

AB360° 12-PACK PLUS (32612)	ActivityBot 360° Robot Kit (12)	Ping))) Mounting Bracket Kit (12)	QTI Line Follower AppKit (12)	3-function Universal Remote (12)	1.2 V AA Ni-MH Rechargeable Batteries, 12-pack (10)	12 AA / AAA Fast Battery Charger (5)	Small Robot Electronics Refresher Pack (3)	Small Robot Hardware Refresher Pack (2)
Use	Small robot w/ multi-core brain, encoder servos, DIY circuit building. 1-2 students per.	Mounts the PING))) sensor the front of the ActivityBot, with a rotating servo turret.	Array of 4 sensors mount under robot, to detect black/white line	Use with IR receiver on ActivityBot for remote control projects	5 per robot, enough for one set in use and one set on chargers at all times.	Keep a set of batteries charged for the fleet of 12 robots	Extra sets of LEDs, resistors, jumper wires, etc.	Extra sets of screws, nuts, standoffs, etc.
Stock code & product page	32600	570-28015	28108	020-00001	752-00022	752-00021	572-28132	570-35000
Resource link	See the ActivityBot with BlocklyProp Scope & Sequence spreadsheet at learn.parallax.com							
Resource link	See the ActivityBot Resources for Educators page at learn.parallax.com							

Scribbler S3 Robot 12-Pack Plus	Scribbler 3 (S3) Robot (12)	3-Function Universal Remote (12)	Infrared Receiver (13)	PING))) Ultrasonic Distance Sensor (12)	Parallax Standard Servo (12)	Scribbler Replacement Motor Assembly (6)	S3 O-Ring Replacement Tire (24)	3-pin Extension Cable, 8" (12)	200mm Jumper Wires, FF, 40-piece Ribbon (2)	Yellow LED, T1 3/4 (13)	220 ohm resistor (red-red-brown) (13)	10 k-ohm resistor (brown-black-orange) (13)
Use	Fully assembled small robot with multi-core brain, built-in sensors, hacker port. 1 or 2 students per.	Program the S3 robot to respond to IR remote button presses with built-in or external IR receiver.	Add external IR receiver to hacker port for multi-direction remote control. Connect with 3 FF wires from ribbon.	Equip the S3 to measure distance to objects with sound. Connect to hacker port with 3-pin extension cable.	Connect to Hacker Port and build a pen lifter for drawing.	Replacement motor assembly just in case a fast repair is needed. IMPORTANT: Retain tiny black encoder disk on old motor shaft.	Replace O-ring tire on S3 wheel if tire comes loose or goes missing.	Use to connect PING))) Ultrasonic Distance Sensor, LED, IR Receiver, or other circuits to S3 Hacker Port.	Use 3 wires peeled from ribbon to connect external IR Receiver to S3 hacker port.	Connect to Hacker Port with the 3-pin Extension Cable, along with a 220 ohm resistor	Connect to the Hacker Port with the 3-pin Extension Cable, along with a Yellow LED.	Connect to the Hacker Port with a 10 k-ohm resistor for making the rear bumper switch.
Stock code & product page	28333	020-00001	350-00039	28015	900-00005	750-28330	721-00023	800-00080	800-00062	350-00007	150-02210	150-01030
Resource link	Scribbler S3 Robot Tutorial Series	IR Remote Control with the S3 Tutorial	Multi-Directional Remote Driving Hack Tutorial	S3 Sense Distance with PING))) Tutorial	S3 Pen Lifter Hack Video	S3 Motor Replacement Video		Hacker Port Expansion tutorial	Multi-Directional Remote Driving Hack Tutorial	What's a Hacker Port? tutorial page		
Resource link	See the Scribbler S3 Resources for Educators page at learn.parallax.com for Scope & Sequence chart and assesment materials											

