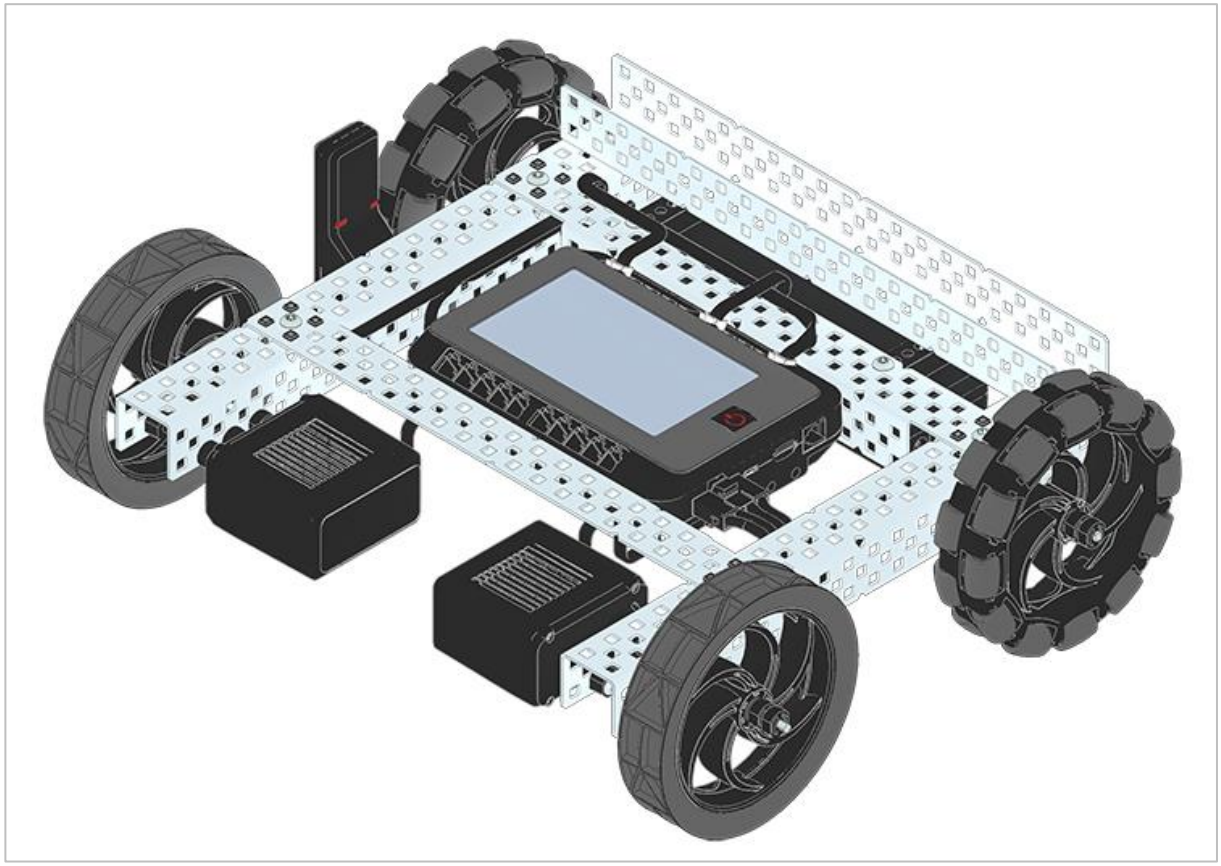
The Completed Look of the Build



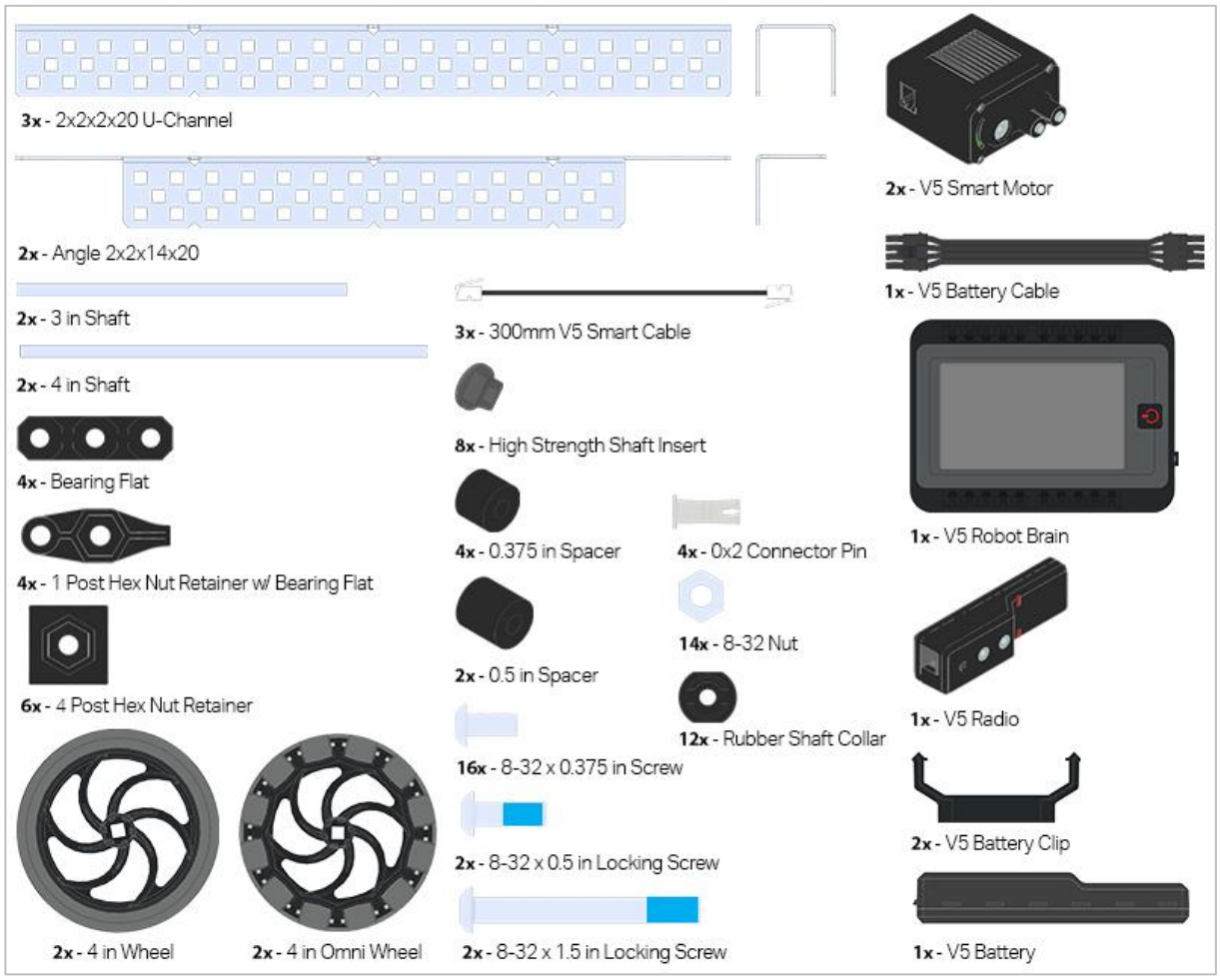
Completed VEX EDR Speed Build

This robot is designed so that it can be built quickly and driven around either autonomously or with the V5 Controller.

