



STEM ROBOTICS | SECONDARY SCHOOL

STEM CODING ULTIMATE AI

Explore robotics, AI, and modern technology in a realistic and action-oriented way

Using twelve versatile, partially expandable models, secondary school students explore key issues in information technology and artificial intelligence. Based on realistic scenarios, they independently develop solutions for complex, problem-oriented tasks. A powerful controller, modern sensors and actuators, a user-friendly app and the proven fischertechnik building blocks provide practical access to advanced technologies. The focus is on topics such as object recognition, automated decision-making processes and machine learning.

The competence-oriented learning approach promotes technical and methodological understanding as well as problem-solving skills and teamwork - at a level that prepares students for the demands of an increasingly digitalized world.

LEARNING OBJECTIVES

Expand knowledge of the fundamentals of computer science and robotics

Understand how actuators and complex sensors work

Acquire basic knowledge of neural networks and AI programming

Apply STEM competencies in an interdisciplinary way

Engage in project-based work and strengthen teamwork

Students gain insight into STEM-related professions

STEM Coding Ultimate AI Facts

-  2 - 4 students
-  12 models
-  224 components, incl. replacement parts bag and easy sorting
-  90+ hours of learning



-  Incl. TXT 4.0 Controller, ultrasonic sensor, 2 x encoder motors, USB camera, track sensor, 2 x mini push buttons, phototransistor, NTC resistor, 5 x LEDs, USB-C battery

-  For teachers: Free instructional materials, lesson plans, step-by-step guides, and video tutorials are available for download from fischertechnik.de/en/stem-coding-ultimate-ai

-  For students: Step-by-step guides for building, programming, and experimenting are integrated into the fischertechnik "STEM Suite" app (available for free download for iOS, Android, Windows and macOS).

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EAN	4048962549324
Dimensions (mm)	429x310x152
Weight (g)	2520

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

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.