



Year-Round Training Guide



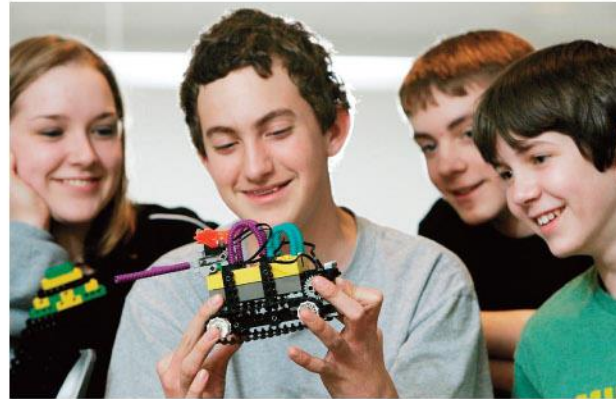
MODULE 1: **Comprehensive Robotics Overview**



MODULE 1: **Comprehensive Robotics Overview**



4-H Robotics: Engineering for Today and Tomorrow





Welcome to 4-H Robotics

- 4-H Robotics is relevant and appealing for today's youth.
- Robotics can enrich your local 4-H program.
- Robotics is a vehicle for positive youth development.



1, 2, 3 Build!





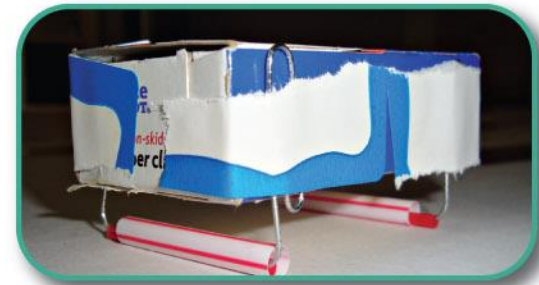
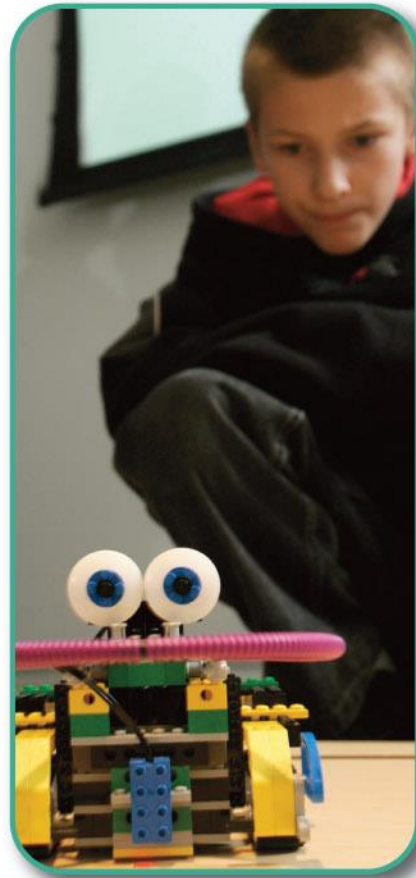
Road to Robotics

- There is no “right place” to start a robotics program.
- Start with the first available resources—a volunteer, youth interest, robotics equipment, funding, or location.
- Start small and continue to grow as you gain experience and resources.