STEM SENSOR CLASS PACK (32024)	96x64 RGB OLED Display (12)	Memsic 2-axis Accelerometer (12)	LaserPING 2m Rangefinder (12)	ColorPAL Color Sensor (12)	TSL230R Light to Frequency Converter (12)	WS2812 RGB LED, 10-pack (2)	2-axis Joystick (12)	CM2302 Temp & Humidity Sensor (12)	3-pin extension cables, 6" (24)	Jumper wires, FF, 100mm, 40-piece ribbon (12)	Jumper wires, MM, 100 mm, 40-piece ribbon (12)
Use	Display sensor data and messages	Measure tilt, acceleration, or count rotations	Measure distance up to 2 meters	Report color of a surface as RGB values	Converts visible & IR light brightness to a pulse frequency	LED can be any color. Requires soldering headers.	4-state human input: up, down, left, right	Report temp -40..176 °F or -40..80 °C, and % RH	Connect ColorPAL or LaserPING to 3-pin header	Breadboard circuit-building	Breadboard circuit-building
Stock code & product page	28087	28017	28041	28380	604-00084	28086	27800	28059	800-00060	800-00061	800-00065
Resource link	RGB OLED block reference	Memsic 2-axis block reference	Ping))) Distance block reference	ColorPAL block reference	Count pulses block reference: 50 ms is a good duration.	RGB LEDs block reference	2-Axis Joystick block reference	Temp & Humidity block reference			
Resource link	OLED Display with BlocklyProp tutorial	Memsic 2125 Wiring & Example Code	PING))) Wiring & Example Code	ColorPAL Wiring & Code Example		Light it Up! with WS2812 LEDs tutorial**	Joystick Wiring & Example Code	Temp & Humidity Wiring & Example Code			
Resource link	Memsic 2125 Tilt with OLED Bubble Display project	Memsic 2125 Tilt with OLED Bubble Display project**		Candy Sorter project**							
Resource link	BlocklyProp Seismometer project**	BlocklyProp Seismometer project**									
Resource link	Capacitive Touch Pong Game project**										
**Activities may list additional hardware required that is not in the STEM Sensor Class Pack											

SECURITY PROJECT CLASS PACK (32025)	PIR Mini Motion Sensor (12)	Fingerprint Scanner (12)	Sound Impact Sensor (12)	2x16 Serial LCD, Backlit (12)	RFID Card Reader, Serial (12)	RFID Tag, Rectangle (12)	RFID Tag, 50 mm round (12)	RFID Tag, Blue Key Fob (12)	4x4 Matrix Membrane Keypad (12)	10 k-ohm resistors (100)	220 ohm resistors (100)	3-pin ext cables (36)
Use	Detects motion up to 12 feet away	Scan, store, and match fingerprint patterns	Trigger sensor with a clap, bang, or similar sound	Display two rows of 16 characters, and beep its onboard piezo speaker	Activate passive RFID tags and report their unique ID numbers	Passive RFID tag, use with RFID reader	Passive RFID tag, use with RFID reader	Passive RFID tag, use with RFID reader	4x4 Matrix Membrane Keypad	Use 4 with Keypad circuit	Use 4 with Keypad circuit	Connect PIR Mini, Sound Impact Sensor, or Serial LCD to a 3-pin header
Stock code & product page	28033	29126	29132	27977	28140	28141	28142	28161	27899	150-01030	150-02210	800-00060
Resource link	PIR block reference	Fingerprint Scanner block reference	Sound Impact Sensor block reference	Serial LCD block reference	RFID block reference				Keypad block reference			
Resource link	PIR Wiring & Example Code	Fingerprint Scanner Wiring & Example Code	Sound Impact Sensor Wiring & Example Code		RFID Wiring & Example Code				4x4 Keypad Wiring & Example Code			
Resource link					RFID Scan & Store to EEPROM project**				4x4 Keypad with 7-segment LED tutorial**			
**Activities may list additional hardware required that is not in the Security Project Class Pack												