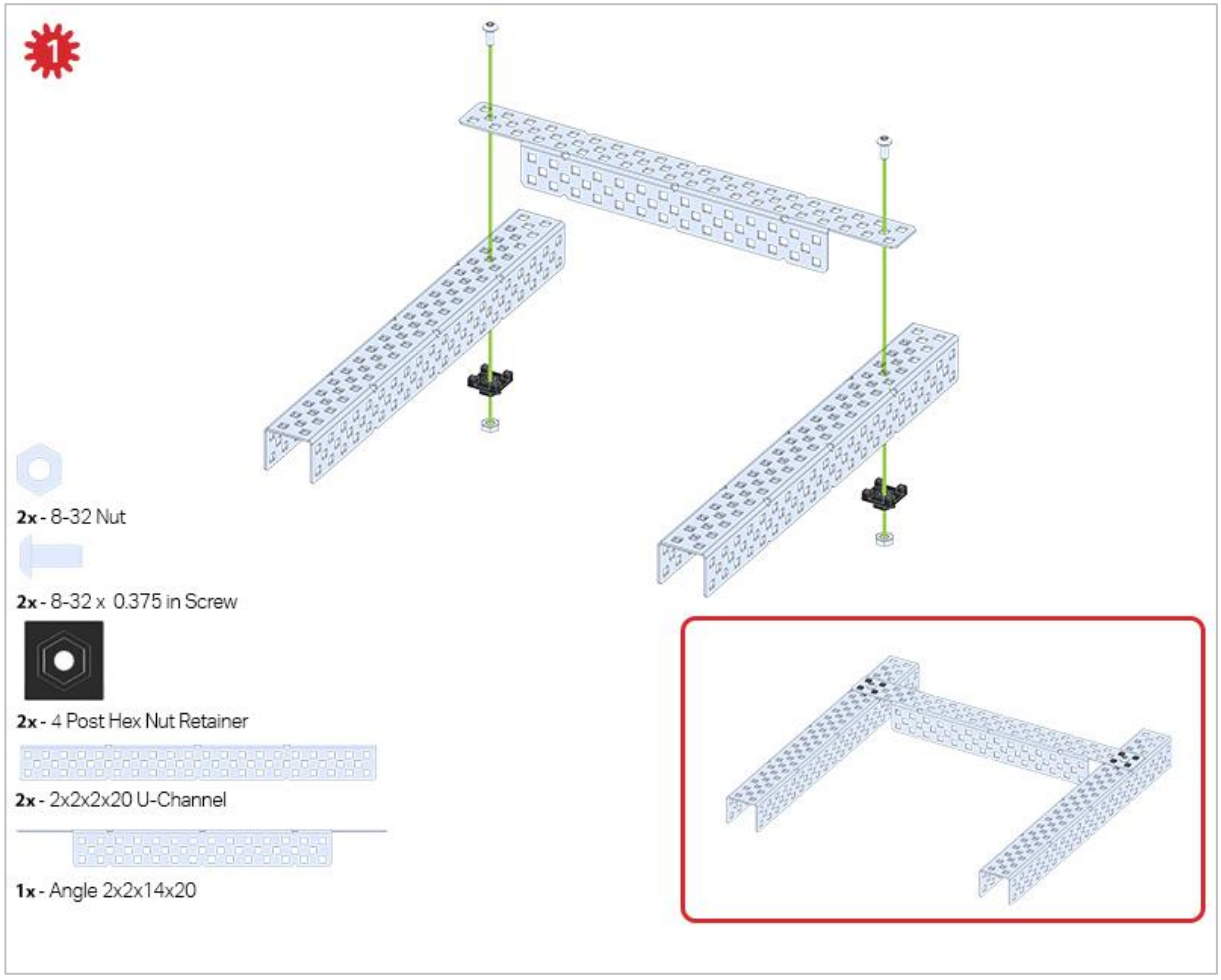
Parts Needed

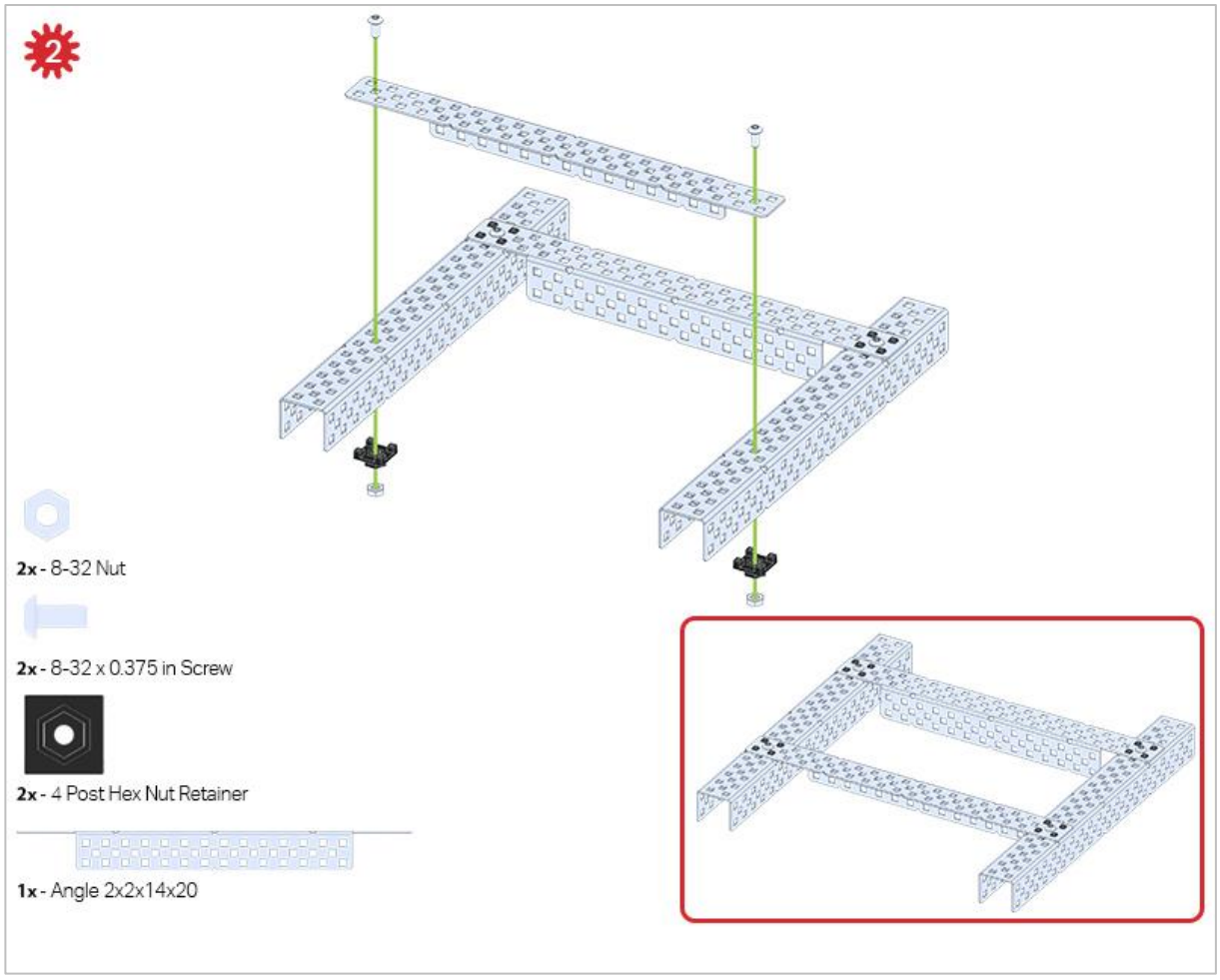
Can be built with:

- VEX EDR V5 Classroom Starter Kit

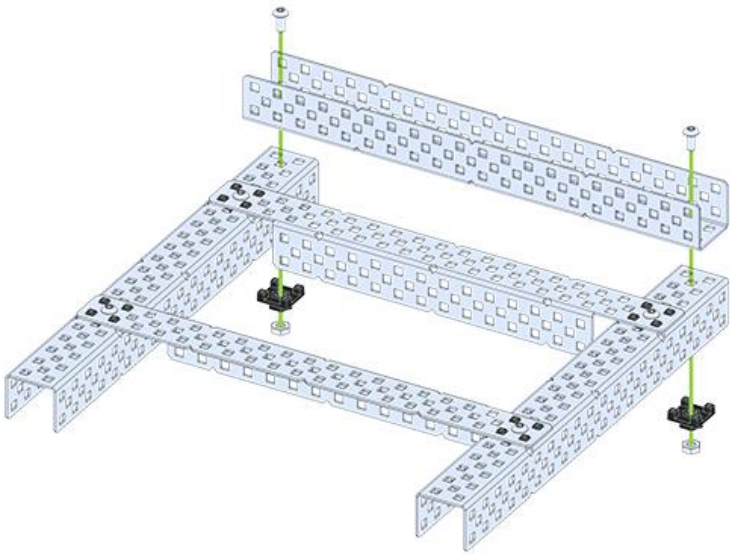


Build Instructions




2
2x - 8-32 Nut
2x - 8-32 x 0.375 in Screw
2x - 4 Post Hex Nut Retainer
1x - Angle 2x2x14x20