Road to Robotics



4-H Robotics Curriculum



4-H Robotics:
ENGINEERING FOR TODAY & TOMORROW

www.4-H.org/curriculum/robotics

4-H Robotics Curriculum





MODULE 1: **Comprehensive Robotics Overview**



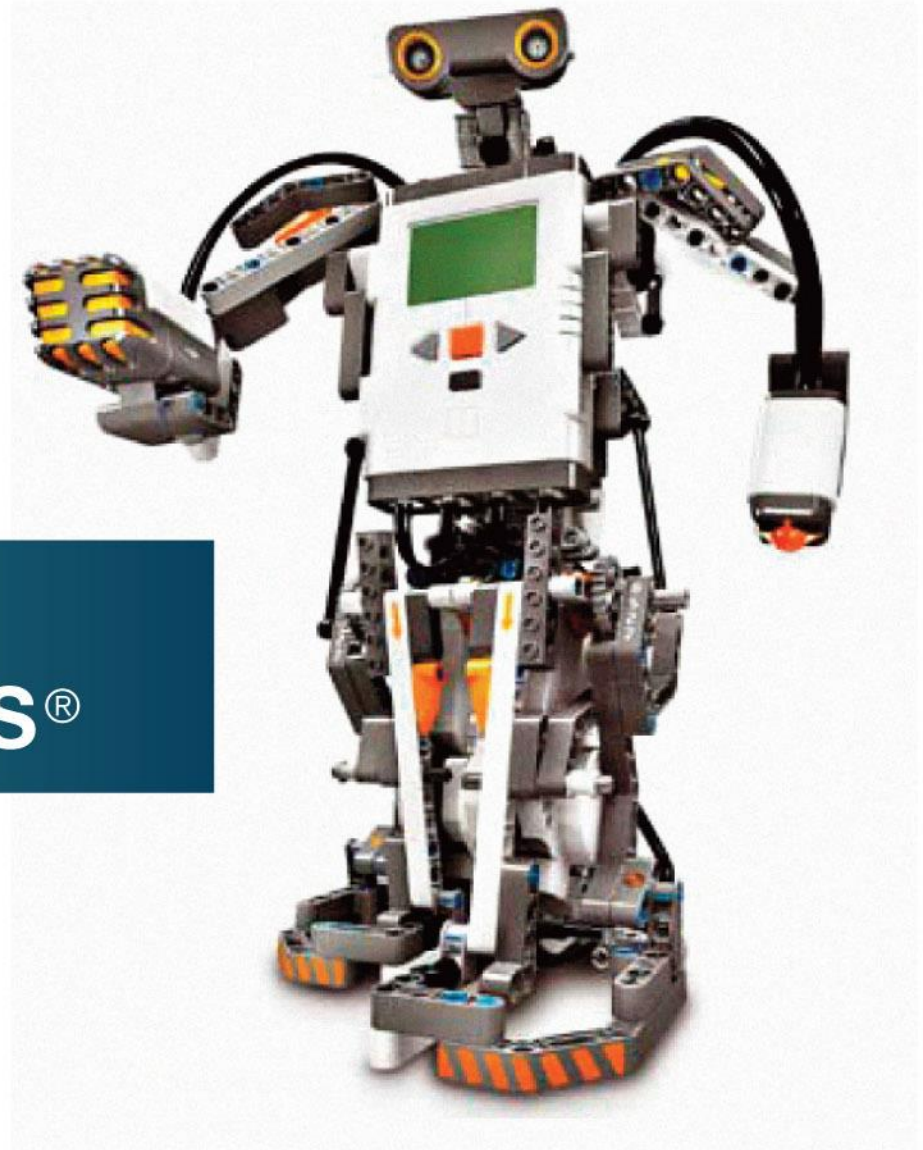
LEGO® WeDo™ Construction Set



LEGO® WeDo™ Construction Set



**LEGO®
MINDSTORMS®**





MODULE 1: **Comprehensive Robotics Overview**



**LEGO®
MINDSTORMS®**

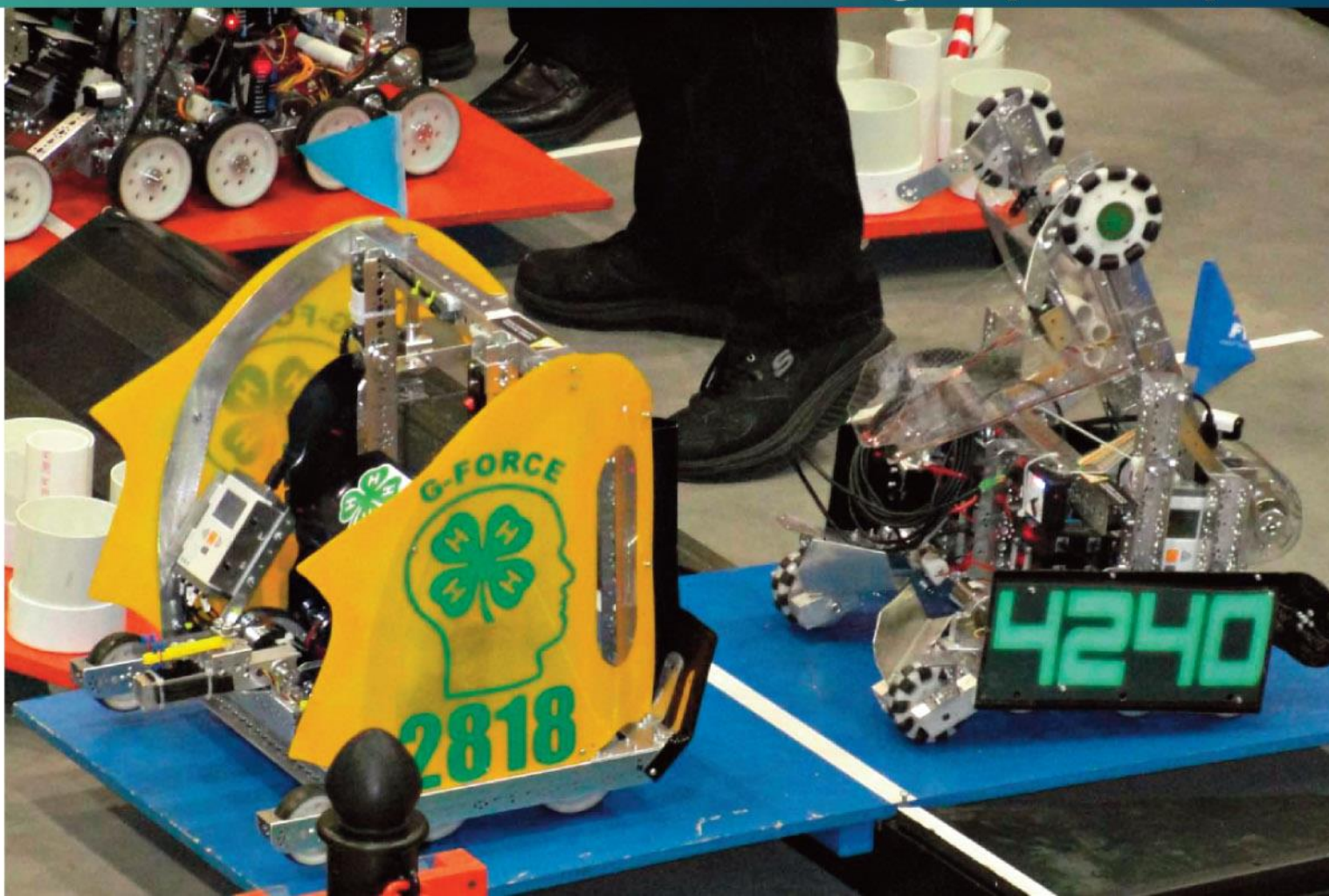


**FIRST[®] LEGO[®]
League (FLL[®])**





FIRST[®] Tech Challenge (FTC[®])



