

PHYSICS

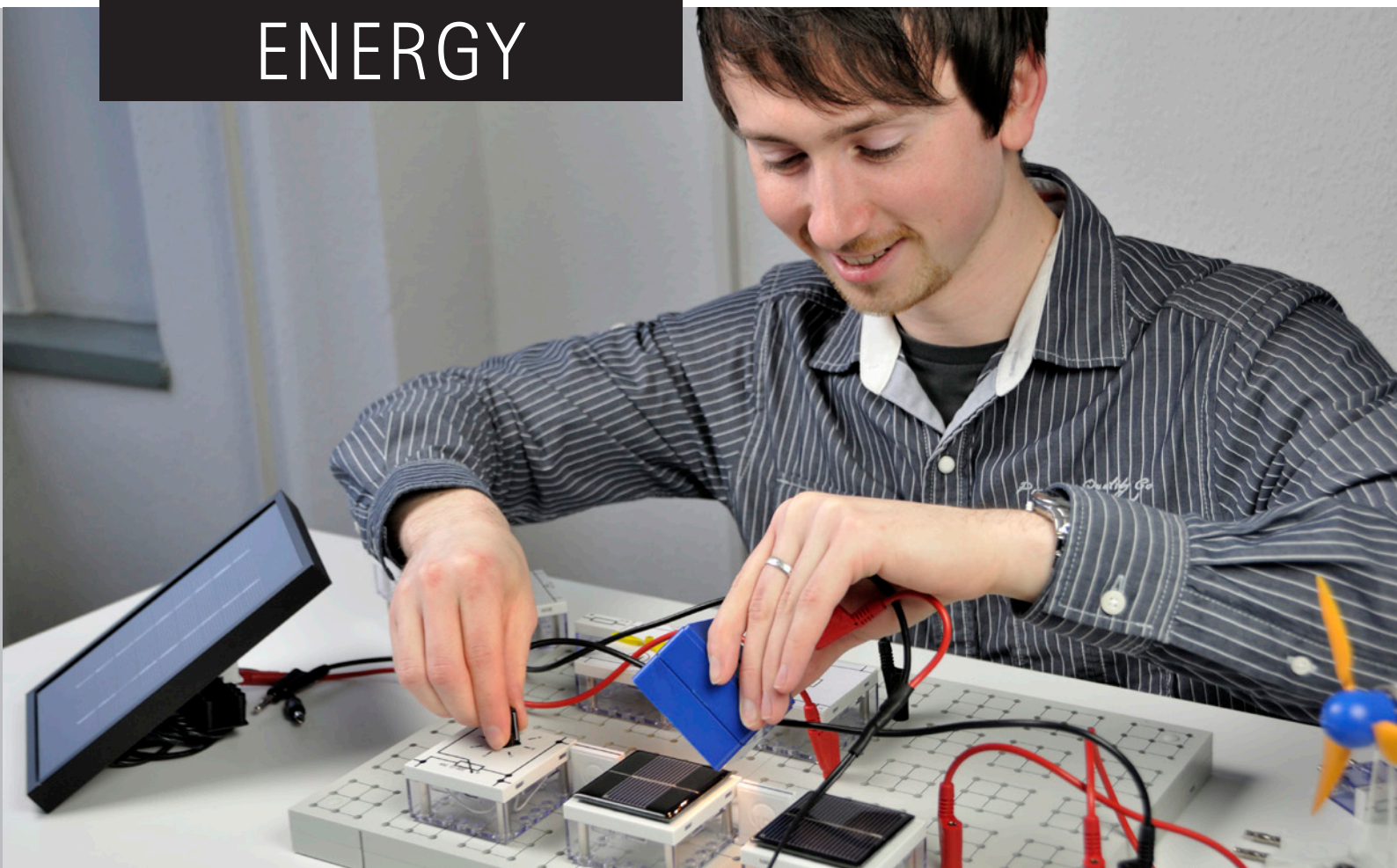
CHEMISTRY
BIOLOGY

ENGINEERING



NEW

RENEWABLE ENERGY



EXPERIMENTS FOR VOCATIONAL TRAINING IN ELECTRONICS

- Solar Power and Electricity
- Wind Power and Electricity
- Battery Technology

LEYBOLD®



UNDERSTAND A FUTURE TOPIC WITH THE PLUG-IN

Using the LEYBOLD Plug-in System (STE) students learn the important topics of vocational training in electronics in a practical way. Using the complete and cased experimental set you can integrate student experiments on the future-oriented topic "Renewable Energy and Storage" into your training. As the start of this new series we can offer you experiment kits on solar energy, wind energy and battery technology.

The didactic concept of this series is the independent development of knowledge.

Our focus is

- An independent set up with experiment instructions
- Measurements using intuitive instruments

Not on demonstrations with unwieldy large systems. This is the perfect combination of theory and practice.