3

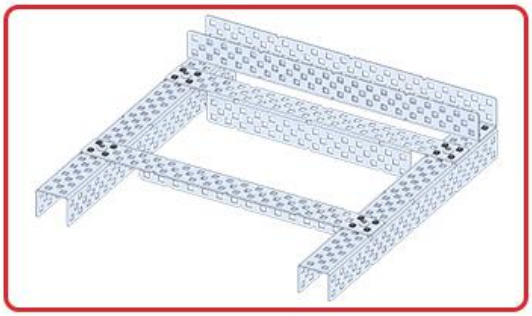


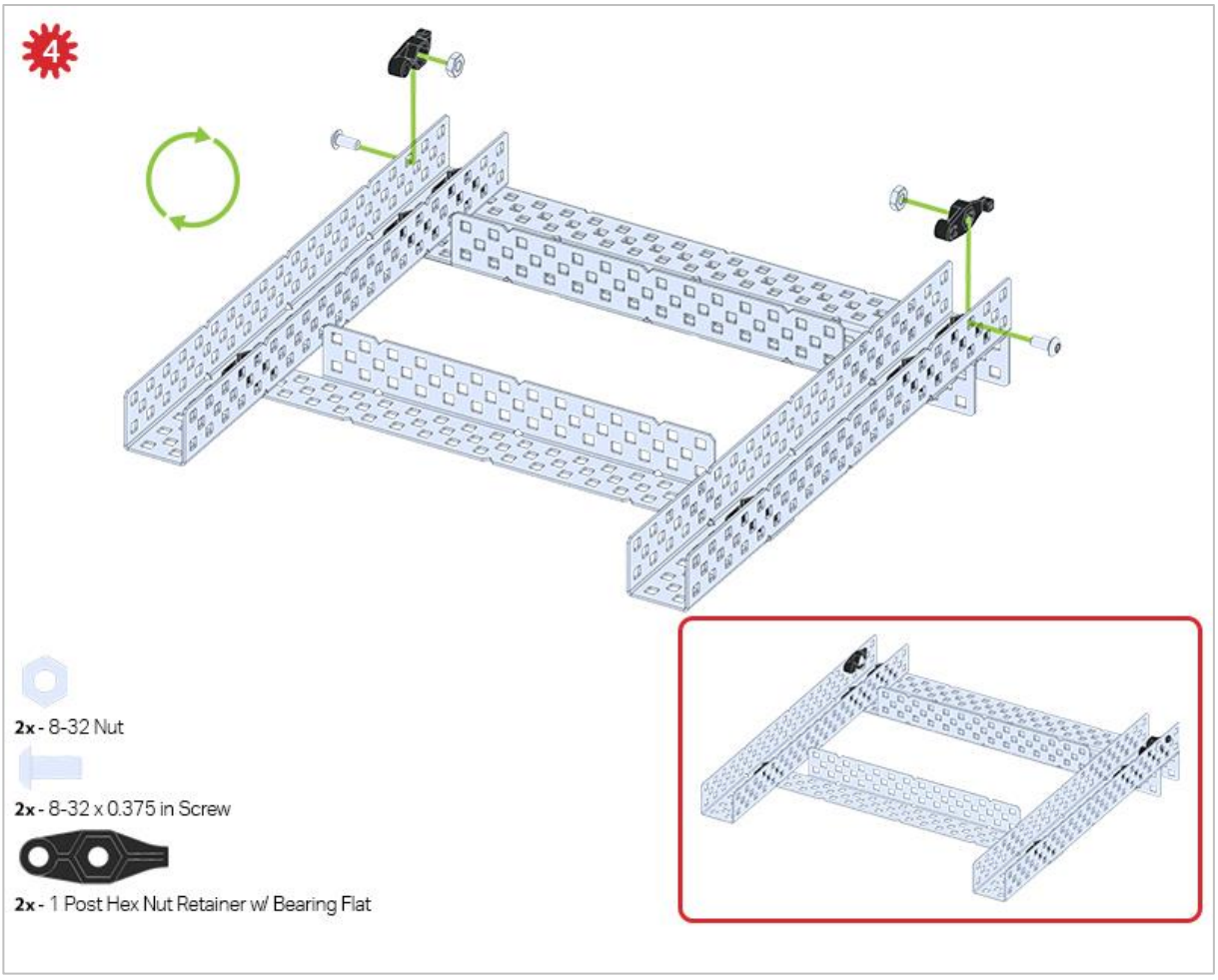
2x - 8-32 Nut

2x - 8-32 x 0.375 in Screw

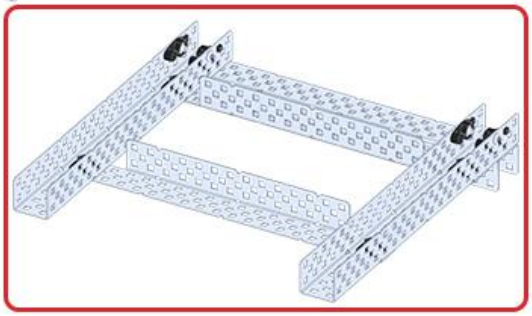
2x - 4 Post Hex Nut Retainer

1x - 2x2x2x20 U-Channel




4
2x - 8-32 Nut
2x - 8-32 x 0.375 in Screw
2x - 1 Post Hex Nut Retainer w/ Bearing Flat