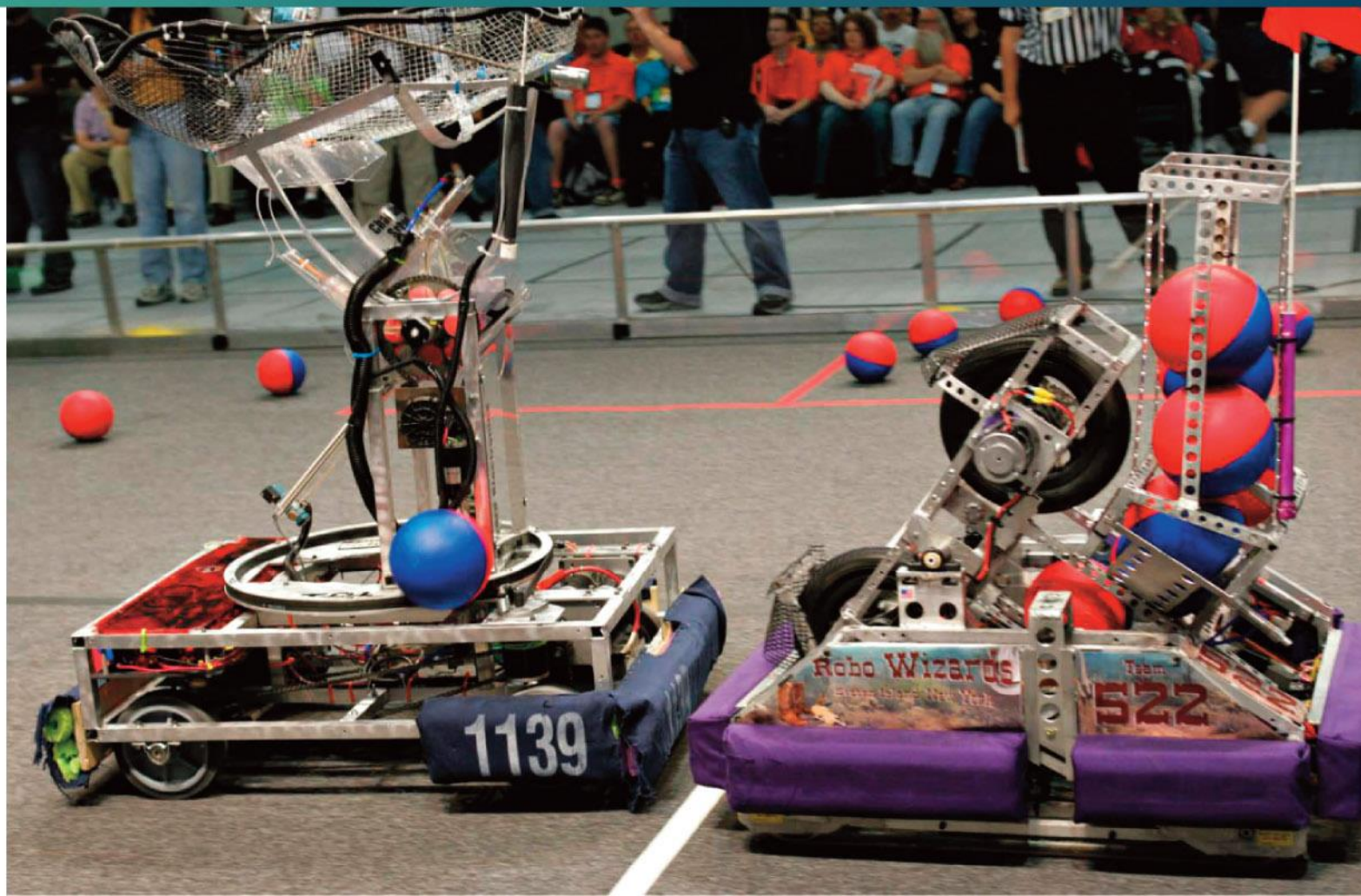


FIRST[®] Tech Challenge (FTC[®])





FIRST[®] Robotic Challenge (FRC[®])





FIRST[®] Robotic Challenge (FRC[®])

