

Minimum Equipment List: Architectural CAD

| Item Description | Number Required |
|---|--------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Computer Scanner | 1 |
| Drafting Chair | 25 |
| Drafting Desks | 25 |
| Machinist Measuring Instrument Set (1" micrometer, 6" vernier gauge, combination square, and 6" machinist scale) | 2 |
| Network Control Software | 1 |
| Blue Print Storage Cabinet | 1 |
| Teacher Computer | 1 |
| Instructor Drawing Chair | 1 |
| Computer Plotter | 1 |
| Total Cost | \$43,319.94 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 36,821.95 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 6,497.99 |

Minimum Equipment List: Engineering CAD

| Item Description | Number Required |
|---|-----------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Computer Scanner | 1 |
| Drafting Chair | 25 |
| Drafting Desks | 25 |
| Machinist Measuring Instrument Set (1" micrometer, 6" vernier gauge, combination square, and 6" machinist scale) | 2 |
| Network Control Software | 1 |
| Blue Print Storage Cabinet | 1 |
| Teacher Computer | 1 |
| Instructor Drawing Chair | 1 |
| Computer Plotter | 1 |
| Total Cost | \$43,319.94 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 36,821.95 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 6,497.99 |

Minimum Equipment List: PLTW Biomedical Science

| Item Description | Number Required |
|---|-----------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| 3DMD Amino Acid Starter Kit - 5 Group Set (MI 4.1.3) | 3 |
| 3DMD Dynamic DNA Kit - PBS 1.1.5 | 1 |
| Adult fly (artificial), 12 pack - PBS 1.1.1 | 1 |
| Adult Skin, Microscope Slide | 13 |
| Alcohol Burners, 3.5 oz/100 mL | 13 |
| ANATOMY IN CLAY EZ-Squeeze Handle with Clay Extruder | 5 |
| ANATOMY IN CLAY Learning System, PLTW Instructor Kit | 1 |
| ANATOMY IN CLAY Learning System, PLTW Student Kit | 7 |
| Artery, vein and capillary, Cs histology slides | 13 |
| BD Syringes with Luer-Lok Tips, 60 mL, 10 pack | 1 |
| Beakers, 100 mL, 12 pack | 3 |
| Beakers, 1000 mL, 6 pack | 3 |
| Beakers, 250 mL, 12 pack | 3 |
| Beakers, 50 mL, 12 pack | 3 |
| Binder Clips, Assorted Sizes, 30 pack | 1 |
| Broken Bones X-rays | 9 |
| Buret Clamps, 1 3/8 inch Opening | 7 |
| Carolina Visual Perception Kit (HBS 2.4.2) | 1 |
| Cell Zone Molecular Puzzle (PBS 2.2.3, HBS 3.2.6) | 1 |
| Colored permanent markers, 8 pack | 3 |
| Conical Tubes, 50 pack, 15 mL | 4 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Shaking 10 L Waterbath | 1 |
| Disorder Detectives Classroom Kit by Carolina - PBS 2.2.5 | 1 |
| Dissecting Forceps, Stainless Steel , 4 1/2 inch, 10 pack | 1 |
| Dissection Tray, Wax Lined | 13 |
| Ear bud headset, basic stereo | 25 |
| EdvoCycler2, Classroom Thermal Cycler | 1 |
| Edvotek M12 Complete Electrophoresis Package | 7 |
| Edvotek Micropipet, Variable Adjustable, 0.5 - 10 ul | 7 |
| Edvotek Micropipet, Variable Adjustable, 10-100 ul | 7 |
| Edvotek Micropipet, Variable Adjustable, 10-100 ul | 7 |

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| Edvotek TruBlu 2 Transilluminator (blue and white light) | 1 |
| Electronic Balance, 500 g, 0.1 g Readability | 7 |
| Erlenmeyer Flask, Narrow neck, 250 mL, 12 pack | 1 |
| Erlenmeyer Flask, Narrow neck, 500 mL, 6 pack | 3 |
| Erlenmeyer Flasks, 1000 mL, 6 pack | 1 |
| Erlenmeyer Flasks, 125 mL, 12 pack | 3 |
| Erlenmeyer Flasks, 50 mL, 12 pack | 1 |
| Fetal Doppler with 8MHz probe | 4 |
| Flint Striker, 10 pack | 1 |
| Floating Microtube Rack Polypropylene rack | 5 |
| Floor puzzle, USA map, 51 piece | 4 |
| Food Storage Containers with lid, 2 pack | 13 |
| Forceps, Fine-Point with Guide Pin, 4 1/2 inch, 10 pack | 1 |
| Glass Dropping Bottles, Clear, 30 mL, 12 pack | 5 |
| Goniometer, 12", 360 degrees | 9 |
| Graduated Cylinder, 10 mL, 0.2 mL Graduations, 5 pack | 3 |
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Graduated Cylinder, 1000 mL | 1 |
| Graduated Cylinder, 250 mL | 13 |
| Graduated Cylinder, 50 mL, Polypropylene, 5 pack | 3 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Histology of Mammalia, Basic Set, 25 slides | 1 |
| Hot Plate Stir Plate, 7 in x 7 in surface, 100-120V | 7 |
| Human Blood Film Smear Slides, Wright's Stain | 13 |
| Human Eye Model | 3 |
| Innoculating loops (metal) pk/12 | 1 |
| Interlocking Cubes, 500 pack | 1 |
| Lab Incubator, 0.7 cu. ft. | 1 |
| Magnetic Stir Bar, 1 in | 7 |
| Mammal Compact Bone Microscope Slide, I.s., H and E | 7 |
| Mammal Spongy Bone Microscope Slide | 7 |
| Measuring tape, windup, 10M/33 ft, Metric and Imperial Scale | 7 |
| Meter Stick, Wood, Case of 6 | 1 |
| Microcentrifuge Tube Rack, 20 well, 6 pack | 1 |
| Microcentrifuge, High Speed 9800 xG | 1 |
| Microscope, binocular, 100 x Objective | 13 |
| Microwave, 1.1 cubic foot, 1000 watt | 1 |
| Mini Longwave UV Lamp, UVP, 365 nm | 9 |
| Mohrs Pinchcock Clamp for Tubing, 10 pack | 3 |
| MV10 Vertical Electrophoresis Apparatus | 5 |
| National Geographic Clone DVD | 1 |