5

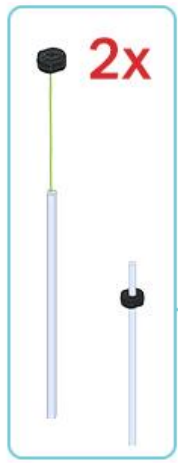


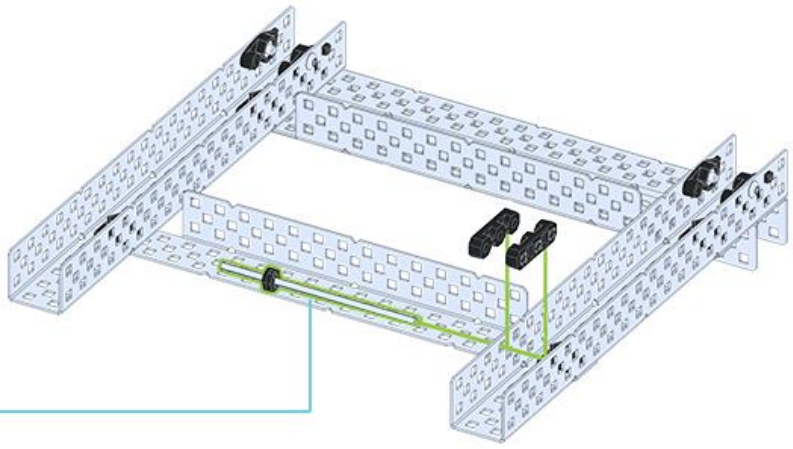
2x - 8-32 Nut

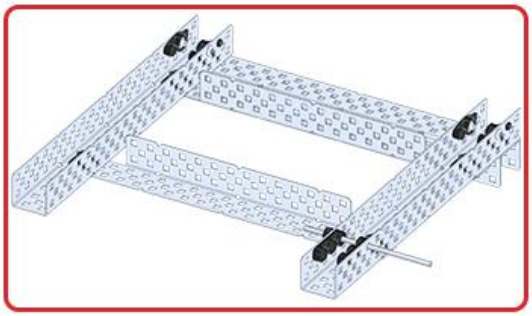
2x - 8-32 x 0.375 in Screw

2x - 1 Post Hex Nut Retainer w/ Bearing Flat

6





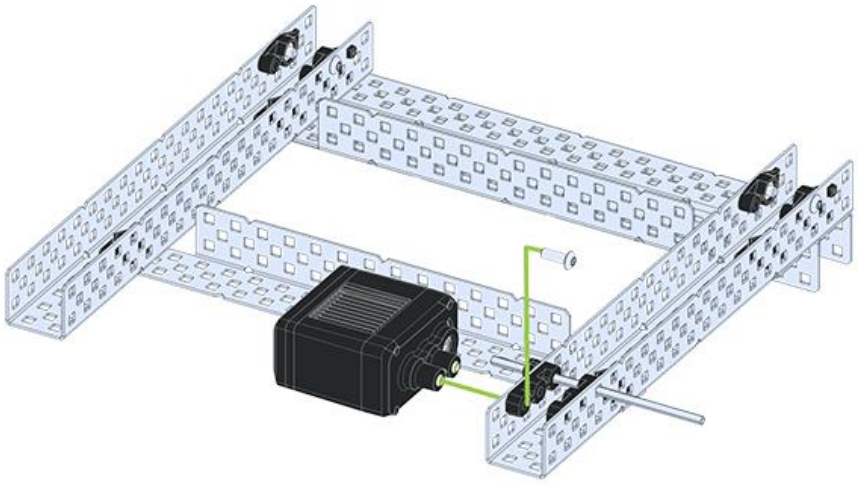


2x - Rubber Shaft Collar

2x - Bearing Flat

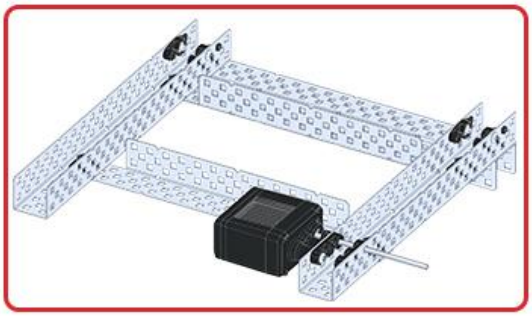
2x - 4 in Shaft

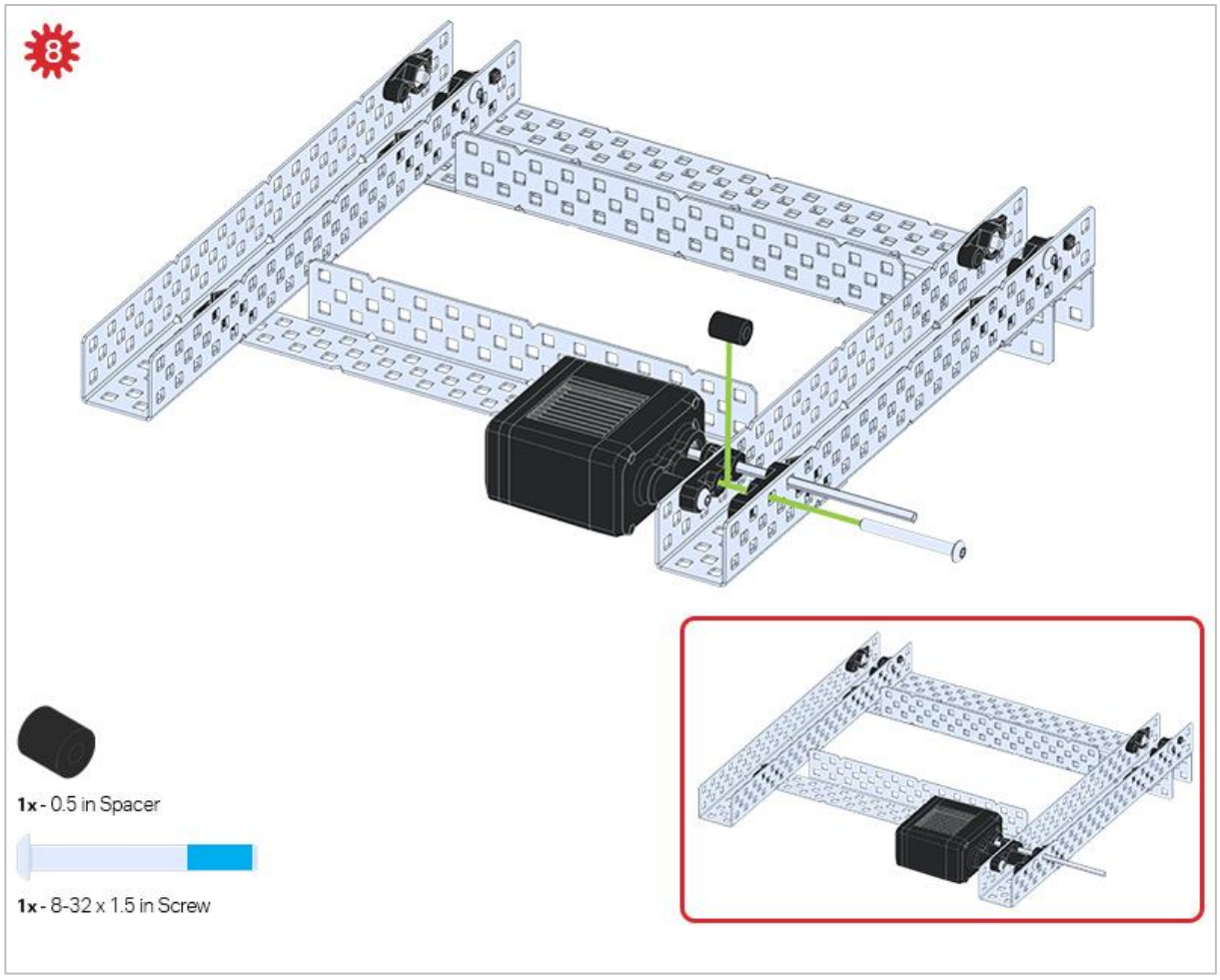
7

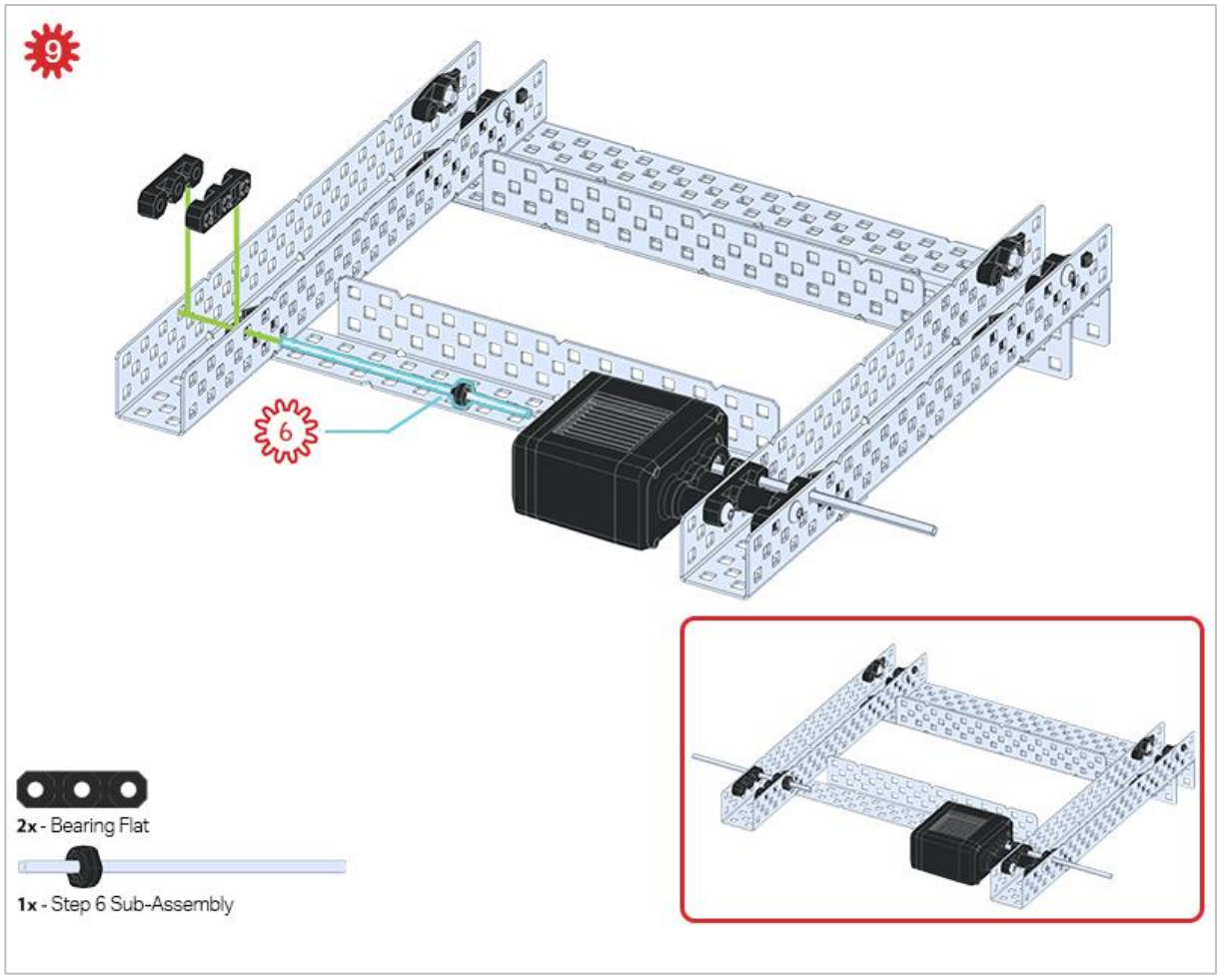


1x - 8-32 x 0.5 in Screw

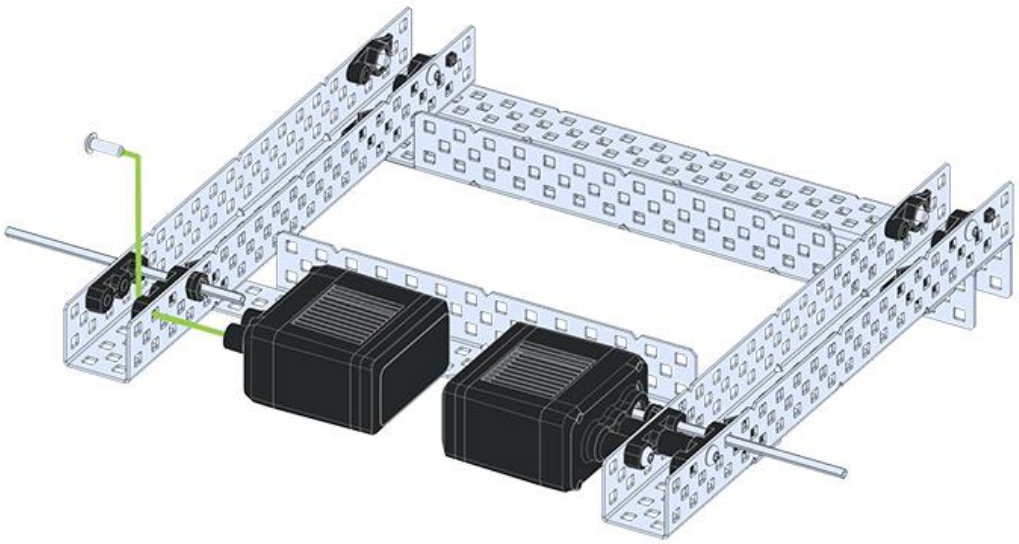
1x - V5 Smart Motor




8
1x - 0.5 in Spacer
1x - 8-32 x 1.5 in Screw

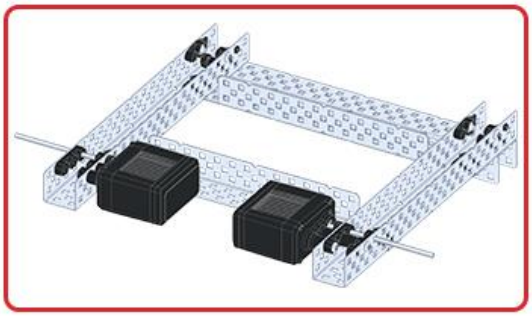

9
6
2x - Bearing Flat
1x - Step 6 Sub-Assembly

