



# STEM Labs

**Spark** creativity and innovation in the classroom with labs using hands-on educational robotics tools.

Our STEM Labs were designed by a team of classroom teachers, cognitive scientists, and pedagogy experts who work closely with the world-renowned Carnegie Mellon Robotics Academy to conduct collaborative research on educational robotics and computer science.



## Each STEM Lab includes:

- Structured lessons that provide easy entry
- Engaging activities with real-world connections
- Teacher materials for a painless implementation
- Aligned standards for core skills and concepts

STEM Labs **spark** innovation in the classroom

## Seek

new hands-on builds and coding opportunities

## Play

test your build and observe how it functions

## Apply

the core skills and concepts you learned to other problems

## Rethink

take what you've learned and try to improve it

## Know

core concepts and how to apply them to other situations

STEM Lab		
Ages 12-15	120 min	Intermediate
<b>Basic Movement - Shufflebot</b>		
Learn how to code the basic movements by using the Speed Build Bot		
<a href="#">Preview Standards</a>		

STEM Lab		
Ages 12-15	255 min	Beginner
<b>What is this piece for: Crown Gears and Standoffs</b>		
Practice using crown gear and standoff pieces in builds by making a working		
<a href="#">Preview Standards</a>		

STEM Lab		
Ages 16-18	240 min	Beginner
<b>Exploring Mechanical Advantage with VEX</b>		
Learners explore how mechanical advantages and gear ratios can be		
<a href="#">Preview Standards</a>		

STEM Lab		
Ages 16-18	420 min	Beginner
<b>Exploring Measurement with V5</b>		
Learners will explore the correlation between motor rotations and distance as		
<a href="#">Preview Standards</a>		