VEX CTE
Workcell

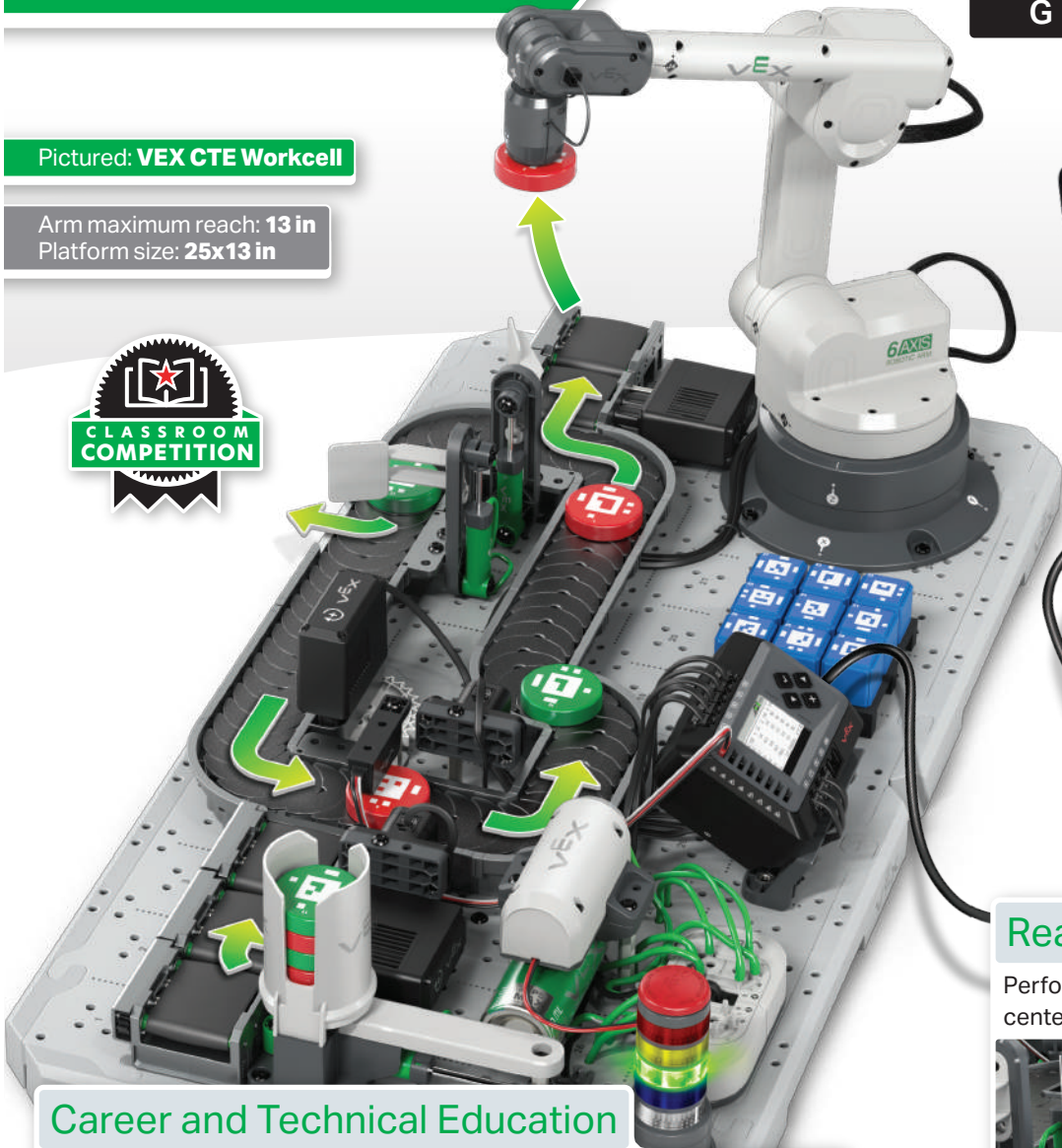**Elevating Tomorrow's Workforce by Preparing Them for the Ever-Evolving Workplace**

GRADES 9+

Pictured: **VEX CTE Workcell**

Arm maximum reach: **13 in**
Platform size: **25x13 in**

CLASSROOM COMPETITION

Program it with
VEX CODE
Code with **Blocks**, **Python**, and **C++**
Software available at no cost
Laptop not included

Realistic Use Case
Perform the same functions as real distribution centers using accurately replicated systems.

Career and Technical Education

Develop crucial career skills in your classroom with CTE!

With the VEX CTE Workcell, designed for **Career and Technical Education**, students gain hands-on experience designing and programming a realistic workcell with a robotic arm, conveyors, and pneumatics. Teach industrial robotics with real-life manufacturing concepts like material handling and layout optimization.

VEX CTE Workcell Kit

Contains one robot arm, one robot brain, and other appropriate pieces to assemble one VEX CTE Workcell.

