The ErgoBot

An extraordinary STEM learning solution

Physics
Robotics
Technology
Engineering
Mathematics
Computer Science

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The ErgoBot connects wirelessly via Bluetooth to almost any device such as an iPad, Mac, PC, Android tablet, or Chromebook. In freewheel mode the miniature photogates on each wheel send detailed displacement and velocity data - right into the e-Labs! Displacement, velocity, and acceleration display the correct positive or negative sign depending on the direction of motion.

See position, velocity, acceleration and time data every 50 milliseconds.

Watch “About the ErgoBot” video at www.ergopedia.com

Teach ...
- Measurement
- Position and displacement
- Speed and velocity
- Acceleration
- Position vs. Time Graphs
- Velocity vs. Time Graphs
- Friction
- Newton’s Laws
... and more!

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The ErgoBot allows students to create motion graphs and then actually drive them! The concepts of position, velocity, and acceleration become real as they are controlled by the student through graphs of motion.

Create a motion graph by varying the velocity in one second intervals. Get the best score by hitting the four red circles on the position vs. time graph.

The ErgoBot will drive any motion graph within its “speed limits”

This switch engages the ErgoBot’s twin independent drive motors.

- Left and right independent drive motors
- Rechargeable battery
- Maximum velocity +/- 40 cm/s
- Maximum acceleration +/- ??

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Exceptional supplemental curriculum now available

- Interactive e-Labs which run on virtually any device
- Editable powerpoint presentations including more than 400 slides
- Editable lesson plans offering fully differentiated learning
- Editable student assignments in both .doc and .pdf format

If you use Essential Physics you already have everything in the ErgoBot supplemental curriculum except the programming lessons.
What an engaging way to teach vectors!

With the front carriage removed, the ErgoBot is a nimble robot able to turn with 0.5° precision. Students use vectors to program a solution to navigate a two-meter maze laid out with tape on the floor.

Students program vectors into interactive labs that run on virtually any device including iPads, Android tablets, Chromebooks, Macs and PCs. Vectors are wirelessly transmitted to the ErgoBot, which then runs the real maze.

Students discover that the shortest “theoretical” path doesn’t allow enough clearance in a real maze. The follow-up lesson is a practical introduction to accuracy and precision and how these concepts affect real life.

Take it to the next level

The optional ErgoBoard allows full programming access to the ErgoBot’s drive motors and sensors. Line following, distance, and light sensors are included. Imagination is the only limit to this versatile and easy to use Arduino-compatible robotics platform!

Sensors are included

Ordering information

130 - 01006  ErgoBot (incl. front carriage & charger)  $595

Additional ErgoBot products

130 - 01032  ErgoBot Robotics System (with ErgoBoard and sensors)  $790
130 - 01028  ErgoBoard and sensors (needs ErgoBot)  $255

Optional curriculum guides

120 - 03010  Motion and Robotics with the ErgoBot Curriculum  $99
120 - 03015  Programming and Robotics Curriculum  $99

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