10

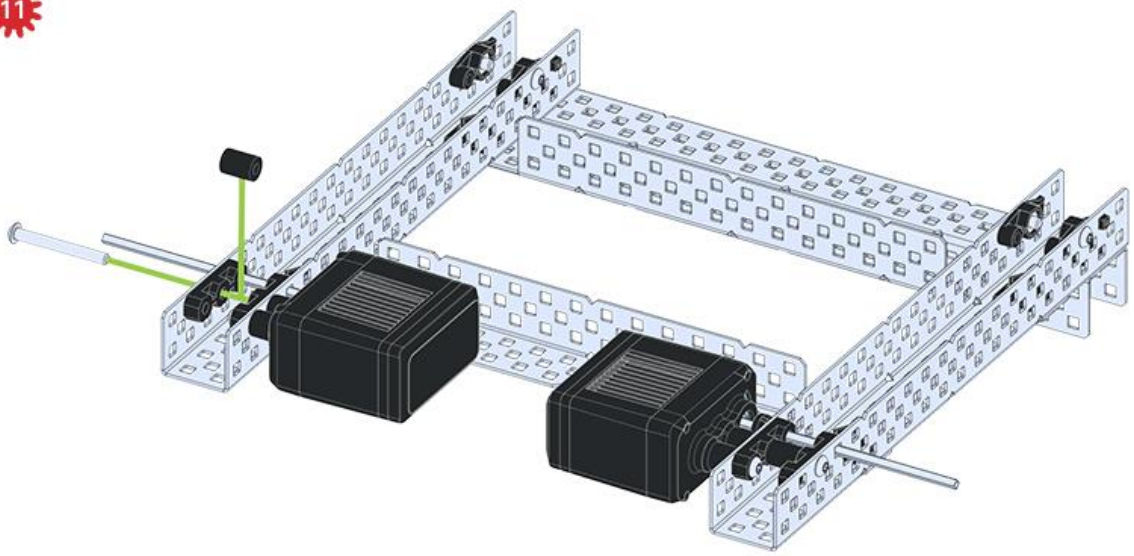


1x - 8-32 x 0.5 in Screw

1x - V5 Smart Motor

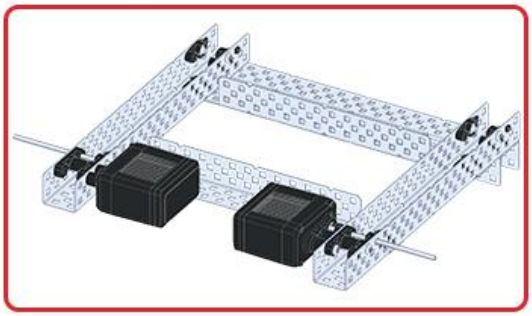


11

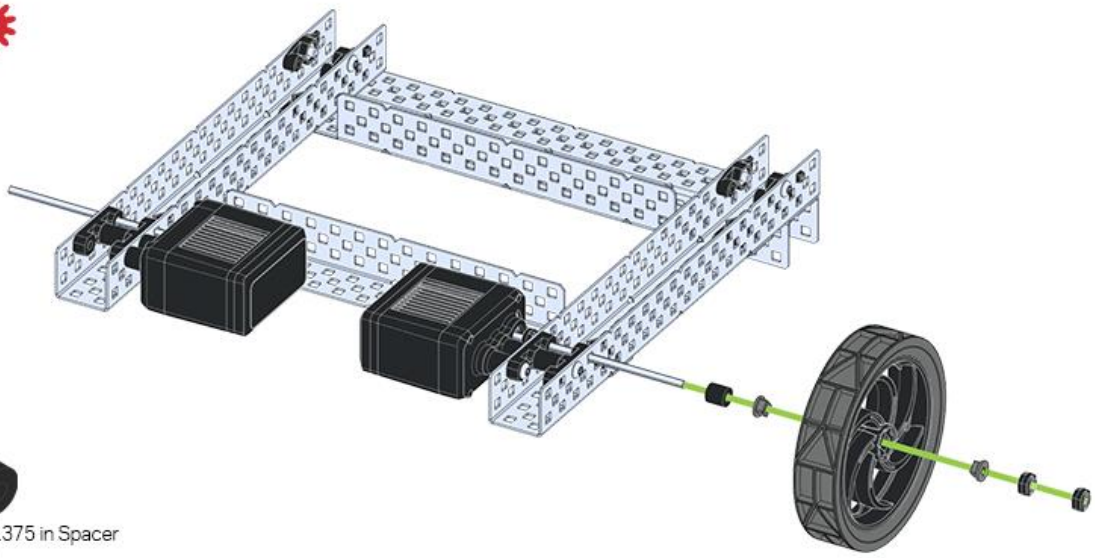


1x - 0.5 in Spacer

1x - 8-32 x 1.5 in Screw



12

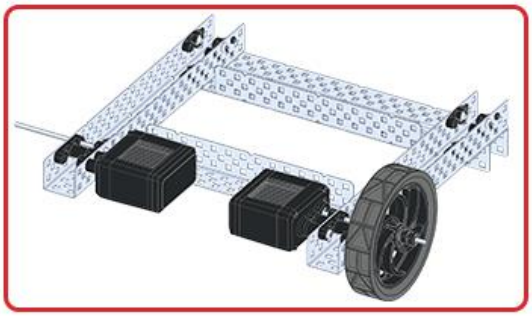


1x - 0.375 in Spacer

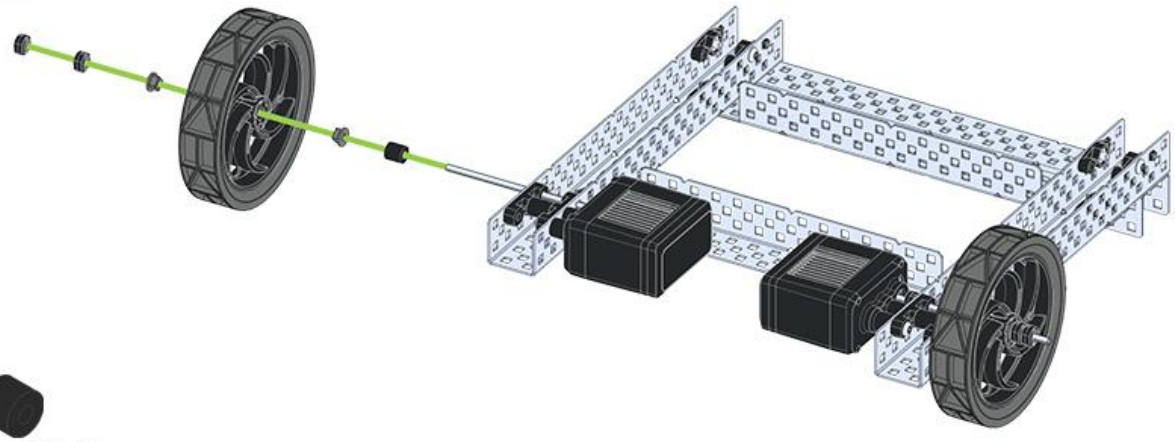
2x - Rubber Shaft Collar

1x - 4 in Wheel

2x - High Strength Shaft Insert



13

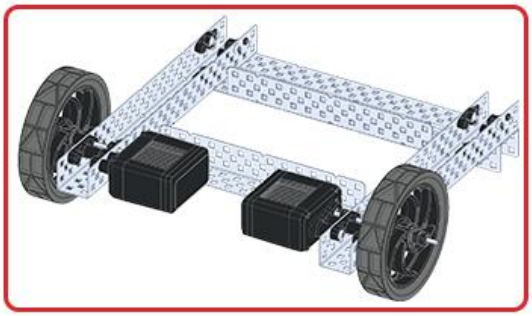


1x - 0.375 in Spacer

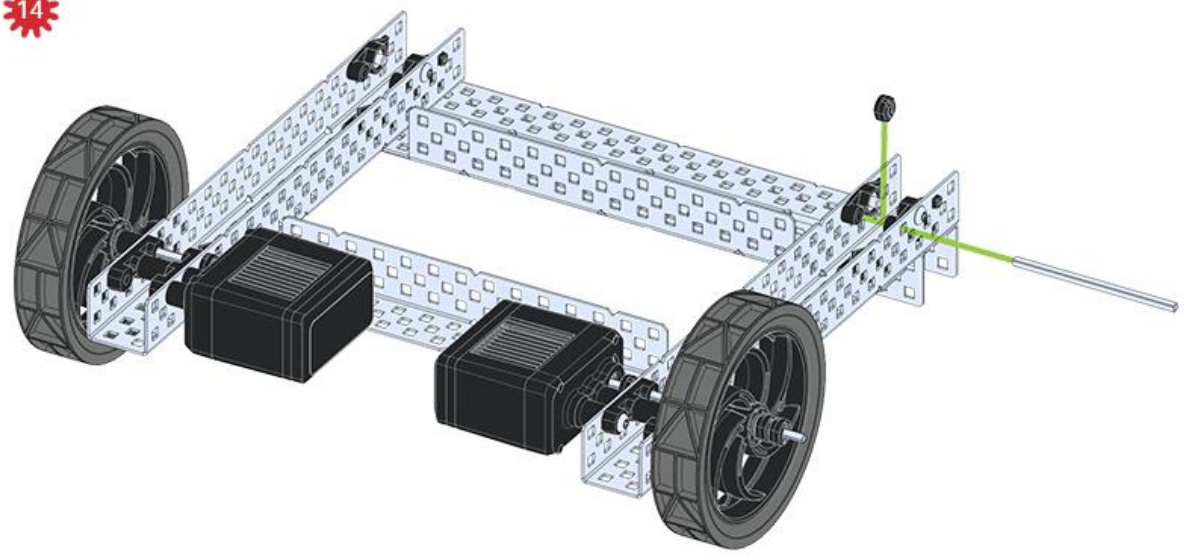
2x - Rubber Shaft Collar

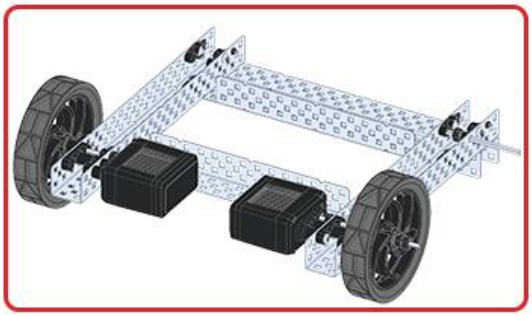
1x - 4 in Wheel

2x - High Strength Shaft Insert



14

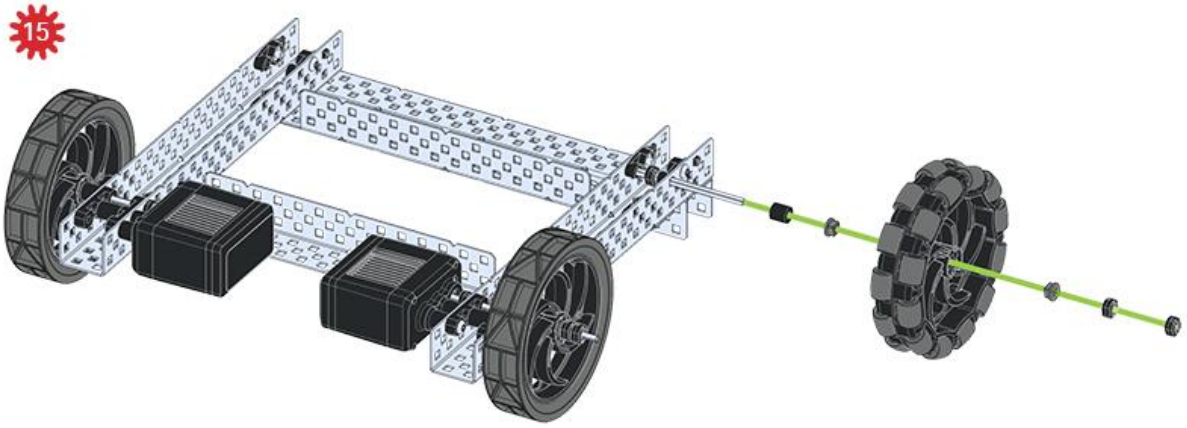