SOLAR POWER AND ELECTRICITY

Every year there is increased use of solar generated electricity. Installation, maintenance and planning of such systems has created new industry that requires special knowledge and skills. With the experimental kit „Solar Power and Electricity“, trainees are able to cover all relevant educational content in specific experiments, such as:

- Efficiency and characteristics of solar cells
- Series and parallel connection of solar panels
- Maximum Power Tracking and DC/DC conversion

The straightforward, but varied, experiments of the Plug-in system, motivates students and strengthens their acquired knowledge.



WIND AND ELECTRICITY

No wind, no electricity. In vocational training we expand on this simple conclusion. The demand for employment with companies in the renewable energy sector is increasing rapidly, but so is the competition.

The LEYBOLD Plug-in system „Wind Power and Electricity“ was developed, to support this with a variety of experiments. The topics are:

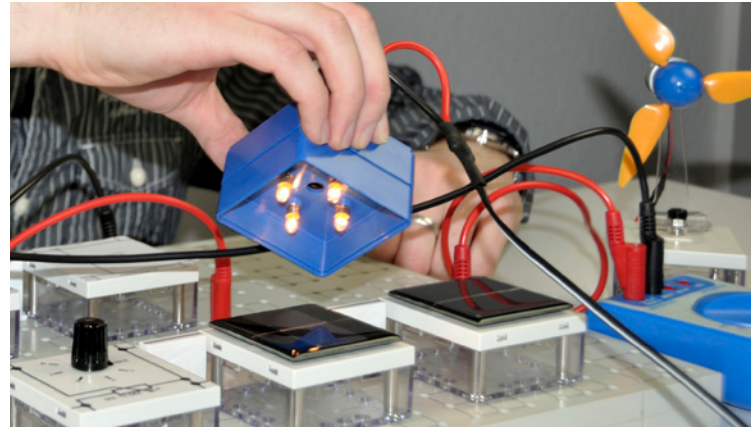
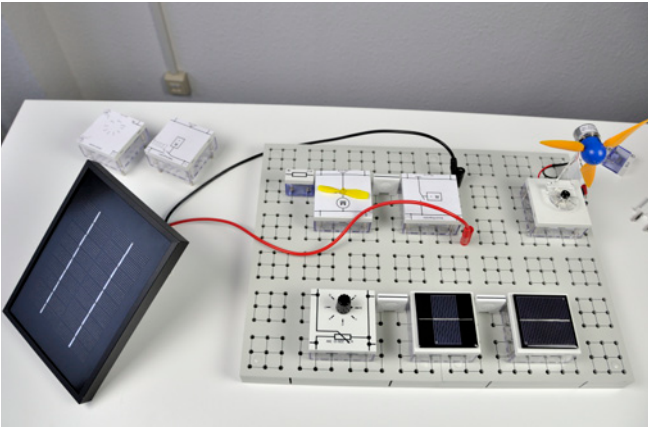
- Shape of rotor blades and their aerodynamic properties
- Relationship between wind speed and power
- Energy surplus and tie-in

The experimental manual contains detailed instructions on Wind Power and Electricity.

INDING ECHNOLOGY

SYSTEM

LEYBOLD®



POWER ELECTRICITY



BATTERY TECHNOLOGY

onal training it is necessary to
n. The opportunities for future
the energy industry and crafts are
required knowledge.

nd Power and Electricity" has been
a modern training system. The study

ergy output
eed, speed of rotation and efficiency

ns more than a dozen experiments

What type of battery is suitable for each application?
Trainees are able to work on the answer to that question
themselves with the kit „Battery Technology“.

The following topics are covered clearly with interesting
experiments:

- The charging procedure is ideal for each type of battery?
- How to achieve maximum battery life?
- How to discharge batteries and what can be measured?
- Which physical aspects have to be taken into account while charging or discharging?

„Battery technology“ is becoming an increasingly important part
in vocational training, because of the growing importance of
Renewable Energy and portable devices. The ecological aspects
have also been considered.

STE SOLAR POWER AND ELECTRICITY

A complete set containing over 30 STE components about photovoltaic systems.

Content:

- 3 different types of solar cells
- MPP-Tracker
- comprehensive experiment instructions
- Lighting module and more.

Clearly arranged in a solid case for transport and storage

580 0100	STE Solar Power and Electricity
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STE WIND POWER AND ELECTRICITY

A complete set containing over 15 STE components on Wind Power and Electricity.

Content:

- 3 different types of rotors
- With wind producer
- Comprehensive experiment instructions
- Wind and speed measuring unit and more

Clearly arranged in a solid case for transport and storage

580 0200	STE Wind Power and Electricity
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STE BATTERY TECHNOLOGY

A complete set containing over 17 STE components on Energy storage using batteries.

Content:

- Different battery types (Pb, NiMH, LiPo)
- MPP-Tracker
- Comprehensive experiment instructions
- Charge controller and more

Clearly arranged in a solid case for transport and storage

580 0300	STE Battery Technology
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Using the STE Complete Package, more complex projects can be realised that illustrate to students key features of future power supplies.

For classroom packages and special offers, please ask your local distributor.

Further product information are available on our website. under the particular item no.