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| NOVA: Cracking the Code of Life DVD | 1 |
| Oven gloves, terry cloth, 1 pair | 3 |
| Percussion Hammer, 7 1/2 inch | 13 |
| Phlebotomy Arm Kit, Light Skin Tone - PBS 2.1.4 & 3.2.2 | 1 |
| Plastic Flashlight, batteries not included | 7 |
| Plastic Forceps, pack of 6 | 3 |
| PLTW custom Laparoscopic Activity Kit (MI 4.3.3) | 5 |
| PLTW Custom Simulated ABO & Rh Blood Typing Kit (HBS 5.3.2) | 3 |
| Pulse Oximeter, finger tip style | 4 |
| QuadraSource Power Supply, for electrophoresis units | 4 |
| Rainbow Stacker | 4 |
| Red Spirit-Filled Thermometers, -20 to +150 degrees, 25 pack | 1 |
| Rubber Laboratory Apron, 27 inch x 42 inch, case of 25 | 1 |
| Rubber Tubing, amber, 3/16" bore, 1/16" wall, 10 ft. | 1 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Ruler, Clear Plastic, 15 CM / 6 IN, 10 pack | 3 |
| Safety Goggles, Anti-fog Indirect Vent, 10 pack | 3 |
| Sanitizing Cabinet, Thirty-Five Goggle Capacity | 1 |
| Scientific Calculator, any brand | 25 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 1 |
| SD Card, 8 GB+ (for use with digital camera) | 1 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| Sherlock Bones: African Female (Bone Set Only) | 1 |
| Sherlock Bones: Skeletal Remains (Caucasian Male Full Kit) | 1 |
| Spatula / Spoon (Scoopula), Nickel / Stainless Steel | 7 |
| Stirring Rods, 12 pack | 3 |
| Stopwatch, handheld, LED, 10 pack | 1 |
| Straight Dressing Forceps with Blunt Tips | 13 |
| Student Dry Erase Whiteboards, 1 cm grid, 30 pack | 1 |
| Student Grade Economy Microscope Slides, 72 pack | 3 |
| Support Stand with Rod and Base | 7 |
| Surviving the Extremes, Paperback book | 1 |
| Tape measure, steel, 25 foot with thumb lock | 7 |
| Test Tube Brushes, 12 pack | 1 |
| Test Tube Clamp (Stoddard Clamp) | 13 |
| Test Tube Rack, polypropylene, 12 well, 5 peg | 13 |
| Test Tubes, 72 pack, 20 mm x 150 mm | 1 |
| Tubing, 6 mm diameter x 12 foot length | 1 |
| Tuning Fork, Aluminum Alloy, 512 VPS, 5 pack | 3 |
| Vernier Go Direct Wireless EKG Sensor | 13 |
| Vernier Go Direct Wireless Force and Acceleration Sensor | 13 |

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| Vernier Go Direct Wireless Hand Dynamometer | 7 |
| Vernier Go Direct Wireless Respiration Belt | 13 |
| Vernier Go Direct Wireless Spirometer | 7 |
| Vernier Go Direct Wireless Surface Temperature Sensor | 7 |
| Vernier Go Direct Wireless Temperature Probe | 13 |
| Vernier Go Wireless Heart Rate | 13 |
| Vernier Reflex Hammer Accessory Kit | 13 |
| Wards Blood disorder slides, 10 total slides - PBS | 1 |
| Ward's Complete Blood Pressure Kit PBS 2.1.2, HBS 4.3.5 | 7 |
| Ward's Controlled Bleeding Full Kit - PBS 3.2.3 | 5 |
| Wards custom microbiology slides, 8 slides - PBS 3.1.7, 3.1.8, 3.1.9 | 3 |
| Wards Digital Waterbath, 2.0 L | 1 |
| Ward's Fingerprint ID Magnetic Powder Kit - PBS 1.1.3 | 1 |
| Ward's hair slides, 8 slide set - PBS 1.1.3 | 1 |
| Ward's Histology slides, sheep brain, 4 slide set - PBS 1.2.4 | 3 |
| Ward's Mammalian Muscle Composite Slides, 3 types | 4 |
| Ward's Natural Selection & Antibiotic-Resistant Bacteria Kit | 1 |
| Wards Normal (5) vs cancer cell slides (5) - PBS 2.2.1 | 1 |
| Ward's Numbered Marker Tents, 15 pack - PBS 1.1.1 | 1 |
| Ward's Preserved flies, life cycle set - PBS 1.3.1 | 1 |
| Ward's Science Pipet Fillers, 50 mL Capacity | 13 |
| Ward's Science Small Latex Bulbs, 72 pack, 1 mL Capacity | 1 |
| Ward's Student Dissecting Set PBS, HBS 2.4.1, BI 7.1.1 | 13 |
| Washing Bottle with Trigger Sprayer, 500 mL capacity | 8 |
| White Light Illuminator | 3 |
| Wood Blocks Set, 100 piece | 1 |
| Wood clothespins, with springs, 36 pack | 1 |
| Total Cost | \$ 74,076.96 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 62,965.42 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 11,111.54 |

