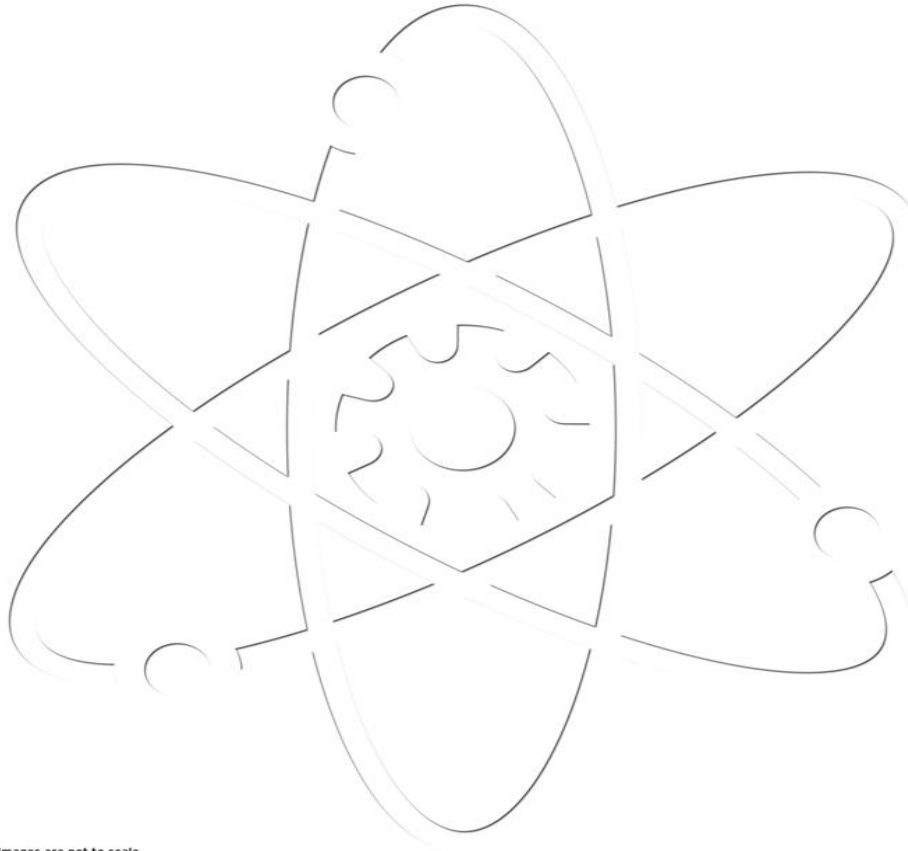


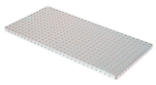
























VEX Gateway to Technology Kit
(270-1920)



*Images are not to scale

Picture	Part Number	Description	Quantity
	275-1030	3/32" Allen Wrench (8-pack): High Strength Allen Wrench 3/32" for the serious VEX builder. Fits the 8-32 screws.	1
	275-1031	5/64" Allen Wrench (8-pack): High Strength Allen Wrench 5/64" for the serious VEX builder. Fits the 6-32 screws and shaft collars.	1
	276-1341	Base Plate Pack: VEX Base Plates are designed to serve as a foundation for a variety of robotic applications. Use them to create a large stationary robotic arm, or interlock them to build larger manufacturing type systems. These pieces can also be used as large structural pieces in other robotic applications.	1
	276-1403	USB A-A Tether Cable, 6' (1.8m): Cable for connecting VEXnet components to sync and run in tether mode	2
	276-1424	3-Wire PWM Cables (Large Bundle): Are used to extend the length of a 3-wire cable such that a motor/servo or sensor can be farther from the VEX Microcontroller. "Y"-cables allow 2 motors/servos to be driven by a single microcontroller output.	1
	276-1456	7.2V Robot Battery NiMH 2000mAh: Battery provides a rechargeable power source for use with your VEX robots	2
	276-1546	Winch and Pulley Kit: This kit provides the ability to implement a winch and pulley system and create block and tackle mechanisms to utilize mechanical advantage.	1
	276-1149	Drive Shaft 12" (4-pack): The square shaft has rounded corners which allow it to spin easily in a round hole, while locking to a square hole.	1
	276-1926	Linear Motion Kit: The Linear Motion Kit provides a method for VEX builders to create linear mechanisms utilizing low-friction plastic slides and metal tracks. (2) 12" Long Linear Slide Track (2) 17.5" Long Linear Slide Track (2) Rack Bracket (4) Inner Delrin Slide Truck (4) Outer Delrin Slide Truck	1
	276-2045	Advanced Mechanics and Motion Kit: This kit contains a variety of mechanisms to help a robot builder learn about the mechanics of motion. Use them to see examples of worm gears, lead screws, universal joints, bevel gear reductions and rotary cams. (2) Hand Crank (1) Lead Screw Nut (4) Lead Screw Segment (2) Lead Screw Mounting Bracket (2) 16-tooth Bevel Gear (2) 32-tooth Bevel Gear (4) Worm Wheel (4) Worm Gear (2) Drop Off Cam (2) Cam Follower (2) Cam Follower Mounting Bracket (2) Universal Joint	1
	276-2154	Line Tracker: Program your robot to follow a line. This sensor can also be used as a beam trigger. Includes (3) IR emitter/receivers.	1
	276-2159	Bumper Switch (2-pack): Includes a pair of simple bumper switches custom built for the VEX Robotics Design System. Ruggedized Bumpers allow the switch to be triggered by large impacts without sustaining damage.	1

