



## Equipment Needs for SkillsUSA Mobile Robotics Competition

Teams will be playing the [2018-19 VRC Turning Point Robot Skills Challenge](#) and will be judged based on their performance score and Engineering Notebook. Teams will not be playing the 2 vs. 2 aspect of the game.

### Equipment Needs for the Event Organizers

The competition will be run on a standard VEX Robotics Competition field, using the game elements from the current season. No field electronics will be required.

#### Needed from year-to-year:

<a href="#">Competition Field Perimeter Kit</a>	(P/N 278-1501)
<a href="#">Competition Field Tile Kit</a>	(P/N 278-1502)
<a href="#">On-Field Robot Expansion Sizing Tool</a>	(P/N 276-5942)
<a href="#">On Field Robot Sizing Tool</a>	(P/N 276-2086)

#### 2018-19 year specific:

[VRC Turning Point – Full Field & Game Element Kit](#) (comes in 5 boxes)

2x VRC Turning Point – Game Elements Kit	(P/N 276-5678)
1x VRC Turning Point – Field Element Kit 1	(P/N 276-5679)
1x VRC Turning Point – Field Element Kit 2	(P/N 276-6115)
1x VRC Turning Point – Pipe Kit	(P/N 276-5681)

*Note: This is the current game used for the VEX Robotics Competition (VRC). If you are unable to purchase a field and/or the field and game elements, you may be able to borrow from a team or Event Partner who participates in VRC and lives in your area.*

## Equipment Needs for the Teams Competing

Competitors will be required to purchase their own robot kits for competition. In 2018-19 and the foreseeable future, teams will have two (2) options as listed below. They must choose one or the other and may not make a combination of the two. The parts listed are the maximum number of parts that can be used on the robot. Spare batteries and rubber bands are expected, but only the amount in the kit(s) can be used on the robot when on the field competing. Teams may choose to not use or purchase all kits, or all components listed. Teams will be able to reuse parts of the kit year-after-year, replacing parts only as needed.

Teams may program the robots in any programming language that suits their needs. Teams will not be judged on which language is chosen, but rather, will be judged on how the robot performs. Some programming options can be found [here](#).

### Option 1: VEX EDR V5

[V5 Competition Super Kit](#) (P/N 276-6650)

And the following:

Unlimited [V5 Smart Cables](#) for connecting motors and sensors only

Unlimited [Zip Ties](#)

### Option 2: VEX EDR Cortex (V4)

[Classroom and Competition Super Kit](#) (P/N 276-3000)

And the following:

4x [2-Wire Motor 393](#) (P/N 276-2177)

4x [Motor Controller 29](#) (P/N 276-2193)

1x [393 Motor Turbo Gear Set 4-pack](#) (P/N 276-3527)

1x [7.2V Robot Battery NiMH 3000mHh](#) (P/N 276-1491)

1x [Power Expander](#) (P/N 276-2271)

1x Standard 9V battery used as the backup battery for the VEXnet System

Unlimited [Extension Cables](#) for connecting motors and sensors only

Unlimited [Zip Ties](#)

*Note: Additional batteries and chargers are recommended so that teams are charging spare batteries while the robot is running. Parts may not be modified except for cutting and bending metal.*