



ENGINEERING

KIT R2

Challenge high school and college students and help them develop mechatronic engineering skills

The Arduino Engineering Kit Rev 2 provides students a strong understanding of basic engineering concepts through fun projects. Students are able to connect what they learn with real-world industries, are encouraged to think critically, and improve their depth of knowledge by learning through experimentation. The kit is a versatile, hands-on learning tool that demonstrates key control systems concepts, core aspects of mechatronics, and MATLAB® and Simulink® programming. Ideal for advanced high school and college students.

NUMBER OF STUDENTS PER KIT: Optimal for 2 - 3 students per kit.

NUMBER OF LESSONS / PROJECTS: 3 Projects

LANGUAGES: English, Spanish and German

TARGET: 17+ years (University)

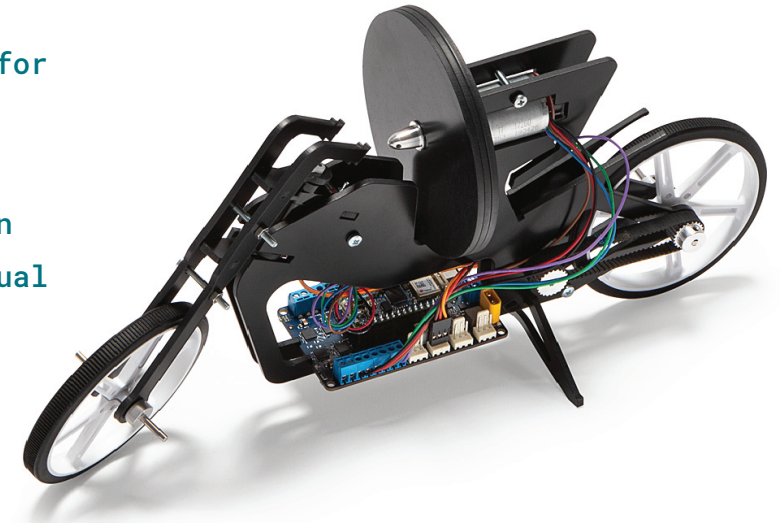
For more info visit:
store.arduino.cc/engineering-kit-r2

Developed in partnership with



“It is a useful exercise for the students to build something operable and to experience the interaction between modelling and actual use“

Andrew Belford, Educator at Macquiere University



WHAT IS THE ARDUINO ENGINEERING KIT?

Featuring cutting-edge technology, the kit is a practical, hands-on learning tool that demonstrates core aspects of mechatronics, MATLAB® and Simulink® programming and key engineering skills. The projects cover the basics of model-based design, control systems, image processing, robotics, signal processing, and more - plus they're fun to do!

The kit includes all the physical components you need, including learning materials and software, to build three projects. There's online step-by-step guidance, so it's ideal for students working in small groups or for facilitating remote learning. In addition to the three projects, students have the freedom to experiment, design, and develop new solutions using the software and hardware components in the kit, which are some of the tools that are used in industry and help students learn valuable career skills they'll use in the future.



KEY LEARNING

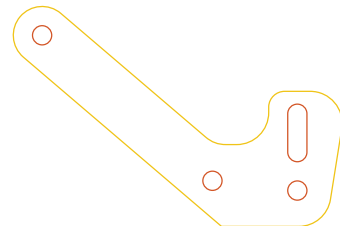
VALUES

- System modeling
- Control theory
- Robotics and mechatronics
- Image and video processing
- Text-based programming with MATLAB®
- Visual programming with Simulink®.
- How to analyze and visualize data
- Applying custom algorithms for complex math operations, image processing, and PID control.
- How to model and simulate behavior of dynamic systems.
- How to incorporate logic-based algorithms that define system behavior for different "states", for example, move forward, turn, stop.