Minimum Equipment List: Engineering and Technology Education

| Item Description | Number Required |
|---|--------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| FasTrak Elevated CO2 Race Track | 1 |
| Classroom Super Kit (Clawbot) | 14 |
| Microsoft Office Suite or Equivalent | 25 |
| Classroom Management Software | 1 |
| Drill Press | 2 |
| Cordless Drill Set | 2 |
| Vernier Structures and Materials Tester | 1 |
| Vernier Truss Tester Accessory | 1 |
| Vernier LabQuest Mini Interface | 1 |
| Mini USB-C Cable | 1 |
| Vernier Logger Pro Data Analysis Software | 1 |
| Pitsco Impulse G3 Race System | 1 |
| Classroom Compact Scale (Digital) | 2 |
| Digital Caliper | 2 |
| Total Cost | \$52,069.99 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 44,259.49 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 7,810.50 |

Minimum Equipment List: Unmanned Aerial Systems

| Item Description | Number Required |
|---|-----------------|
| Recommended Training | 1 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Ready-to-Fly UAV(s) | 2 |
| Monitor Hood | 2 |
| Multifunctional Backpack/Case | 2 |
| Batteries (2) | 2 |
| Micro Sd (64 GB) | 2 |
| Charger Hub | 2 |
| Tablet for Mobile Ground Station w/Case and Screen Protector | 3 |
| UAV Insurance | 3 |
| Do-it-Yourself UAV Kit: Airframe, Autopilot System, GPS/Compass, Motors, Propellers, Gimbal, Optional Sensors, Electronic Speed Controllers, Power Distribution Boards, Servos | 9 |
| Transmitter for DIY Kit | 2 |
| LiPo Battery 3s for DIY Kit | 5 |
| LiPo Battery 4s for DIY Kit | 5 |
| LiPo Battery Charger for DIY Kit | 2 |
| Mini Ready-to-Fly Programmable UAS w/ Controller | 7 |
| FPV Goggles | 1 |
| External Hard Drive (4 TB) | 1 |
| 3-D Printer | 1 |
| 3-D Printer Supplies | 3 |
| Solder Practice Kit | 25 |
| Soldering Iron Kit | 4 |
| Heat Gun | 4 |
| Digital Scale | 1 |
| Digital Multimeter | 7 |
| Rotary Tool with Bits | 4 |
| Variable Power Supply | 1 |
| Propeller Balancers | 7 |
| Servo Testers | 7 |
| Servo Leads (pkg of 10) | 1 |

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|---|---------------------|
| Thrust Stand | 2 |
| Lockable Storage | 2 |
| Miscellaneous | 1 |
| Surge Protectors | 7 |
| Eye Safety Glasses | 25 |
| Heavy Duty Aprons | 25 |
| Commercial UAS Safety Vest | 2 |
| UAS Flight Simulator Software | 8 |
| 3-D Design Software | 1 |
| Slicing Software | 1 |
| Video Editing Software | 1 |
| Mapping Software | 1 |
| Total Cost | \$54,451.00 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 46,283.35 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 8,167.65 |

Minimum Equipment List: Automation and Robotics Technology

| Item Description | Number Required |
|---|-----------------|
| ABB IRB120 Robots | 2 |
| Grippers | 2 |
| Tables | 2 |
| Air Compressor | 2 |
| 20 Pc Air Compressor Starter Kit | 4 |
| 3-Way Quick Coupling Manifold | 4 |
| Transformer for Robots HAMMOND 176F Auto Transformer, Step Up, 230 V, 1 kVA | 2 |
| Miscellaneous sensors | 1 |
| Tool Kit | 1 |
| 6 Pc Torx Offset T-Handle Hex Key Set | 1 |
| Electronic/soldering/tool kit | 22 |
| RSR Test Leads - 36" Banana to Banana Test Lead Set | 33 |
| 36" Lead Banana to Banana, Blue | 33 |
| 36" Lead Banana to Banana, White | 33 |
| The Awesome Cube | 22 |
| AWESOME U-S-A | 22 |
| Device programmer MicroEngineering Labs U2C (one time purchase) | 22 |
| PLC trainer stations | 2 |
| PLC Hardware for training stations | 4 |
| Portable Electric Relay Control Troubleshooting | 2 |
| Computer Control 1 Learning System | 1 |
| Portable Electronic Sensors Learning System | 1 |
| Adobe E-Learning Unlimited | 1 |
| PID simulators | 2 |
| 24Volt Fan (19031090A | 2 |
| Motor Controller | 2 |
| Analog Prox ANALOG PROX 18mm 4-20mA 100-900mm RNG 3-WIRE 2m CABLE | 2 |
| BUZZER PULSE 24V 80dB AT 10cm RED LED 22.5mm PANEL MOUNT | 6 |
| PB 22mm PLAS RED N.O. MOM FLUSH 30mm HEAD | 6 |
| PB 22mm PLAS Green N.O. MOM FLUSH 30mm HEAD | 6 |
| PB ENC 22mm 3-HOLE GRY 51mm DEEP PLASTIC | 6 |
| TIMER MULTI-MODE 2PDT 24VDC 0.05S-60H | 6 |
| SOCKET DIN RAIL MOUNT FOR MS4SM | 6 |
| Din Rail | 4 |
| 24vdc contactor | 6 |

