



STEM KITS | SECONDARY SCHOOL

STEM Renewable Energies

Make the fundamentals of renewable energies comprehensible and understandable.

How can electricity be generated in an environmentally friendly way? How does a fuel cell work and how can it be used to produce hydrogen? Renewable energies will be our most important energy sources in the future. Nine models and 28 experiments clearly explain how electricity is generated, stored, and used from natural energy sources such as water, wind, and sun. The powerful solar modules can be flexibly used in the models thanks to their many mounting options. The included Gold Cap serves as an energy storage device and can release stored energy back into the system. With the help of the fuel cell, it is clearly demonstrated how water is split into its two components, hydrogen and oxygen. This teaches the principle of future forms of energy and trains important skills. With the comprehensive lesson plans, STEM Renewable Energies can be optimally used in the classroom.

LEARNING OBJECTIVES

Getting to know and understanding different renewable energy sources: water, wind, sun, and hydrogen.

Generation, storage, and use of electrical power


Fuel cell for generating hydrogen


Multimeter for measuring current and voltage

Voltage transformer for high voltage transformation


STEM Renewable Energies


Facts

 2 - 4 students

 270 pieces

 28 experiments

 9 models:
Hand generator / Water turbine / Wind power /
Functional model of solar energy / Fuel cell
charging station / Functional model / Electric
vehicle with solar modules / Electric vehicle
with Goldcap and solar charging station / Electric vehicle
with fuel cell and solar charging station

 Includes solar motor (2VDC), 2x solar modules (1VDC, 400 mA),
Gold Cap energy storage device, LED, fuel cell, voltage converter,
and multimeter.

 Extensive accompanying materials and support for teachers

Hands-on learning concepts for regular classes with fischertechnik education

fischertechnik education offers innovative digital and analog learning concepts for use across a wide range of subjects - from preschools and general education schools to universities and vocational training programs.

STEM (Science, Technology, Engineering, and Mathematics) content is taught in an engaging and practical way through hands-on learning concepts. This approach helps students develop essential future skills such as problem-solving, creative thinking, and social and emotional competence.

From robotics and artificial intelligence to automated, agile production simulation, and the fundamentals of renewable energy, electronics, and mechanics - the fischertechnik product range provides comprehensive solutions for teaching STEM content aligned with your curriculum.

All learning concepts include themed building kits, technical components such as motors, sensors, and controllers, as well as freely accessible instructional and training materials - including building and programming guides, lesson plans with tasks and solutions, curriculum references, and professional development resources.

For more than 60 years, our solutions have been successfully used in schools, universities, vocational education programs, and industry around the world.

More information on our learning concepts is available at:
fischertechnik.de/en/schools



Item No.	559881
EAN	4048962424621
Dim. (mm)	440x315x150
Weight (g)	2.700

FISCHERTECHNIK STEM KITS



Our **STEM kits** are designed for project-based learning and are curriculum-aligned for easy classroom use. Each kit focuses on a specific STEM topic and includes high-quality components for building models and conducting hands-on experiments.

With free **online teaching materials** - including lesson plans, learning objectives, and curriculum links - and the intuitive STEM Suite learning app for robotics sets, bringing STEM learning to life has never been easier.