$2,499.⁹⁹

SKU: 234-8952
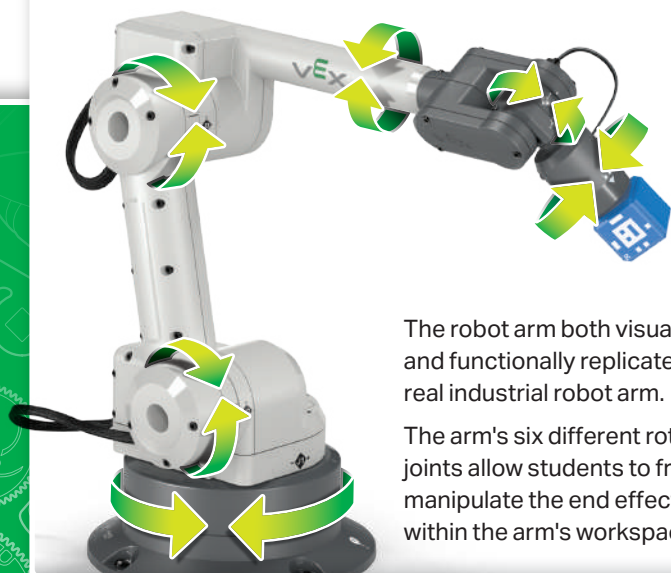
Find a sales rep near you!
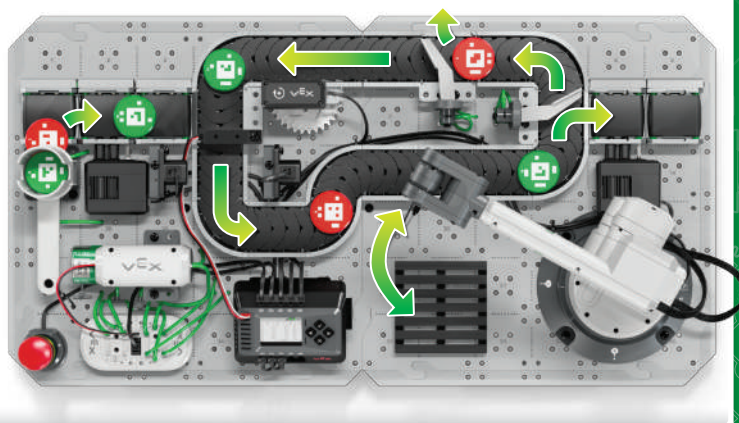sales.vex.com

Six Degrees of Freedom

The robot arm both visually and functionally replicates a real industrial robot arm.

The arm's six different rotational joints allow students to freely manipulate the end effector within the arm's workspace.

Layout Optimization

Plan and then reconfigure a realistic industrial conveyor system to optimize factory throughput. Utilize linear and serpentine conveyors and connect multiple Workcells to create interactions between distribution systems.

Educator Support Ecosystem

You can rely on **VEXcode** *(coding platform)*, the **VEX Library** *(self-service knowledge base)*, **VEX PD+** *(professional development and certifications)*, **VEX STEM Labs** *(curriculum plug-ins)*, and **VEX Sales & Support** *(support by phone or email)* to support your teaching journey.

VEX STEM Labs for the CTE Workcell

Course 1 - Introduction to the 6-Axis Arm
Unit 1: Introduction to Robotic Arms
Unit 2: Using the Teach Pendant
Unit 3: Coding Movements
Unit 4: Motion Planning
Unit 5: Absolute vs. Relative Movements
Unit 6: Transporting and Palletizing Objects
Unit 7: Stacking Objects
Unit 8: Pick & Place
Capstone Project: Engineering Design Process

Course 2 - Workcell Automation
Unit 1: Introduction to Workcells
Unit 2: Pick & Place
Unit 3: Sorting by Color
Unit 4: Material Transportation
Unit 5: Loading and Sorting Materials
Unit 6: System Automation
Unit 7: System Integration
Unit 8: Cooperative Systems
Capstone Project: Automated Manufacturing

Additional Courses - To Be Announced
All curricular resources are aligned with educational standards.

ISTE • NGSS • CSTA • TEKS
Common Core Math • Common Core ELA

Professional Development

VEX PD+ is a professional learning community for the ongoing professional development you need, when you need it.

Connect with VEX Experts and educators around the world!

VEX PD+ All Access

$999 per year, per educator
SKU: 210-8353

Free Educational Resourc-

teachCTE.vex.com offers a hub of resources to get started with, and return to over time as you continue on your STEM teaching journey.

The free, online, self-paced **Certification in VEX PD+** will guide you through the basics of building, coding, and teaching with VEX CTE.

library.vex.com is an online encyclopedia of all things VEX, where you can search and find articles to answer questions, help troubleshoot, or learn more about using VEX CTE with your students.

getStarted.vex.com gives you the quick links you need to dive into your journey with VEX CTE.

Free Teacher Certifications, Lesson Plans, and Software

Instant answers to almost any question at **educators.vex.com** and **library.vex.com**

Find a sales rep near you!
sales.vex.com