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|---|---------------------|
| Electric Circuits Fundamentals ISBN-10: 0-13-507293-X | 22 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 26 |
| Datamation SafeHarbor2 Laptop networked cart (\$1800 at 1 per school) | 1 |
| HP LaserJet M402DN printer (\$300 at 1 per school) | 1 |
| LogixPro | 27 |
| ETCAI software | 1 |
| 4 port USB hub for instructor laptops | 4 |
| Safety goggles | 22 |
| Solder mats | 22 |
| Benchtop Solder Fume Extractor 120V | 11 |
| Total Cost | \$106,273.29 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 90,332.30 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 15,940.99 |

Minimum Equipment List: PLTW Pre-Engineering with Aerospace (IED, POE, AE)

| Item Description | Number Required |
|--|-----------------|
| 2 Amp Multi-Output Power Supply | 13 |
| Acrylic Balls 1/2", 50 pack | 1 |
| Adjustable Wrench, 8 inch, 1.25 in max opening | 1 |
| Alligator Leads Set of 10 Leads | 5 |
| AltiTrak Altitude Tracker | 3 |
| APC Slow Flyer Propeller, 8x3.8SF | 7 |
| Back Saw, 14 inch, 12-14 teeth per inch | 5 |
| Banana to Alligator Test Lead Set | 7 |
| Banana to reinforced Test Pin Lead Set, 36" red and black | 13 |
| Bastard-Cut Mill File, 8 inch | 1 |
| Bolt, 5/16" - 18 - 2 1/2 | 9 |
| Box Fan 3-speed, 23 x 5 x 22 | 1 |
| Bucket, 6 gallon, plastic with handle | 3 |
| Building block set, wooden painted, 8 block shapes (100 pieces) | 5 |
| Carabiner Shuttle pens (6 pack) | 1 |
| Carolina Visual Perception Kit (HBS 2.4.2) | 1 |
| Chain, 2 foot length, 3/4 inch length links | 1 |
| Clamp light, Reflector, white 6' cord, each | 7 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 3 |
| Coffee maker, basic single serve | 1 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 7 |
| Compact Scale, 1000 g x .1g accuracy | 1 |
| Compact Scale, 2000 g x 1 g | 1 |
| Compression and extension springs, assorted small | 1 |
| Concrete block , 16 inch x 8 inch x 8 inch | 13 |
| Cordless Drill, 14 Volt or higher | 3 |
| Crucible Tongs | 1 |
| Delrin balls - white 3/4"- pack of 10 | 1 |
| Desktop 3-Hole Punch | 1 |
| Dial Calipers, 6 inch, steel, graduated to .001 inches | 13 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Multimeter Super Economy Plus DMM | 13 |
| Dremel 3D Printer Bundle for IED - includes 1 x 3D45 + 9 rolls of filament | 1 |
| Drill Press Vise, 4" Capacity | 1 |
| Easy Cutter | 3 |
| Estes Industries ALPHA III E2X ROCKET | 1 |

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| Eye screws, #4 size, (25 pack) | 1 |
| File handle, For 8" to 10" files, pack of 5 | 1 |
| Fishing snap swivels (any size), 12 pack | 1 |
| Flexible tape knife, 4" Steel blade, each | 3 |
| Furring strip, 1 in x 2 in x 8 ft | 3 |
| Garmin eTrex 10 | 7 |
| Gauge block, Steel | 1 |
| Glider Launcher | 3 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Hack saw, For 10" or 12" blade, D-Handle, each | 3 |
| Hand lenses, 3x magnification | 13 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Hex key set, folding, 9 sizes | 1 |
| Hickory Hammer, 16 oz | 3 |
| Hook Up Wire 22 Gauge, Solid, Black, 25 feet | 1 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 1 |
| IED Material Testing Kit | 1 |
| IED Metal Dowel Pin Kit | 1 |
| Instant Read Probe Thermometer | 1 |
| Jaw style/Claw staple remover | 3 |
| Lamp base E10 | 1 |
| Locking pliers, 7", 1 5/8" curved jaw, each | 1 |
| Magnetic Wand, 1 piece | 1 |
| Melamine board, 4 ft x 8 ft, cut into four count 2 ft x 4 ft boards | 1 |
| Mini push button switch, 10 pack | 3 |
| Miter Box, clamping | 5 |
| Momentary switch, 20 pack | 1 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Nitinol Memory Wire, 1 ft | 1 |
| Nut, 5/16" - 18 | 50 |
| Paper Cutter, 12 inch cut length | 1 |
| Plate Steel Perforated Tube, 1 inch, 14 Gauge | 4 |
| PLTW IED VEX IQ Kit | 1 |
| Precision Screwdriver Set, 6-Piece | 1 |
| Propeller Adapter with set screw, 4mm | 7 |
| Protractors, Semicircular Transparent, 12 pack, 3.5 inch | 3 |
| PVC 90 deg elbow, 1 inch diameter | 7 |
| PVC coupling, 1 inch diameter | 7 |
| PVC pipe, 1 inch diameter, 2 ft length | 4 |