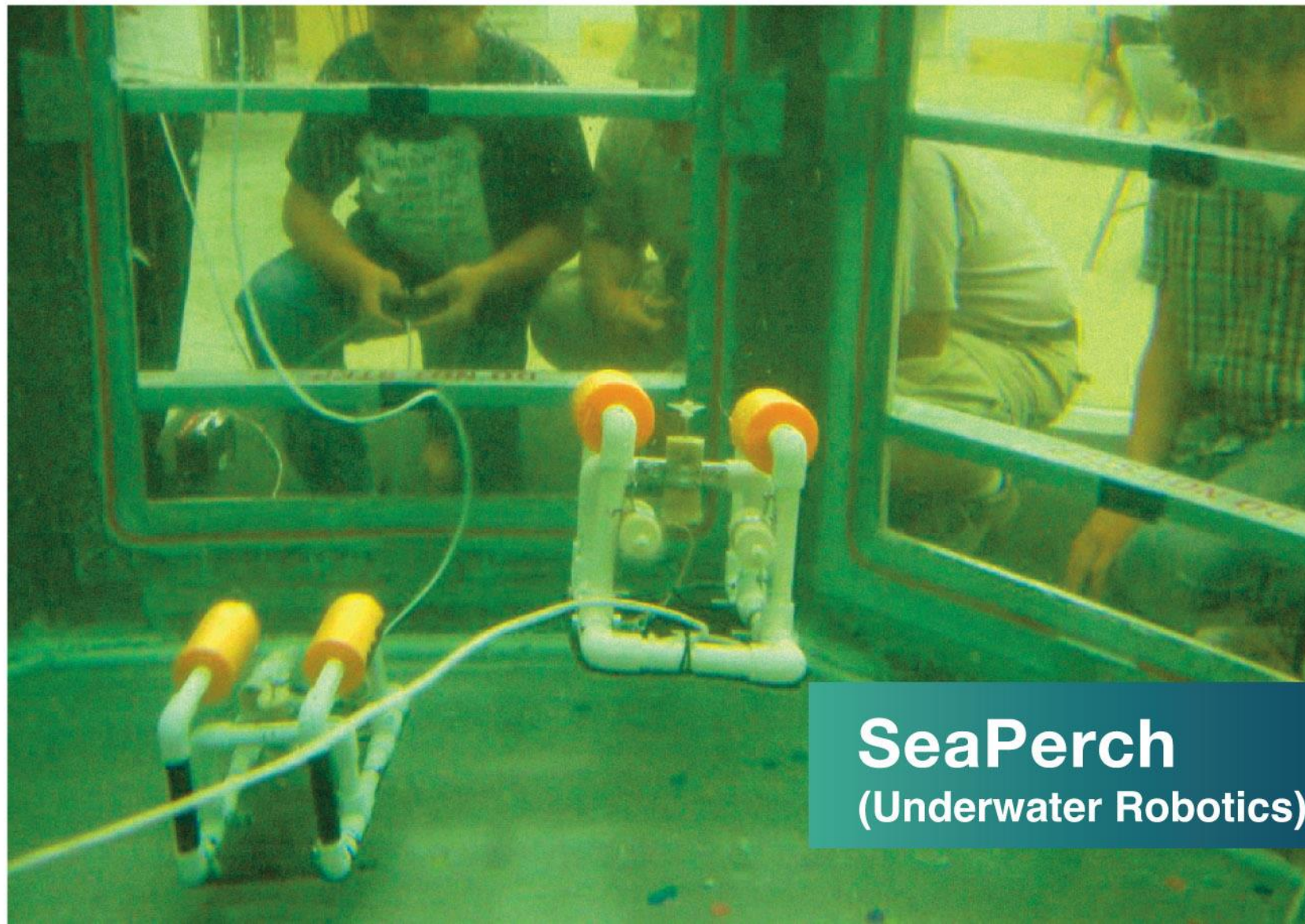


SuGO





MODULE 1: **Comprehensive Robotics Overview**



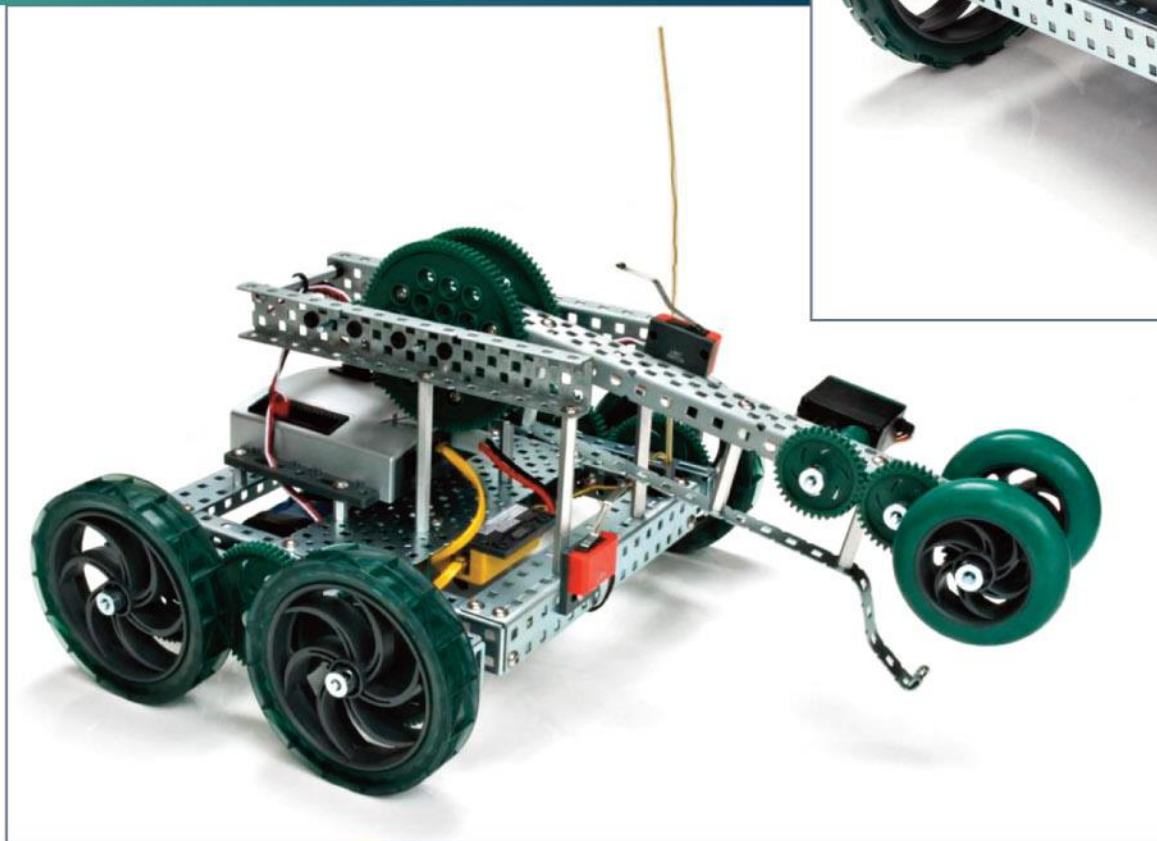
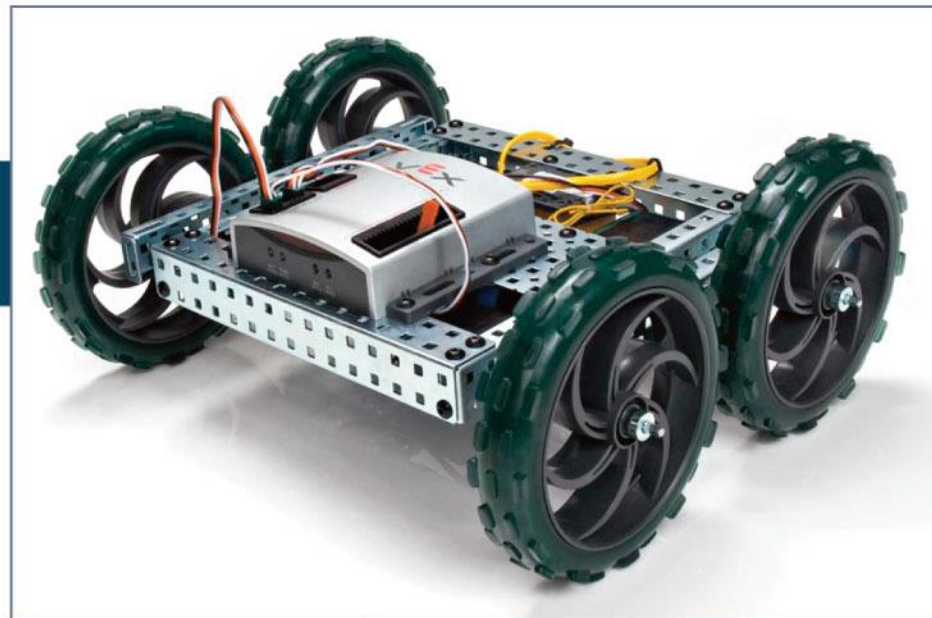
SeaPerch
(Underwater Robotics)



