSEM-400 Wind and Solar Energy Module



Dr FuelCell™ Science Kit



Dr FuelCell™ Model Car

Description

Renewable energy quickly replaces itself and is usually available in a never-ending supply. Renewable energy comes from the natural flow of sunlight, wind, or water around the Earth. With the help of special collectors, we can capture some of this energy and put it to use in our homes and businesses. As long as sunlight, water and wind continue to flow and trees and other plants continue to grow, we have access to a ready supply of energy.

Solar energy

For billions of years, the sun has poured out huge amounts of energy in several forms, including light, heat, radio waves, and even x-rays. Direct sunlight is available from sunrise until sunset, except during solar eclipses. Solar collectors and modules are designed to capture some of the sun's energy and change it from radiation into more usable forms such as heat or electricity.

Wind energy

Wind energy is really just another form of solar energy. Sunlight falling on oceans and continents causes air to warm and rise, which in turn generates surface winds. The wind has been used by humans for thousands of years, first to carry ships across oceans and, later, to pump water and grind grain. More recently, wind has been harnessed as a clean, safe source of electricity.

Hydrogen Fuel Cells

Fuel cells combine the best of batteries (quiet, no emissions) and internal combustion engines (easy refuelling once the infrastructure is in place). They are far more energy-efficient than gasoline-fueled vehicles with double the efficiency of internal combustion engines, and are far less polluting.

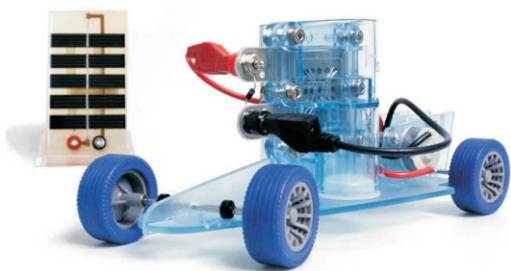
Fuel cells have a simple construction, so mass production costs would become extremely low. Within the past 5 years, there has been a 10-fold increase in the power density of fuel-cell stacks and a 10-fold decrease in their cost.

The Progressive Educational Systems Renewable Energy solutions use real world technology to demonstrate how wind turbines, solar PV and hydrogen fuel cells are beginning to transform the way the world is powered.

In the Wind and Solar Energy modules from Progressive Educational Systems, students learn about today's two major forms of alternative energy and how technology is used to convert and transmit this energy. They explore solar and wind as an energy source that can be used to help reduce dependency on exhaustible, non-renewable fuel sources. They gain a global perspective when they understand the economics, efficiency, and low environmental impact of producing energy from non-polluting, renewable sources.

The Dr FuelCell™ teaching system(s) for science and technology education, prepare your students for a greener future. These systems help you to easily integrate solar and fuel cell technology into your classes and come cover modern topics, like the usage, storage and conversion of energy. Each system comes complete with comprehensive teaching materials and prepared experiments.

Now any of the Progressive Educational Systems renewable energy training systems can be bundled with any of the following Dr. Fuel Cell training systems.



Dr FuelCell™ Model Car. Powered by water and sunlight, the model car represents an interesting and simple gateway into solar hydrogen and fuel cell technology. Through practical experiments your students gain hands-on experience in the relationships between energy conversion, storage and consumption.

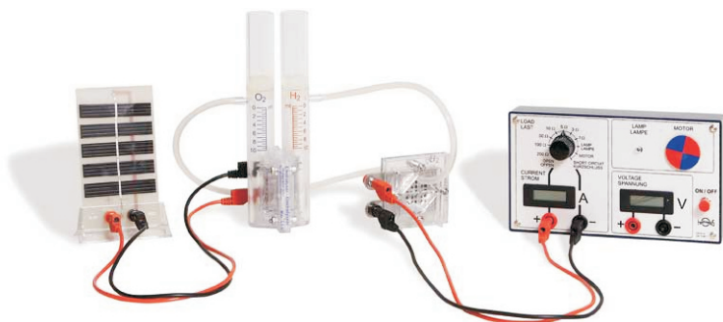
Developed for daily use in the classroom.

Distinguished by its easy manageability and through its flexible and robust construction. Suitable for both working in groups and individually.

Pique your students' interest in fuel cells with this fascinating car and increase your students' awareness for renewable energies through curriculum-related experiments with an exciting new technology.

With the Dr FuelCell™ Science Kit your students can practically experiment with what they were taught in theory and can grasp the overall concept of renewable energies as well as more closely investigate individual technologies.

- Course material includes 20 ready-made experiments.
- No additional components/chemicals necessary
- Ample curriculum-oriented documentation and coordinated experiments
- Appropriate for lessons in chemistry, physics and technology in grades 9-12
- Suitable for individual use or in small groups



With the aid of the Dr FuelCell™ Professional, solar hydrogen and fuel cell technology can be presented and taught with outstanding results. Large modular components and displays that are clear and easy to read are ideally suited for presentations in front of the class or larger groups.

Curriculum

Many different facets of the curricula of physics, chemistry and technology can be demonstrated using the Dr FuelCell™ Professional:

- Principle of molecules
- Chemical reactions
- Acceleration of reactions
- Thermodynamics
- Electrochemistry
- Measurement and interpretation of characteristic curves
- Voltage, Current measurement

Independently of this, the main emphasis of the instruction can be shifted as needed. You can choose from 20 well-prepared basic experiments – and modify them as needed or design your own individual experiments.

The [Dr FuelCell™ Science Kit](#) makes the perfect supplement to this wall panel system in order to have your students conduct purposeful experiments.



Renewable Energy Bundles

Bundle A - Any Progressive RE System and the Dr FuelCell™ Model Car

Bundle B - Any Progressive RE System and the Dr FuelCell™ Model Car and Dr FuelCell™ Science Kit

Bundle C - Any Progressive RE System and the Dr FuelCell™ Model Car, Dr FuelCell™ Science Kit and Dr FuelCell™ Professional.



54 Station St. Belleville, Ontario K8N 2S5

888-256-0715, 613-966-3332 FX 613-966-7490 sales@progressiveinc.ca <http://www.progressiveinc.ca>