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| PVC Pipe, Schedule 40, 1" x 24" | 1 |
| PVC plug, 1 inch diameter | 7 |
| Reamer | 1 |
| Resistor Kit, 365 Piece, 1/4 Watt | 1 |
| Rocket Builder's Marking Guide | 1 |
| Rocket Engine Test Bracket, for size A, B, C and D engines | 1 |
| RSR Solderless Breadboard Model MB106 | 13 |
| RSR Variable DC Power Supply 18V 0-2A | 7 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissor Jack, 3,000 lb capacity. Solid metal construction, lift range is 4 1/8 inches to 15 1/8 inches. | 1 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 1 |
| Screwdriver Set, 12 piece, slot and Phillips tips | 1 |
| SD Card, 8 GB+ (for use with digital camera) | 1 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| S-Hook, 1.75 Inch, Pack of 10 | 1 |
| Single AAA-battery holders, 10 pack | 3 |
| Slide staple remover | 3 |
| Slow Flyer Propeller, 8x6SF | 7 |
| Solderless Breadboard with 300 Tie Points | 13 |
| Spring Clamps, 3 inch jaw opening | 3 |
| Spring Scale, Push and Pull, 1 Kilogram (10.0 N) capacity | 7 |
| Steel balls, 1/2 inch, 100 pack | 1 |
| Storage Organizer (for small hardware), 4 pack | 3 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Support Stand with Rod | 1 |
| Syringes, 10 cc/mm, 10 pack, standard tip | 1 |
| Syringes, 20 cc/mm, 10 pack | 1 |
| Syringes, 30 cc/mm, 10 pack, standard tip | 1 |
| Tape measure, steel, 25 foot with thumb lock | 7 |
| Tape measure. vinyl (10 pack), 60" length, inch and CM | 1 |
| Thermodynamics Heat Box classroom set (3 units) | 1 |
| Threaded rod, 5/16" - 18 - 36 inch | 5 |
| Trammel toy base - 5 pack | 1 |
| Trigger Bar Clamp, Medium, 12 inch, 2 pack | 7 |
| Trigger Bar Clamp, Medium, 6 inch | 3 |
| Utility Knife, metal, with 5x replacement blades | 13 |

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| Vernier Basic Turbine Building Parts | 7 |
| Vernier Dual Range Force Sensor | 7 |
| Vernier Force Plate | 1 |
| Vernier Go! Link | 7 |
| Vernier Stainless Steel Temperature Probe | 7 |
| VEX AE Kit - Cortex | 7 |
| VEX AE Kit - New V5, Select Optional filter to view pricing and order | 7 |
| VEX IQ Pin Tool (10-pack) | 1 |
| VEX POE/CIM Kit - Cortex | 7 |
| VEX POE/CIM Transition Kit - New V5 | 7 |
| Washer, Flat, 5/16" - 18 | 50 |
| Webcam, generic USB | 7 |
| Weight,Dumbbell 2 lb, 1 pair | 7 |
| Weight/Dumbbell, 1 lb, 1 pair | 7 |
| Wood board, 1in X 10 in x 6 ft | 1 |
| Wood board, 2 inch x 6 inch x 16 inch | 35 |
| Wood Round Balls, 1/2 inch diameter, 100 pack | 1 |
| Wrench Set, 9 piece, SAE | 1 |
| Total Cost | \$ 59,156.20 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 50,282.77 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 8,873.43 |

**Minimum Equipment List: PLTW Pre-Engineering with Civil
Engineering and Architecture
(IED, POE, CEA)**

| Item Description | Number Required |
|--|-----------------|
| 2 Amp Multi-Output Power Supply | 13 |
| Acrylic Balls 1/2", 50 pack | 1 |
| Adjustable Wrench, 8 inch, 1.25 in max opening | 1 |
| Alligator Leads Set of 10 Leads | 5 |
| Architectural Scale, 12" Triangle with 6 Divisions, Engraved | 25 |
| Auto Level, Nikon #AX25, 20X magnification with stadia lines | 4 |
| Banana to Alligator Test Lead Set | 7 |
| Banana to reinforced Test Pin Lead Set, 36" red and black | 13 |
| Bastard-Cut Mill File, 8 inch | 1 |
| Brass bottom pan, 8" for soil sieve | 3 |
| Brass Cover, 8" for sieve pan | 3 |
| Bucket, 6 gallon, plastic with handle | 3 |
| Building block set, wooden painted, 8 block shapes (100 pieces) | 5 |
| Carabiner Shuttle pens (6 pack) | 1 |
| Chain, 2 foot length, 3/4 inch length links | 1 |
| Civil Engineering Scale, Triangular, White Plastic | 25 |
| Clamp light, Reflector, white 6' cord, each | 7 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 3 |
| Coffee maker, basic single serve | 1 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 7 |
| Compact Scale, 1000 g x .1g accuracy | 1 |
| Compact Scale, 2000 g x 1 g | 1 |
| Compression and extension springs, assorted small | 1 |
| Concrete block , 16 inch x 8 inch x 8 inch | 13 |
| Cordless Drill, 14 Volt or higher | 3 |
| Crucible Tongs | 1 |
| Delrin balls - white 3/4"- pack of 10 | 1 |
| Desktop 3-Hole Punch | 1 |
| Dial Calipers, 6 inch, steel, graduated to .001 inches | 13 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Multimeter Super Economy Plus DMM | 13 |
| Dremel 3D Printer Bundle for IED - includes 1 x 3D45 + 9 rolls of filament | 1 |
| Drill Press Vice, 4" Capacity | 1 |
| Easy Cutter | 3 |
| Eye screws, #4 size, (25 pack) | 1 |
| File handle, For 8" to 10" files, pack of 5 | 1 |
| Fishing snap swivels (any size), 12 pack | 1 |
| Gauge block, Steel | 1 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |

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|---|----|
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Hack saw, For 10" or 12" blade, D-Handle, each | 3 |
| Hand lenses, 3x magnification | 13 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Hex key set, folding, 9 sizes | 1 |
| Hickory Hammer, 16 oz | 3 |
| Hook Up Wire 22 Gauge, Solid, Black, 25 feet | 1 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 1 |
| IED Material Testing Kit | 1 |
| IED Metal Dowel Pin Kit | 1 |
| Instant Read Probe Thermometer | 1 |
| Jaw style/Claw staple remover | 3 |
| Lamp base E10 | 1 |
| Level Rod, Fiberglass, 13' length graduated in 1/100ths | 4 |
| Locking pliers, 7", 1 5/8" curved jaw, each | 1 |
| Magnetic Wand, 1 piece | 1 |
| Melamine board, 4 ft x 8 ft, cut into four count 2 ft x 4 ft boards | 1 |
| Mini push button switch, 10 pack | 3 |
| Momentary switch, 20 pack | 1 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Nitinol Memory Wire, 1 ft | 1 |
| Ohaus Triple Pro Balance, 2610 g capacity, 0.1 g Sensitivity | 1 |
| Paper Cutter, 12 inch cut length | 1 |
| PLTW IED VEX IQ Kit | 1 |
| Precision Screwdriver Set, 6-Piece | 1 |
| Protractors, Semicircular Transparent, 12 pack, 3.5 inch | 3 |
| PVC Pipe, Schedule 40, 1" x 24" | 1 |
| Reamer | 1 |
| Resistor Kit, 365 Piece, 1/4 Watt | 1 |
| Rod Level, Seco | 4 |
| RSR Solderless Breadboard Model MB106 | 13 |
| RSR Variable DC Power Supply 18V 0-2A | 7 |
| Rubber Mallet, 16 oz. | 3 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 1 |
| Screwdriver Set, 12 piece, slot and Phillips tips | 1 |
| SD Card, 8 GB+ (for use with digital camera) | 1 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| S-Hook, 1.75 Inch, Pack of 10 | 1 |
| Sieve, Soil Testing, #4, 8" Dia | 3 |
| Sieve, Soil Testing, #40, 8" Dia | 3 |
| Single AAA-battery holders, 10 pack | 3 |
| Slide staple remover | 3 |
| Solderless Breadboard with 300 Tie Points | 13 |

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|---|---------------------|
| Spring Clamps, 3 inch jaw opening | 3 |
| Spring Scale, Push and Pull, 1 Kilogram (10.0 N) capacity | 7 |
| Steel balls, 1/2 inch, 100 pack | 1 |
| Storage Organizer (for small hardware), 4 pack | 3 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Syringes, 10 cc/mm, 10 pack, standard tip | 1 |
| Syringes, 20 cc/mm, 10 pack | 1 |
| Syringes, 30 cc/mm, 10 pack, standard tip | 1 |
| Tape measure, steel, 25 foot with thumb lock | 7 |
| Tape measure. vinyl (10 pack), 60" length, inch and CM | 1 |
| Thermodynamics Heat Box classroom set (3 units) | 1 |
| Trammel toy base - 5 pack | 1 |
| Trigger Bar Clamp, Medium, 12 inch, 2 pack | 7 |
| Trigger Bar Clamp, Medium, 6 inch | 3 |
| Tripod, Aluminum Extension Legs with shoulder strap | 4 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Vernier Dual Range Force Sensor | 7 |
| Vernier Go! Link | 7 |
| Vernier Stainless Steel Temperature Probe | 7 |
| VEX IQ Pin Tool (10-pack) | 1 |
| VEX POE/CIM Kit - Cortex | 7 |
| VEX POE/CIM Transition Kit - New V5 | 7 |
| Webcam, generic USB | 7 |
| Weight,Dumbbell 2 lb, 1 pair | 7 |
| Weight/Dumbbell, 1 lb, 1 pair | 7 |
| Wood Round Balls, 1/2 inch diameter, 100 pack | 1 |
| Wrench Set, 9 piece, SAE | 1 |
| Total Cost | \$ 53,539.53 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 45,508.60 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 8,030.93 |