MODULE 1: Comprehensive Robotics Overview



VEX[®]

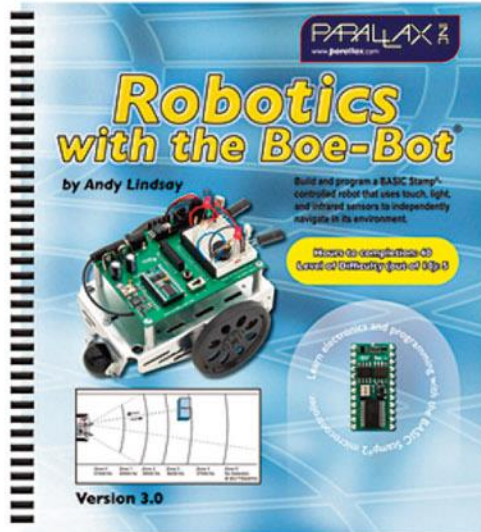


MODULE 1: Comprehensive Robotics Overview

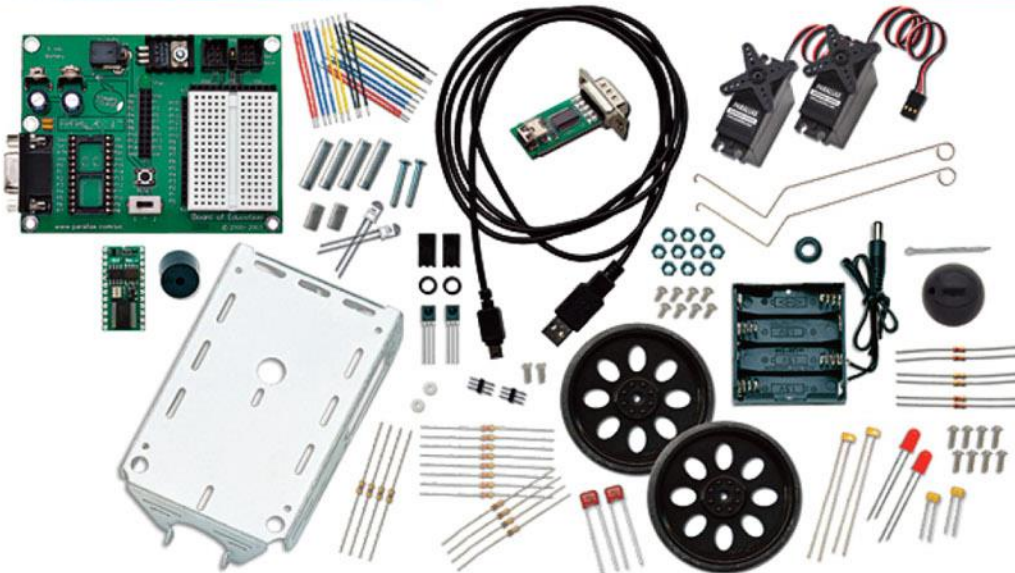


TETRIX®

MODULE 1: Comprehensive Robotics Overview

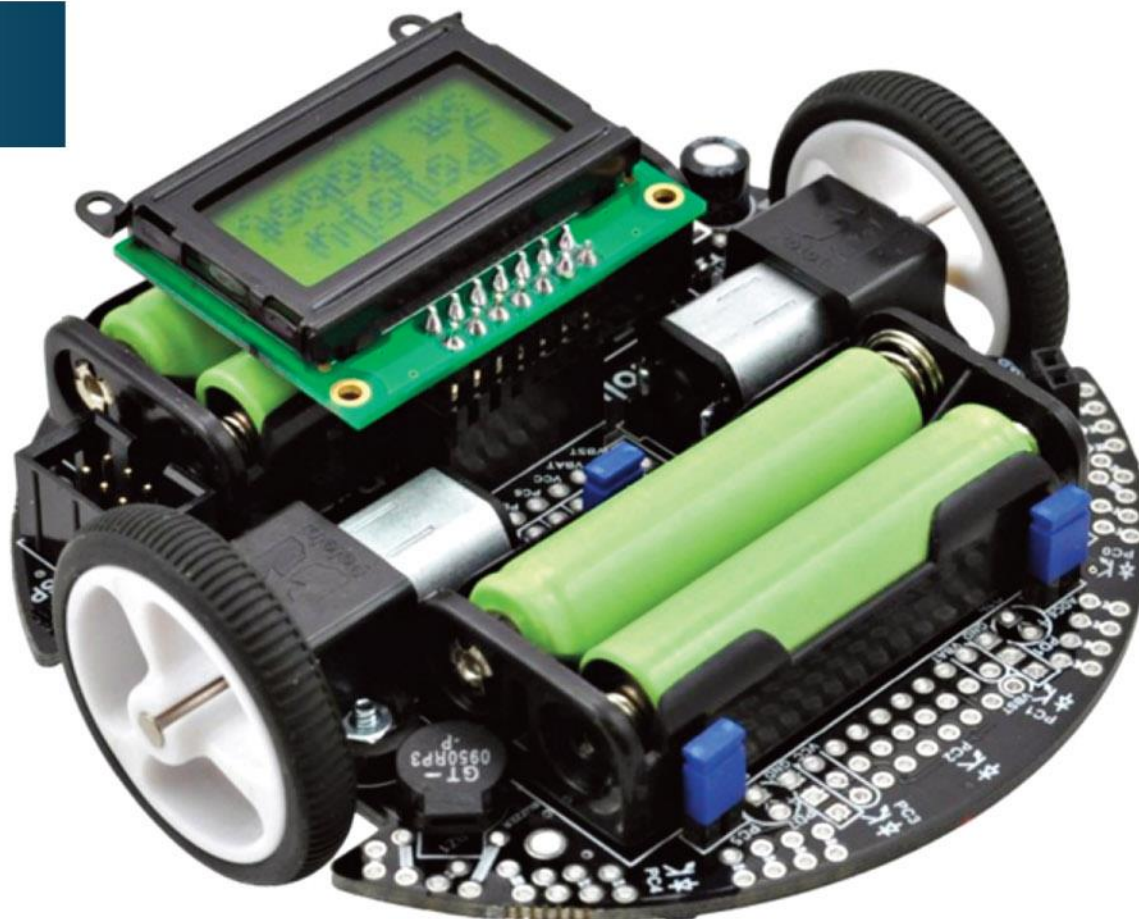


Parallax





Pololu 3pi





Bioloid