Picture	Part Number	Description	Quantity
	276-2161	Metal & Hardware Kit:	1
		<p>More tools for building the ultimate robot. Additional metal and hardware pieces let you create more complex devices.</p> <p>Steel Plates & Bars (2) Plate 15x5 holes (4) Bar 1x25 holes (4) Angle, Slotted 30 holes</p> <p>Steel Gussets (2) Gusset, Angle (2) Gusset, Plus (2) Gusset, Pivot</p> <p>Collars & Shafts & Bearings (16) Shaft Collar (4) Shaft 2in (4) Shaft 3in (2) Shaft 12in (16) Bearing, Flat (6) Bearing, Pillow Block (4) Lock Plate, Plastic</p> <p>Steel Chassis (2) Chassis Bumper 2x2x15 (4) Chassis Rail 2x1x16</p> <p>Standoffs & Spacers (10) Standoff 1/2in (8) Standoff 1in (4) Standoff 2in (4) Standoff 3in (20) Spacer, Thin 4.6mm (20) Spacer, Thick 8mm</p> <p>Screws & Nuts & Washers (70) Screw 8-32 1/4in (28) Screw 8-32 3/8in (28) Screw 8-32 1/2in (14) Screw 8-32 3/4in (30) Washer, Steel (10) Washer, Plastic (65) Nut, Keps 8-32 (14) Nut, Nylock 8-32</p>	
	276-2168	Tank Tread Kit:	1
		<p>Contains over five feet of tank tread designed specifically for the VEX Robotics Design System. Use this tank tread to build robot tracks which can overcome tough terrain, or build a conveyor belt for scooping up objects.</p> <p>(170) Tread Links (4) Tank tread drive/idler wheels (4) Double Bogie wheel assemblies (2) Single Bogie wheel assemblies (12) 8-32 x 1" Bogie wheel support screws (12) Keps nuts</p>	
	276-2174	Limit Switch (2-pack):	3
		<p>Includes a pair of simple limit switch sensors custom built for the VEX Robotics Design System. Switches send a signal to the Microcontroller when they are triggered. These switches are great for signaling when a robot arm has reached the top or bottom of its motion.</p>	
	276-2176	LED Indicator Pack:	1
		<p>Compatible with VEX Microcontroller Digital Outputs. Use these for feedback indicators, to debug code, verify Microcontroller mode, or for cool light patterns.</p>	
	276-2177	2-Wire Motor 393:	4
		<p>The 2-Wire Motor 393 is the primary actuator used in the VEX Robotics Design System. Build rotational mechanisms, drive bases, rotational joints, conveyor belts - anything that spins can be built using the 2-wire Motor 393.</p>	
	276-2193	Motor Controller 29:	2
		<p>The VEX Motor Controller 29 uses a standard PWM signal (like that originating from the 3-wire ports on VEX Microcontrollers) to drive a VEX 2-Wire Motor.</p>	
	276-2194	VEX Cortex Microcontroller:	2
		<p>The brain of every VEX robot. Coordinates the flow of information and power on the robot. All other electronic system components must interface to the Microcontroller.</p>	
	276-2212	Claw Kit:	1
		<p>With the VEX Robotics Claw Kit, your robot can easily grab and manipulate various objects.</p> <p>(1) Partial Claw Assembly (1) 2.000" Long Square Bar (1) 12-tooth Gear (1) Bearing Flat (1) Shaft Collar (4) 8-32 0.250" Screws (2) 6-32 0.250" Screws</p>	
	276-1496	2.75" Wheel (4-pack):	1
		<p>A pack of (4) of the VEX 2.75" diameter Wheels. These wheels include a smooth grippy tire which has high traction on smooth surfaces.</p>	
	276-2169	Gear Kit:	1
		<p>This kit contains four sizes of VEX Spur Gears (12-, 36-, 60-, and 84-tooth gears). The 60- and 84-tooth gears have extra mounting holes for attaching metal bars or parts to these gears when using them as part of a turntable system or similar design.</p> <p>(4) 12-tooth gears (4) 36-tooth gears (4) 60-tooth gears (2) 84-tooth gears</p>	