1x - Rubber Shaft Collar

1x - 3 in Shaft

15

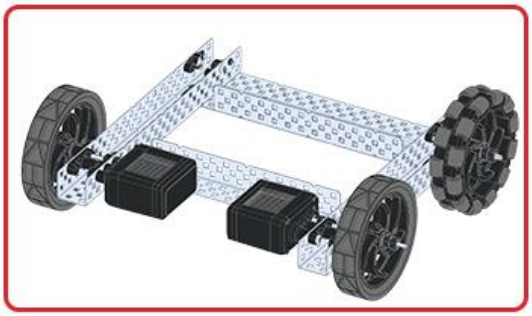


1x - 0.375 in Spacer

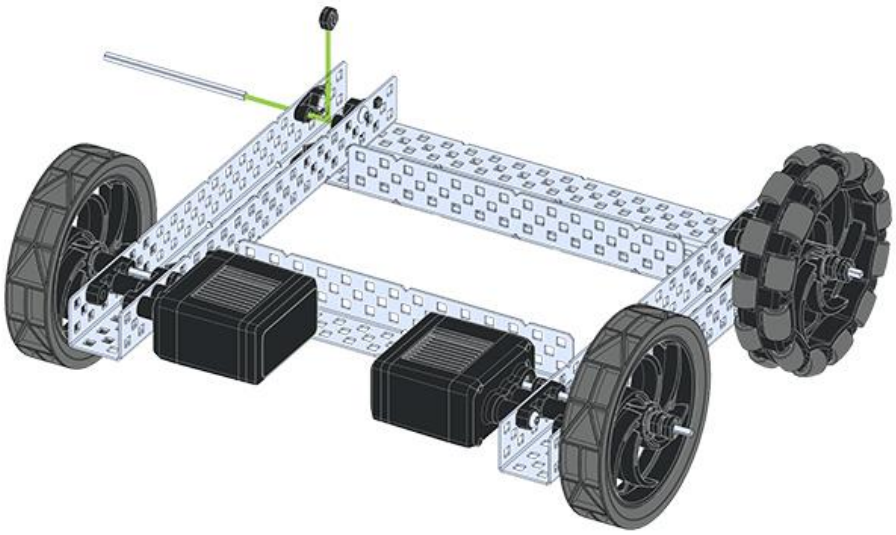
2x - Rubber Shaft Collar

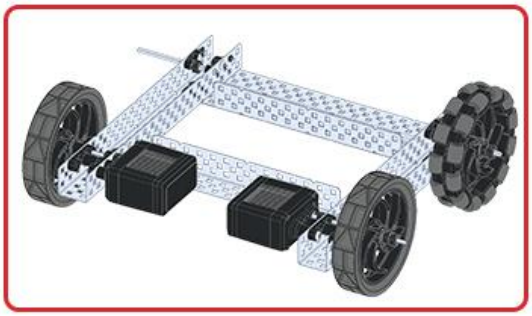
1x - 4 in Omni Wheel

2x - High Strength Shaft Insert



16

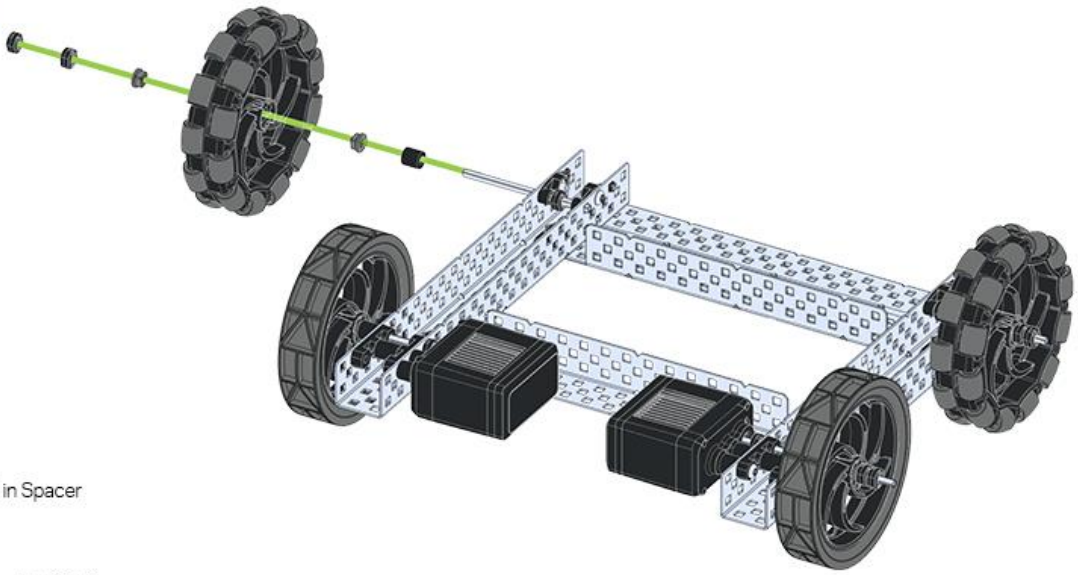




1x - Rubber Shaft Collar

1x - 3 in Shaft

17

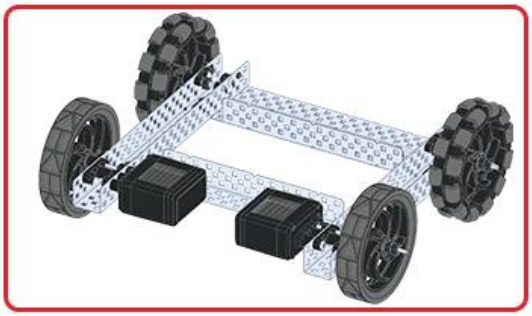


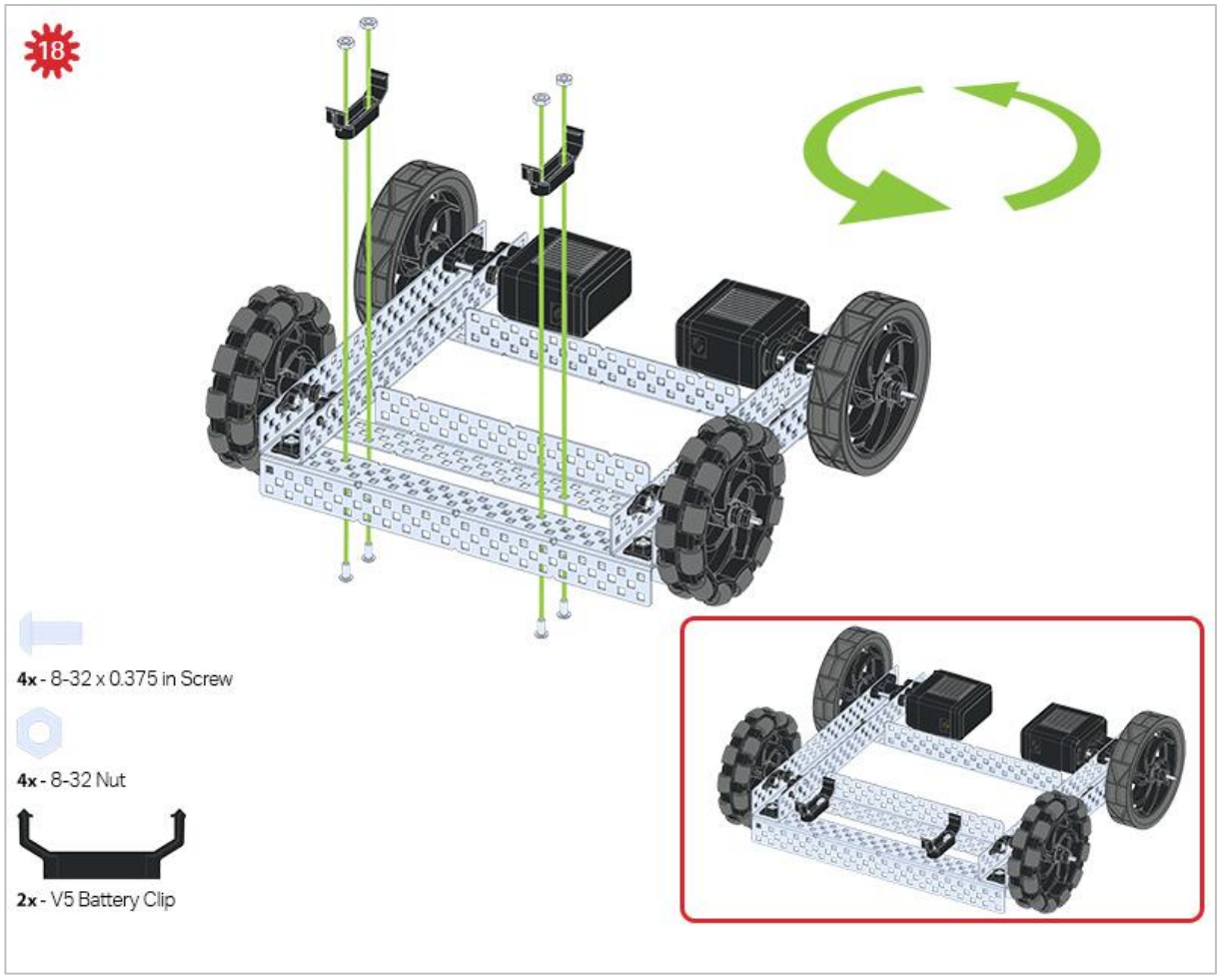
1x - 0.375 in Spacer

2x - Rubber Shaft Collar

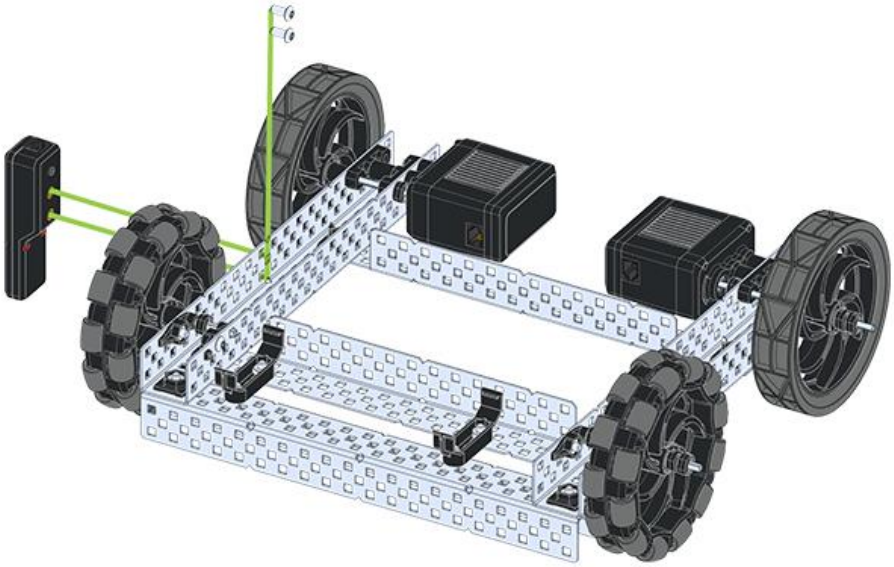
1x - 4 in Omni Wheel

2x - High Strength Shaft Insert



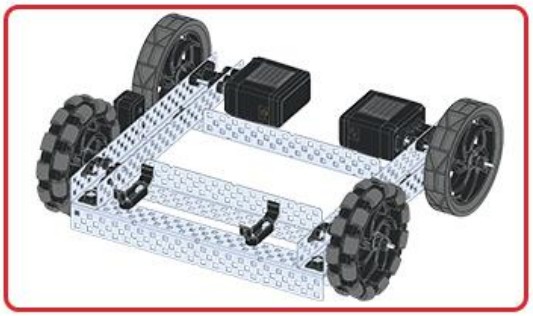

18
4x - 8-32 x 0.375 in Screw