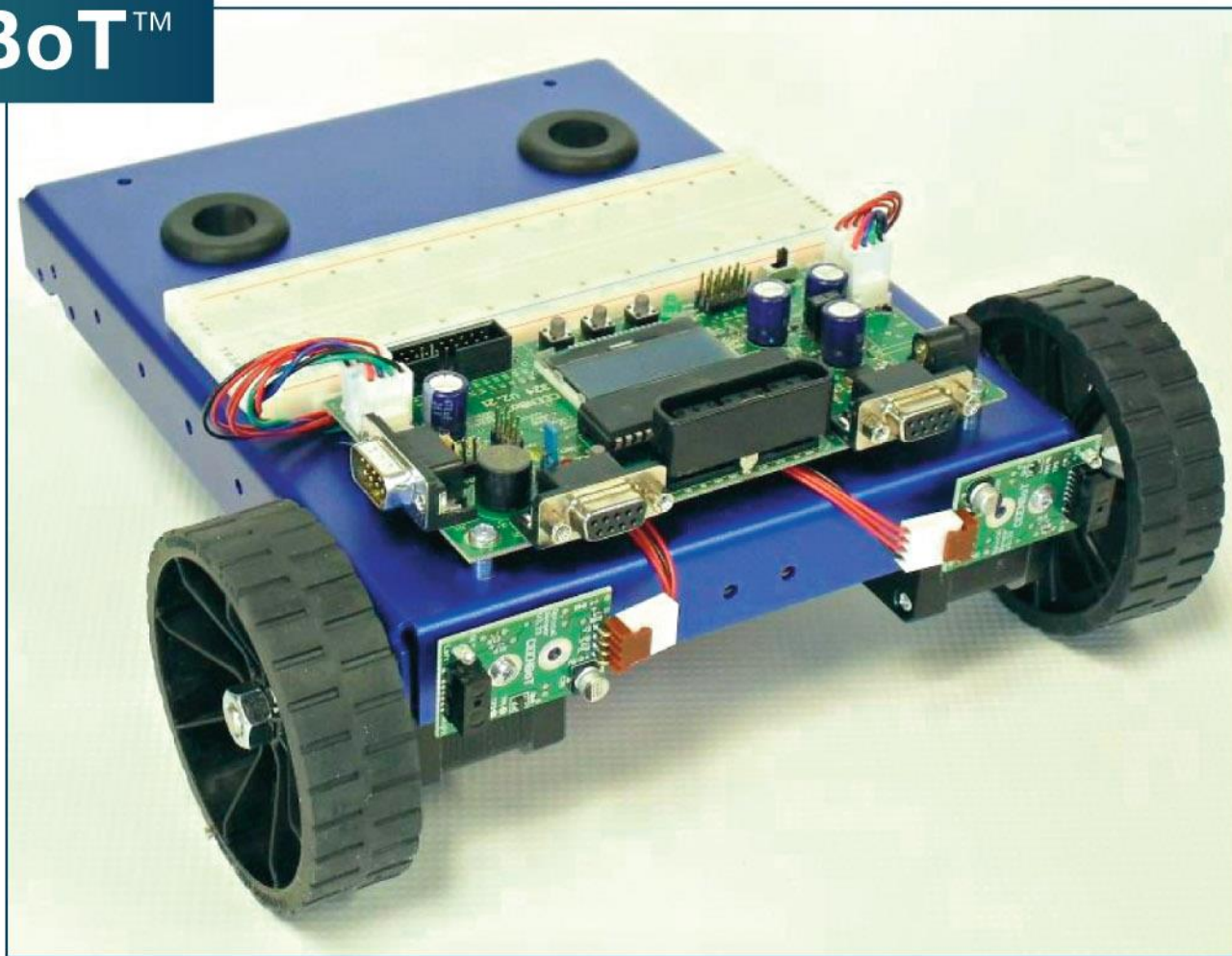




MODULE 1: **Comprehensive Robotics Overview**



CEENBoT™





Robotics for Real

Hands-on Demonstrations



4-H Robotics in Action

- What are your reactions?
- What did you see?
- What did you learn about 4-H Robotics?
- What are your initial thoughts about how you might include robotics in your program?