**Minimum Equipment List: PLTW Pre-Engineering with Computer
Integrated Manufacturing
(IED, POE, CIM)**

| Item Description | Number Required |
|--|-----------------|
| 2 Amp Multi-Output Power Supply | 13 |
| 3/32" Hex Keys (8-pack) | 3 |
| Acrylic Balls 1/2", 50 pack | 1 |
| Adjustable Wrench, 8 inch, 1.25 in max opening | 1 |
| Air Compressor Hose, 25 foot length | 1 |
| Air Compressor, Portable, 5 gal. tank | 1 |
| Alligator Leads Set of 10 Leads | 5 |
| Ball End, 1/4" | 3 |
| Banana to Alligator Test Lead Set | 7 |
| Banana to reinforced Test Pin Lead Set, 36" red and black | 13 |
| Band saw, Bench top, 9" Throat, 115V, 1/5HP, Tilting | 1 |
| Bastard-Cut Mill File, 8 inch | 1 |
| BenchMill 6100 CNC Milling Machine | 1 |
| Bucket, 6 gallon, plastic with handle | 3 |
| Building block set, wooden painted, 8 block shapes (100 pieces) | 5 |
| Carabiner Shuttle pens (6 pack) | 1 |
| Chain, 2 foot length, 3/4 inch length links | 1 |
| Clamp light, Reflector, white 6' cord, each | 7 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 3 |
| Coffee maker, basic single serve | 1 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 7 |
| Compact Scale, 1000 g x .1g accuracy | 1 |
| Compact Scale, 2000 g x 1 g | 1 |
| Compression and extension springs, assorted small | 1 |
| Concrete block , 16 inch x 8 inch x 8 inch | 13 |
| Connector Socket, 22-26 AWG, Tin Crimp, 100 pack | 1 |
| Cordless Drill, 14 Volt or higher | 3 |
| Crucible Tongs | 1 |
| Delrin balls - white 3/4"- pack of 10 | 1 |
| Desktop 3-Hole Punch | 1 |
| Dial Calipers, 6 inch, steel, graduated to .001 inches | 13 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Multimeter Super Economy Plus DMM | 13 |
| Dremel 3D Printer Bundle for IED - includes 1 x 3D45 + 9 rolls of filament | 1 |

| | |
|---|----|
| Drill Press Vise, 4" Capacity | 1 |
| Drill press, bench top, 8", 5-speed, 1/3HP, 1Ph, 120V, each | 1 |
| Easy Cutter | 3 |
| Edge Finder | 1 |
| End Mill Tool, square, 0.25 inch diameter, 1.5 inch length | 3 |
| End Mill, 1/8" | 3 |
| End Mill, 3/8" | 3 |
| Engraver Drill Bit | 3 |
| Eye screws, #4 size, (25 pack) | 1 |
| File handle, For 8" to 10" files, pack of 5 | 1 |
| Fishing snap swivels (any size), 12 pack | 1 |
| Gauge block, Steel | 1 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Hack saw, For 10" or 12" blade, D-Handle, each | 3 |
| Hand lenses, 3x magnification | 13 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Height Offset Sensor | 1 |
| Hex Key Set, 10 Piece Metric | 1 |
| Hex key set, folding, 9 sizes | 1 |
| Hickory Hammer, 16 oz | 3 |
| Hook Up Wire 22 Gauge, Solid, Black, 25 feet | 1 |
| Hook Up Wire 22 Gauge, Solid, White, 25 feet | 1 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 1 |
| IED Material Testing Kit | 1 |
| IED Metal Dowel Pin Kit | 1 |
| Instant Read Probe Thermometer | 1 |
| Jaw style/Claw staple remover | 3 |
| Lamp base E10 | 1 |
| Locking pliers, 7", 1 5/8" curved jaw, each | 1 |
| Lynxmotion PLTW Robotic Arm Kit (assembled) w/base | 7 |
| Magnetic Wand, 1 piece | 1 |
| Male Headers, 20 x .025 inch posts, 10 pack | 3 |
| Melamine board, 4 ft x 8 ft, cut into four count 2 ft x 4 ft boards | 1 |
| Mini push button switch, 10 pack | 3 |
| Momentary switch, 20 pack | 1 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Nitinol Memory Wire, 1 ft | 1 |
| Paper Cutter, 12 inch cut length | 1 |
| Pliers, Curved Jaw Slip Joint, Channel Lock | 1 |

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|---|----|
| PLTW IED VEX IQ Kit | 1 |
| Precision Screwdriver Set, 6-Piece | 1 |
| Protractors, Semicircular Transparent, 12 pack, 3.5 inch | 3 |
| PVC Pipe, Schedule 40, 1" x 24" | 1 |
| Reamer | 1 |
| Resistor Kit, 365 Piece, 1/4 Watt | 1 |
| RSR Solderless Breadboard Model MB106 | 13 |
| RSR Variable DC Power Supply 18V 0-2A | 7 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 1 |
| Screwdriver Set, 12 piece, slot and Phillips tips | 1 |
| SD Card, 8 GB+ (for use with digital camera) | 1 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| S-Hook, 1.75 Inch, Pack of 10 | 1 |
| Single AAA-battery holders, 10 pack | 3 |
| Slide staple remover | 3 |
| Slip joint pliers, 8" L, milled jaws, each | 3 |
| Socket Set, 3/8 in. Drive SAE/Metric, 19-Piece | 1 |
| Solderless Breadboard with 300 Tie Points | 13 |
| Spring Clamps, 3 inch jaw opening | 3 |
| Spring Scale, Push and Pull, 1 Kilogram (10.0 N) capacity | 7 |
| Steel balls, 1/2 inch, 100 pack | 1 |
| Stopwatch, handheld, LED, 10 pack | 1 |
| Storage Organizer (for small hardware), 4 pack | 3 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Syringes, 10 cc/mm, 10 pack, standard tip | 1 |
| Syringes, 20 cc/mm, 10 pack | 1 |
| Syringes, 30 cc/mm, 10 pack, standard tip | 1 |
| Tape measure, steel, 25 foot with thumb lock | 7 |
| Tape measure. vinyl (10 pack), 60" length, inch and CM | 1 |
| Thermodynamics Heat Box classroom set (3 units) | 1 |
| Trammel toy base - 5 pack | 1 |
| Trigger Bar Clamp, Medium, 12 inch, 2 pack | 7 |
| Trigger Bar Clamp, Medium, 6 inch | 3 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Vernier Dual Range Force Sensor | 7 |
| Vernier Go! Link | 7 |