4x - 8-32 Nut
2x - V5 Battery Clip

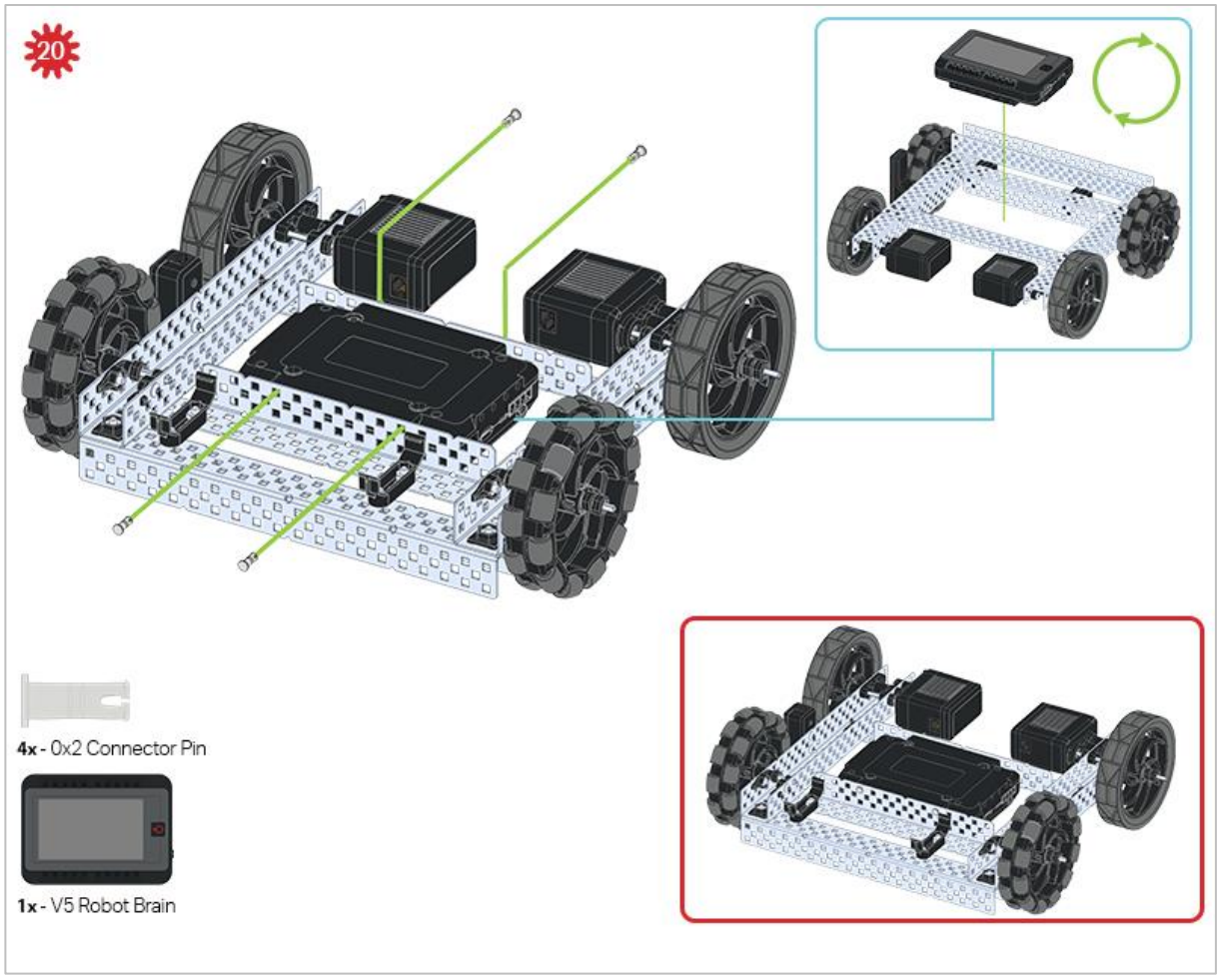
19



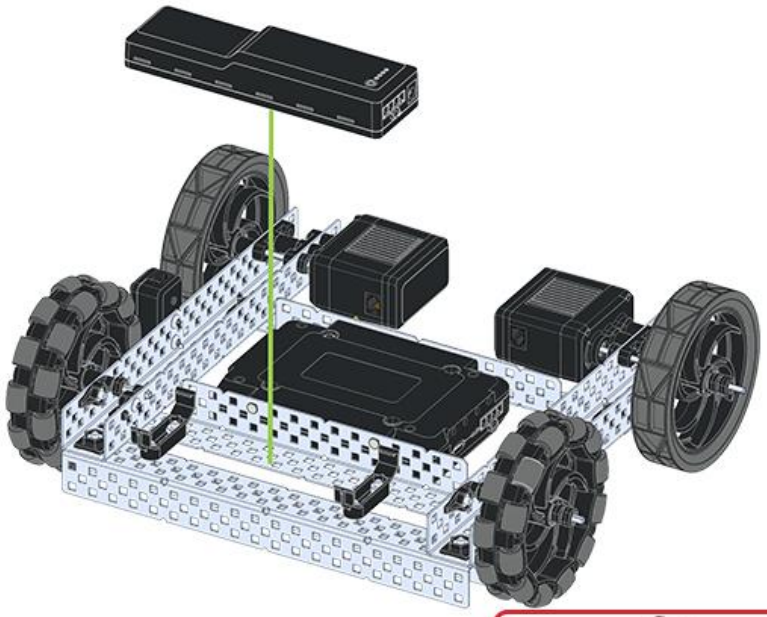
1x - V5 Radio

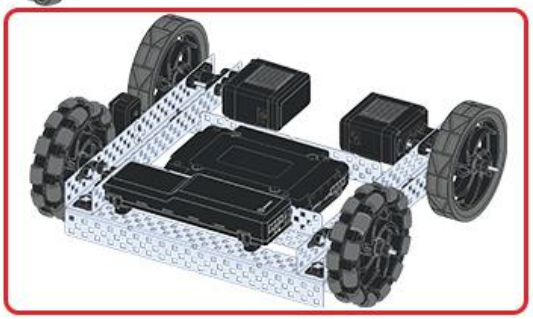
2x - 8-32 x 0.375 in Screw



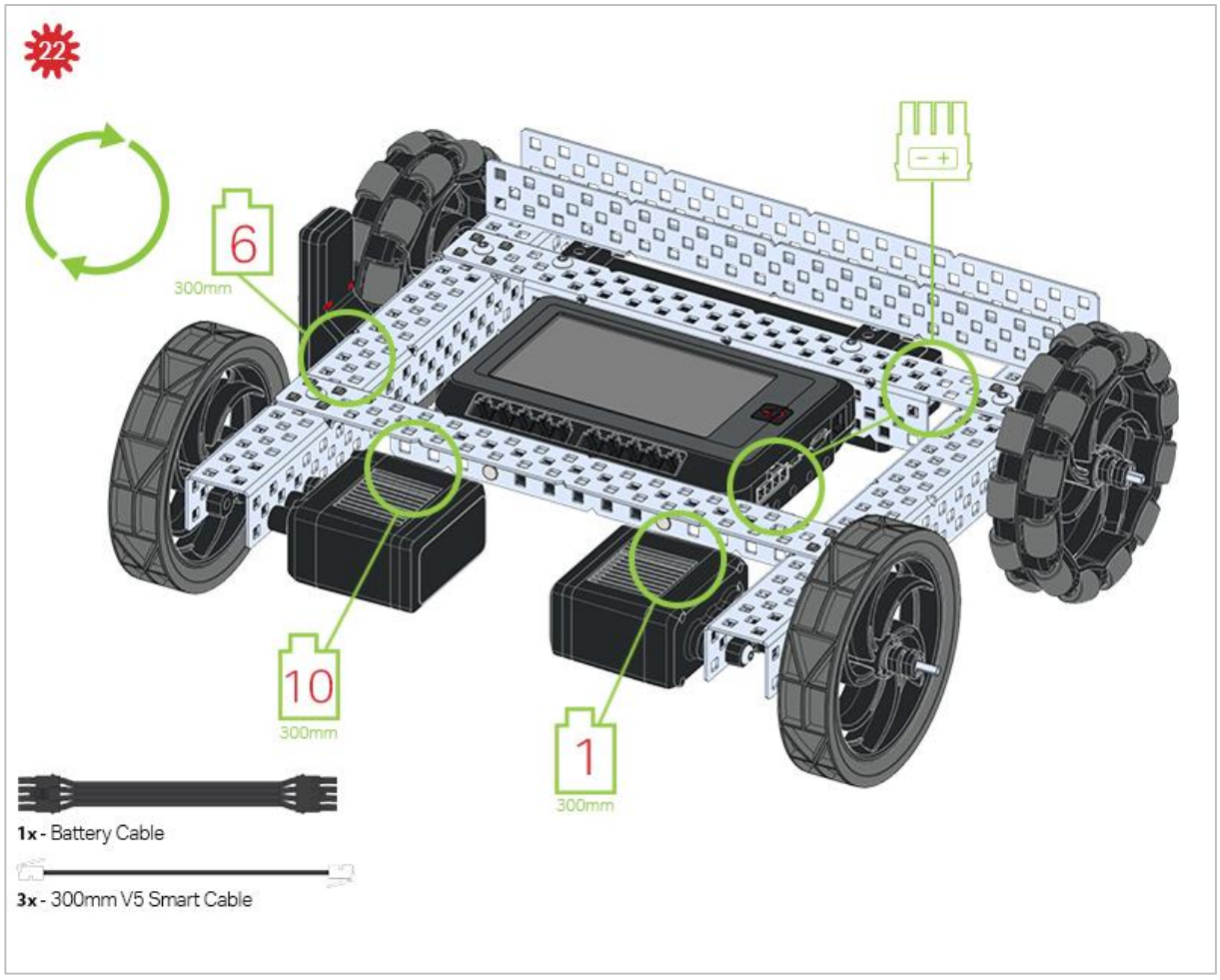

20
4x - 0x2 Connector Pin
1x - V5 Robot Brain

21





1x - V5 Robot Battery



Build Instruction Tips

Check the Appendix for info on how to use the new Hex Nut Retainers.

Step 4: The green icon indicates that the build needs to be flipped over (upside down).

- Step 6: Only one of the two sub-assemblies made in this step is used right now. The other will be used later in step 9.
- Step 7: Make sure your Smart Motors are oriented in the correct direction (screw holes facing the outside of the build and the shaft hole towards the inside).
- Step 10: Make sure your Smart Motors are oriented in the correct direction (screw holes facing the outside of the build and the shaft hole towards the inside).
- Step 18: The green icon indicates that the build needs to be rotated (180 degrees).
- Step 20: The blue call out shows what the orientation of the Robot Brain should be if the build were flipped right side up. Make sure the 3 wire ports on the Robot Brain are facing the V5 Radio!

- Step 22: The green call outs indicate which port on the Robot Brain to plug each device into using their respective cable.