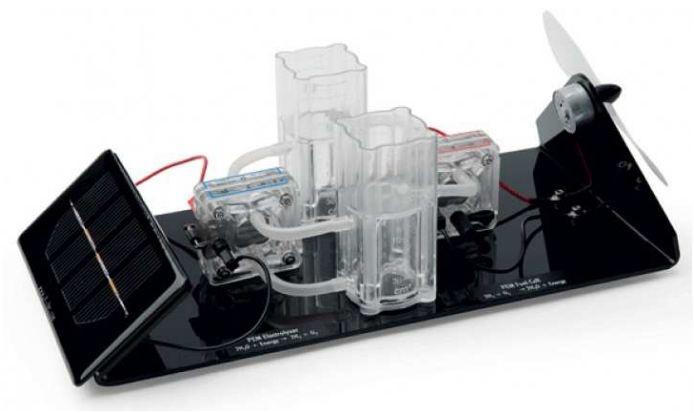
H-TEC EDUCATION

# Junior Basic J101



H-TEC's Junior Basic J101 is a **Solar Hydrogen Experimentation System** consisting of solar module, PEM electrolyzer, hydrogen and oxygen storage tanks, PEM fuel cell and fan (for electric load); mounted on a black base plate. The included instructional textbook contains information about the fuel cell technology and instructions for a variety of experiments.

The Junior Basic reflects the simple elegance of the hydrogen cycle by reflecting a self-contained hydrogen system that is perfect for introducing the technology behind the solar hydrogen cycle, or for small demonstrations.

**Features:**

- Compact system on one base-plate
- Clear, self-explanatory set-up
- Sturdy construction
- Short setup time

**Includes:**

- Electrolyzer Cell 5
- Storage 30 (2x)
- Fuel Cell Hydrogen/Oxygen
- Solar Panel Cell
- Fan Load
- Metal Base Plate
- Fuel Cell Technology Book

**Experiments possible with the Junior Basic J101:**

- Producing and storing hydrogen and oxygen
- Determining characteristic curve of solar panel
- Operating the fuel cell with hydrogen and oxygen 2:1
- Determining characteristic curve of electrolyser
- Determining electrolyzer efficiency
- Learning about Faraday's laws
- Determining characteristic curves of fuel cell
- Determining fuel cell efficiency
- Determining decomposition voltage of water
- Storing electrical energy from wind by using hydrogen technology
- Demonstrating a complete renewable hydrogen energy system

For the blue experiments listed above you will also need the **Measurement Set**.
For the green experiments listed above you will also need the **Wind Generator**.