Clover Countdown

*Top 10 Reasons
4-H Educators
Will **Love** Robotics
Suggestions*



**Clover Countdown
Reason 10:**

**Everyone
likes to play
with robots.**

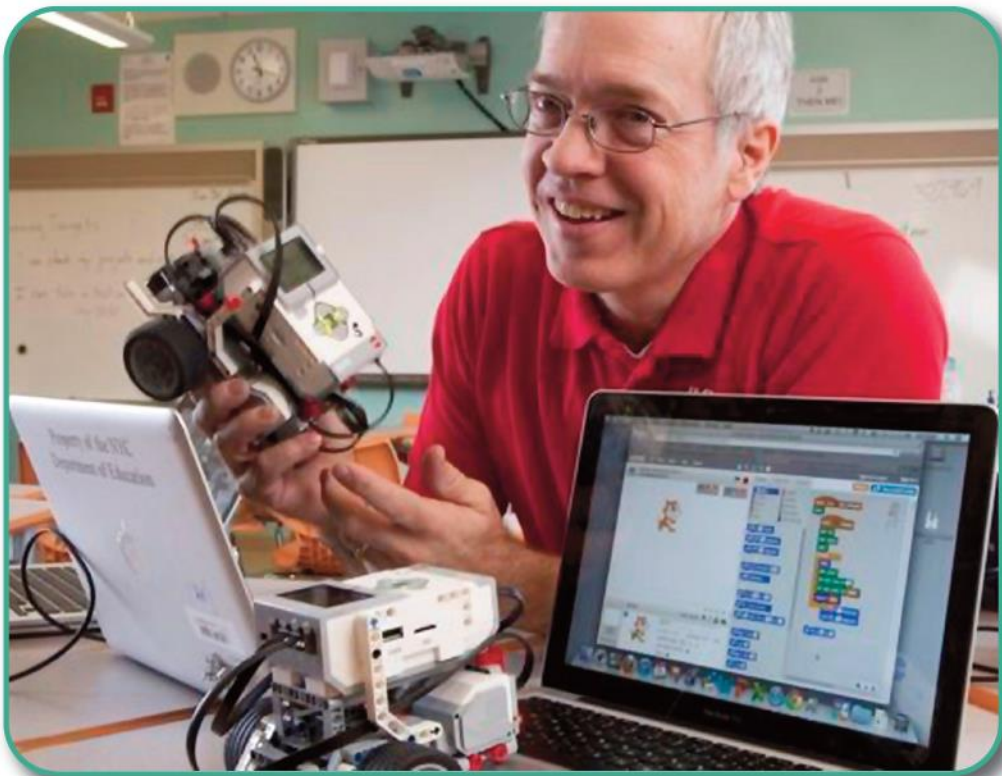


**Clover
Countdown
Reason 9:**

**Community
partners will be
anxious to join
your progress.**



**Clover
Countdown
Reason 8:**



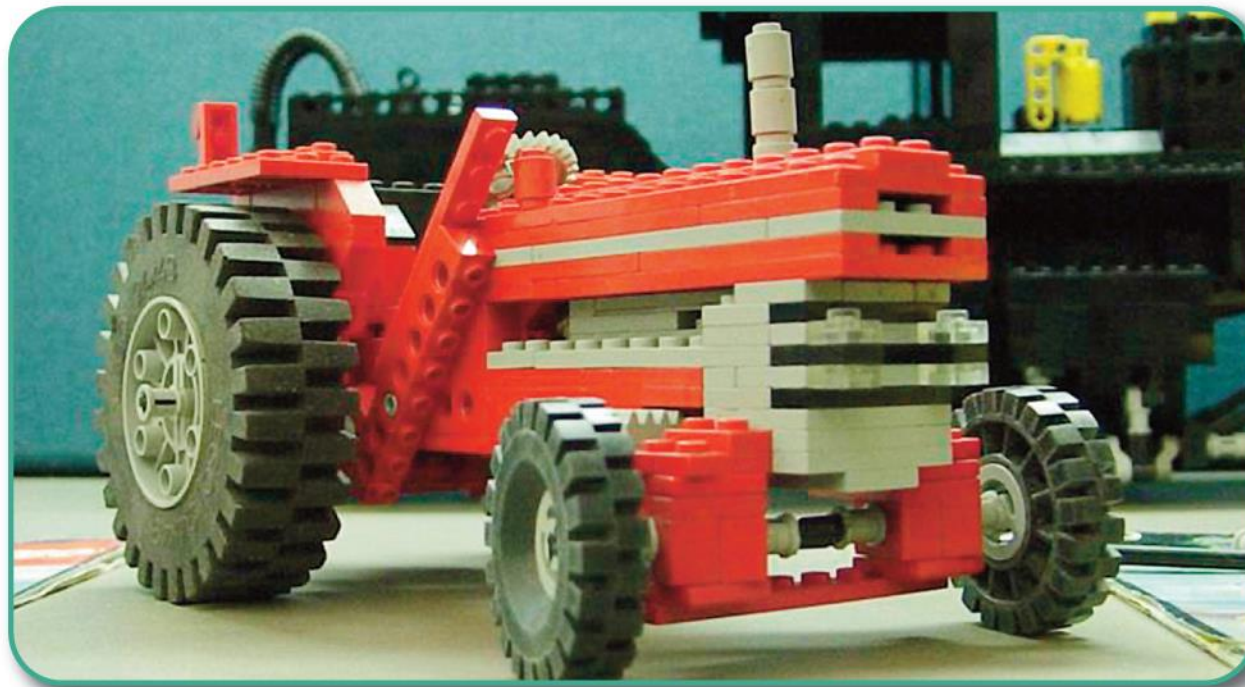
**Reenergize yourself
as a 4-H educator.**



Clover Countdown Reason 7:

**Science,
technology,
engineering,
and math
are fun.**





**Clover Countdown
Reason 6:**

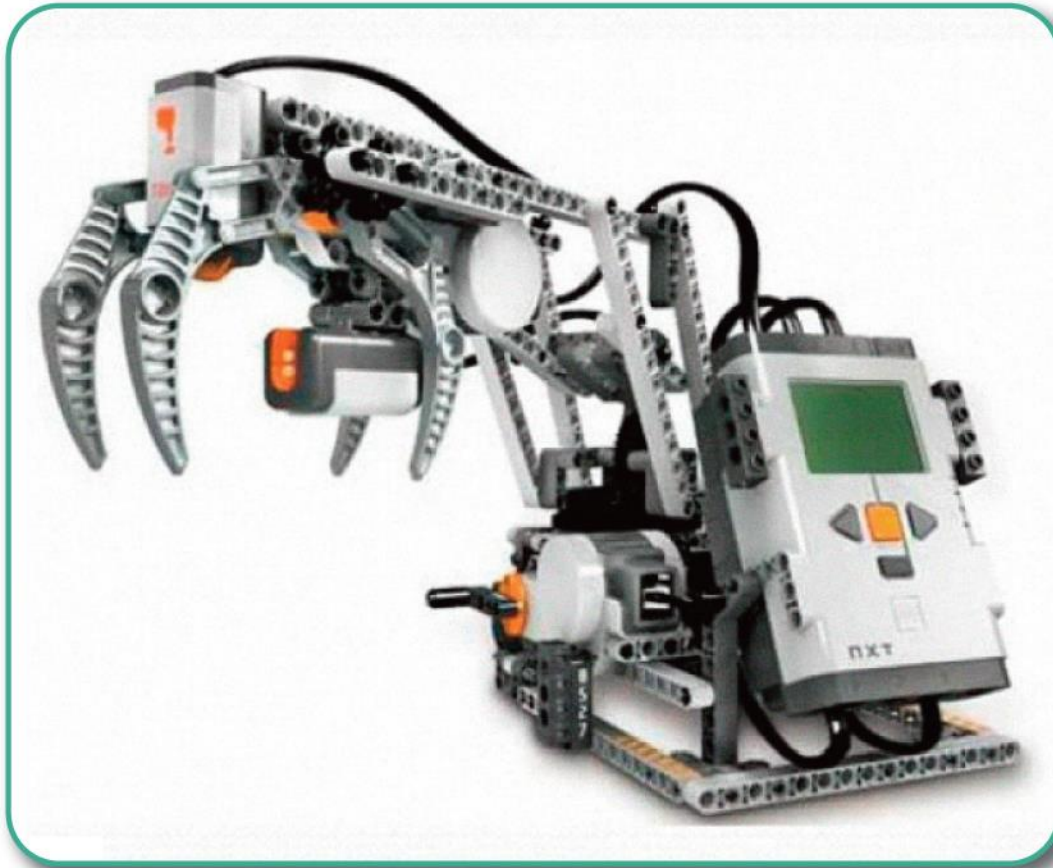
Living on a farm is optional.



**Clover
Countdown
Reason 5:**



**You don't outgrow robotics:
teen leadership opportunities**



**Clover
Countdown
Reason 4:**

**Workforce
readiness:
scientists
wanted!**



**Clover
Countdown
Reason 3:**

**What better way to get a rocket
scientist for a 4-H volunteer?**



**Clover
Countdown
Reason 2:**

**Funders will
be knocking
on your
door.**



MODULE 1: Comprehensive Robotics Overview



Clover Countdown Reason 1:



Kids learn a lot – and love doing it!



Positive Youth Development through Robotics

Case Studies

*What will be your
success story?*



Closing and Questions

- Learned about a variety of robotics curriculums and kits available
- Experienced demonstrations of various robotics kits
- Discussed the ways robotics can be a part of an effective and dynamic 4-H program





4-H
ROBOTICS