

# West Tennessee STEM Hub

## Vex and FLL Training Workshop July 15<sup>th</sup> -16<sup>th</sup>

9:00 AM-3:00 PM

### Day 1 Morning Session:

9:00 AM -9:15 AM: Introductions

9:15 AM – 11:30 AM:

- Overview of Robotics,
- What is Vex/FLL?
- How competitions work (State vs. Worlds)
- Best option for your school (Pros and Cons of both)
- What's the point?

11:30 AM – 1:00 PM: Lunch on your own. The last 30 min of lunch (12:30 PM – 1:00 PM) is an open Q&A with our FLL Professional, Professor Kohn. This is completely optional.

### Day 1 Afternoon Session:

Group will be split according to robotics platform preference.

FLL:	Vex: Driver Control Day
<ul style="list-style-type: none"><li>• 1:00 PM-1:10PM What's in the box?</li><li>• 1:10 PM-1:40PM Assemble Robot</li><li>• 1:40PM-2:15PM eV3lessons.com (Basic robot locomotion and navigation as well as a small lesson on sensors)</li><li>• 2:15PM-3:00PM Challenge #1: Program a robot to stop when it is within 20cm of an object (wall) and turn around and travel the opposite direction</li></ul>	<ul style="list-style-type: none"><li>• 1:00PM-1:10PM What's in the Box?</li><li>• 1:10PM-1:45PM Assemble Robot</li><li>• 1:45PM-2:15PM Carnegie Mellon Coding modules (Basic robot locomotion and navigation as well as a small lesson on sensors)</li><li>• 2:15PM-3:00PM Challenge #1: Program controller. Navigate robot through maze</li></ul>

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## Day 2 Morning Session:

9:00 AM -9:15 AM: Team Building Exercise

9:15 AM – 11:30 AM:

- Grants (When are they available and how to find them)
- Resources and finding specifics on the website
- How to get children interested
- Developing a curriculum around Robotics
- Creating a functional team environment (Do's and Don'ts of coaching)

11:30 AM – 1:00 PM: Lunch on your own. The last 30 min of lunch (12:30 PM – 1:00 PM) is an open Q&A with our FLL Professional, Professor Kohn. This is completely optional.

## Day 2 Afternoon Session:

Group will be split according to robotics platform preference.

<b>FLL:</b>	<b>Vex: Autonomous</b>
<ul style="list-style-type: none"><li>• 1:00PM-2:00PM e3Lessons.com In depth use of sensors</li><li>• Challenge #2: Develop code and instruction for robot to navigate through a maze</li></ul>	<ul style="list-style-type: none"><li>• 1:00PM-2:00PM Carnegie Mellon Coding modules (Autonomous robot locomotion and navigation)</li><li>• Challenge #2: Develop code and instruction for robot to navigate through a maze without driver control</li></ul>