Picture	Part Number	Description	Quantity
	276-2216	Potentiometer (2-pack): Can determine absolute position of a VEX shaft. Use this sensor to get an analog measurement of angular position. This measurement can help to understand the position of robot arms or other mechanisms.	1
	276-2215	Bearing Pop Rivet (50-pack): These make mounting Flats Bearing onto VEX structural component easy. Reusable; simply push the pin out from the back side.	1
	276-2219	Battery Strap (2-pack): Are used to mount the 7.2v battery to your robot. The strap is reusable. Two Battery Straps and Mounting Hardware included	1
	276-2519	Smart Charger: The VEX Smart Charger is capable of charging ALL VEX rechargeable power packs.	2
	276-2520	Power Cord - North America (Type A): Brings power to the Smart Charger.	2
	276-2600	Clawbot Kit: The VEX Clawbot Kit is the foundation robot kit in the VEX Robotics Design System. Included as the basic robot in all kits, the step-by-step instructions guide users in assembling the robot as they learn to work with the VEX Robotics Design system. Motion (3) 2-Wire Motor 393 (4) 2-Wire Motor 393 High Speed Gear Sets (1) Claw Kit Assembly (includes motor) (2) Shaft Collar (4) Shaft Coupler (6) Shaft, 3" Long (18) Bearing Flat (2) Spur Gear, 12-tooth (6) Spur Gear, 60-tooth (2) Spur Gear, 84-tooth (4) 4" Wheel Metal (2) Bar, 20-hole (2) Chassis Bumper (20-hole) (4) Chassis Rail (16-hole) (2) C-Channel, 1x2x1x15 hole (1) C-Channel, 1x2x1x20 hole Electrical (2) Motor Controller 29 (1) Battery Strap (2-pack) Hardware (32) Screw, 8-32 x 1/4" Long (14) Screw, 8-32 x 1/2" Long (3) Screw, 8-32 x 1 1/2" Long (6) Locking Screw, 6-32 x 1/4" Long (6) Locking Screw, 6-32 x 1/2" Long (42) Nut, 8-32 Keps (2) Nut, 8-32 Nylock (6) Shaft Spacer, Thin (4.6mm) (50) 4" Tie Wraps (32) Bearing Pop-Rivet (1) Standoff 1.00" Equipment (2) Tool, Allen Wrench Small (5/64") (2) Tool, Allen Wrench Large (3/32") (2) Tool, VEX Open-Ended Wrench (1) Quick Start Guide, Clawbot	1
	276-2232	Booster Kit: Includes pieces specifically recommended by VEX builders to maximize versatility. Contains over 600 pieces of VEX Structural and Motion Components. Steel Chassis (2) Chassis Bumper 2x2x25 holes (4) Chassis Rail 2x1x25 holes Steel Plates & Bars (2) Plate 5x5 holes (2) Plate 5x15 holes (2) Plate 5x25 holes (8) Bar 1x25 holes Steel Gussets (4) Gusset, Pivot (4) Gusset, Angle (4) Gusset, Plus Steel Angles (2) Angle, Slotted 30 holes (2) Angle, Slotted 30 holes Inverse (2) Angle, Segmented 25 holes Steel C-Channels (2) C-Channel 1x2x1x15 holes (2) C-Channel 1x2x1x25 holes (2) C-Channel 1x5x1x25 holes Gears & Rollers & Clutches (4) Intake Roller (4) Gear 12 tooth (4) Gear 36 tooth (4) Gear 60 tooth (2) Gear 84 tooth (4) Gear, Rack 19 tooth (3) Motor Clutch Collars & Shafts & Bearings (16) Shaft Collar (4) Shaft 11mm (4) Shaft 2in (4) Shaft 3in (2) Shaft 4in (4) Shaft 12in (26) Bearing, Flat (6) Bearing, Pillow Block (4) Lock Plate, Plastic Standoffs & Spacers (10) Standoff 1/2in (8) Standoff 1in (4) Standoff 2in (4) Standoff 3in (20) Shaft Spacer, Thin 4.6mm (20) Shaft Spacer, Thick 8mm Screws & Nuts & Washers (70) Screw 8-32 x 1/4in (28) Screw 8-32 x 3/8in (28) Screw 8-32 x 1/2in (14) Screw 8-32 x 3/4in (10) Screw 6-32 x 1/4in (10) Screw 6-32 x 1/2in (30) Washer, Steel (10) Washer, Plastic (130) Nut, Keps 8-32 (28) Nut, Nylock 8-32 (50) Bearing Pop-Rivet	1
	276-2252	VEX High Strength Sprocket & Chain Kit: These reinforced sprockets and chain can transmit higher loads over long distances. Use this kit to withstand higher stresses and lift heavier loads. For any application where regular chain just won't cut it. (4) High Strength 6-tooth Sprocket (-0.97" OD) (2) High Strength 12-tooth Sprocket (-1.69" OD) (2) High Strength 18-tooth Sprocket (-2.43" OD) (2) High Strength 24-tooth Sprocket (-3.18" OD) (2) High Strength 30-tooth Sprocket (-3.90" OD) (140) High Strength Chain Links (20) Chain Attachment Links	1