PRODUCT

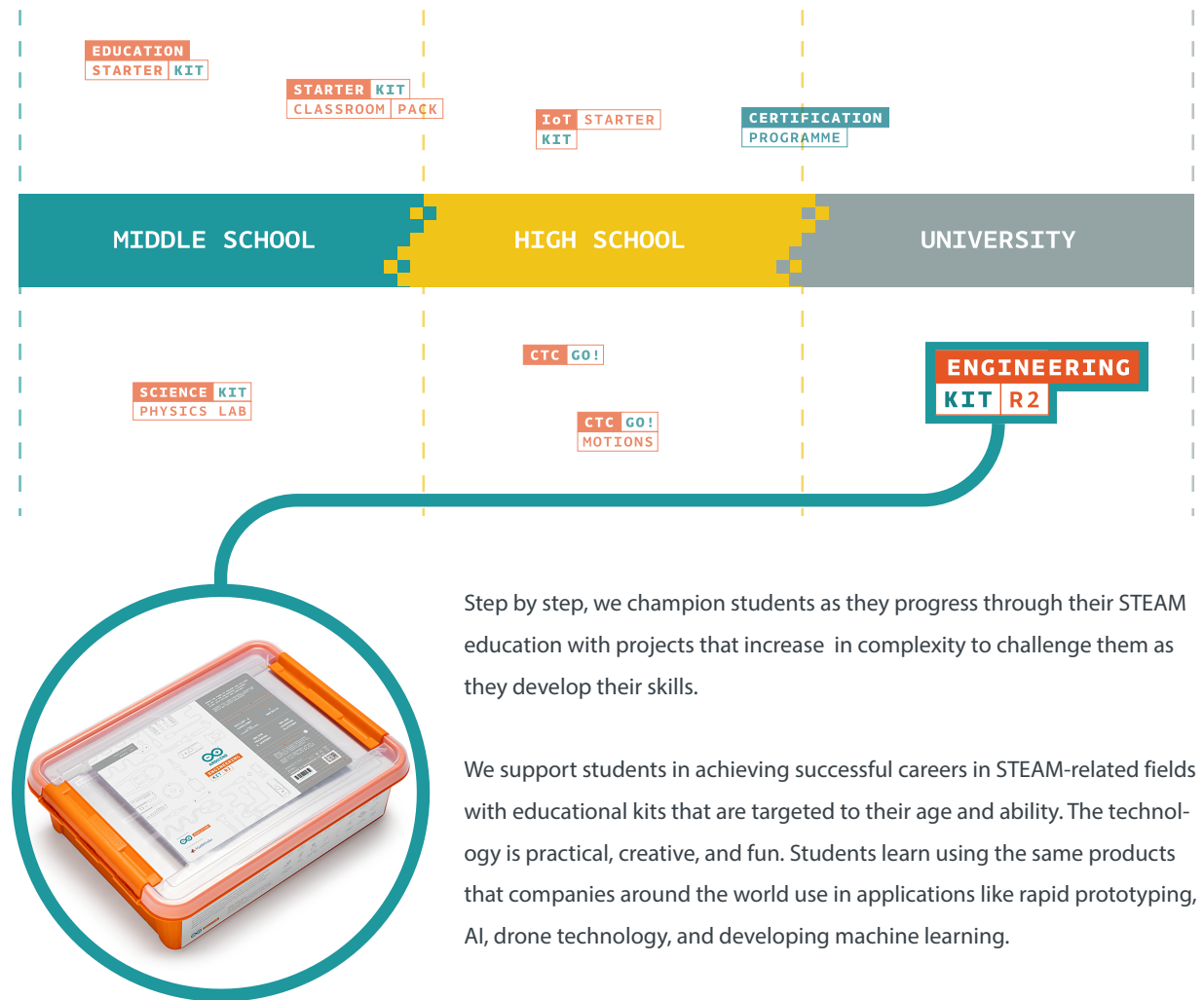
BENEFITS

- Students want to learn because the projects are fun and create and outcome-driven environment
- Broaden your students' 21st-century skills with collaborative learning and problem-solving, and challenge them to think critically
- Help students connect their knowledge with real-world industries
- Educators can freely tailor the kit to their students' needs and their own curriculum
- Improve depth of knowledge by learning theoretical concepts in a hands-on way



ARDUINO® EDUCATION LEARNING EVOLUTION

Our aim is to help students achieve their dream careers in STEAM. Our cross-curriculum content and open-source approach are essential tools for STEAM classes that develop with students as they progress through middle school, high school, and university, preparing them for a successful future.



Step by step, we champion students as they progress through their STEAM education with projects that increase in complexity to challenge them as they develop their skills.

We support students in achieving successful careers in STEAM-related fields with educational kits that are targeted to their age and ability. The technology is practical, creative, and fun. Students learn using the same products that companies around the world use in applications like rapid prototyping, AI, drone technology, and developing machine learning.

We are currently focused on translating our content into more languages and mapping it to more curricula. If you have a project that you would like to have localised for your country, please contact us with your suggestion.

For more info visit: [ARDUINO . CC / EDU](https://www.arduino.cc/edu)