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|---|---------------------|
| Vernier Stainless Steel Temperature Probe | 7 |
| VEX IQ Pin Tool (10-pack) | 1 |
| VEX POE/CIM Kit - Cortex | 7 |
| VEX POE/CIM Transition Kit - New V5 | 7 |
| Webcam, generic USB | 7 |
| Weight,Dumbbell 2 lb, 1 pair | 7 |
| Weight/Dumbbell, 1 lb, 1 pair | 7 |
| Wood Round Balls, 1/2 inch diameter, 100 pack | 1 |
| Wrench Set, 10 Piece, Metric | 1 |
| Wrench Set, 9 piece, SAE | 1 |
| Total Cost | \$ 70,734.24 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 60,124.10 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 10,610.14 |

Minimum Equipment List: PLTW Pre-Engineering with Digital Electronics (IED, POE, DE)

| Item Description | Number Required |
|--|-----------------|
| 2 Amp Multi-Output Power Supply | 13 |
| Acrylic Balls 1/2", 50 pack | 1 |
| Adjustable Wrench, 8 inch, 1.25 in max opening | 1 |
| Alligator Leads Set of 10 Leads | 5 |
| Banana to Alligator Test Lead Set | 7 |
| Banana to reinforced Test Pin Lead Set, 36" red and black | 13 |
| Bastard-Cut Mill File, 8 inch | 1 |
| Battery Holder, 4 x AA capacity, 10 pack | 3 |
| Bucket, 6 gallon, plastic with handle | 3 |
| Building block set, wooden painted, 8 block shapes (100 pieces) | 5 |
| Carabiner Shuttle pens (6 pack) | 1 |
| Chain, 2 foot length, 3/4 inch length links | 1 |
| Clamp light, Reflector, white 6' cord, each | 7 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 3 |
| Coffee maker, basic single serve | 1 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 7 |
| Compact Scale, 1000 g x .1g accuracy | 1 |
| Compact Scale, 2000 g x 1 g | 1 |
| Compression and extension springs, assorted small | 1 |
| Concrete block , 16 inch x 8 inch x 8 inch | 13 |
| Cordless Drill, 14 Volt or higher | 3 |
| Crucible Tongs | 1 |
| Delrin balls - white 3/4"- pack of 10 | 1 |
| Desktop 3-Hole Punch | 1 |
| Desolder Pump with Tip | 7 |
| Dial Calipers, 6 inch, steel, graduated to .001 inches | 13 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Logic Probe | 1 |
| Digital Multimeter Super Economy Plus DMM | 13 |
| Dremel 3D Printer Bundle for IED - includes 1 x 3D45 + 9 rolls of filament | 1 |
| Drill Press Vise, 4" Capacity | 1 |
| Easy Cutter | 3 |
| Eye screws, #4 size, (25 pack) | 1 |
| File handle, For 8" to 10" files, pack of 5 | 1 |

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|---|----|
| Fishing snap swivels (any size), 12 pack | 1 |
| Fuse, 5x20mm fast-acting , 1.25 amp, 10 pack | 3 |
| Gauge block, Steel | 1 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Green LED - 5 mm, 1.9 V, 100 pack | 1 |
| Hack saw, For 10" or 12" blade, D-Handle, each | 3 |
| Hand lenses, 3x magnification | 13 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Hex key set, folding, 9 sizes | 1 |
| Hickory Hammer, 16 oz | 3 |
| Hook Up Wire 22 Gauge, Solid, Black, 25 feet | 1 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 1 |
| IED Material Testing Kit | 1 |
| IED Metal Dowel Pin Kit | 1 |
| Instant Read Probe Thermometer | 1 |
| Jaw style/Claw staple remover | 3 |
| Lamp base E10 | 1 |
| Lead Free De-Soldering Braid Rosin, .05 inch , 5 pack | 5 |
| Lighted Magnifier, 4x Magnification | 5 |
| Lighted Magnifier, Lens Free | 5 |
| Locking pliers, 7", 1 5/8" curved jaw, each | 1 |
| Magnetic Wand, 1 piece | 1 |
| Melamine board, 4 ft x 8 ft, cut into four count 2 ft x 4 ft boards | 1 |
| Mini push button switch, 10 pack | 3 |
| Mini Table Vise, 1.5 inch | 13 |
| Momentary switch, 20 pack | 1 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Nitinol Memory Wire, 1 ft | 1 |
| Paper Cutter, 12 inch cut length | 1 |
| Parallax Student DE Bundle with Arduino | 13 |
| PLTW Digital Electronics Integrated Circuits Kit | 3 |
| PLTW IED VEX IQ Kit | 1 |
| PLTW myDAQ Digital MiniSystem | 13 |
| Precision Screwdriver Set, 6-Piece | 1 |
| Protractors, Semicircular Transparent, 12 pack, 3.5 inch | 3 |
| PVC Pipe, Schedule 40, 1" x 24" | 1 |
| Reamer | 1 |
| Red LED - 5 mm, 2 V, 500 pack | 1 |
| Resistor / Capacitor Kit | 3 |

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|---|----|
| Resistor Kit, 365 Piece, 1/4 Watt | 1 |
| RSR Helping Hand With Magnifier | 13 |
| RSR High Performance 25 Watt 3-Wire Iron | 13 |
| RSR Soldering Iron Stand | 13 |
| RSR Solderless Breadboard Model MB106 | 13 |
| RSR Variable DC Power Supply 18V 0-2A | 7 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 1 |
| Screwdriver Set, 12 piece, slot and Phillips tips | 1 |
| SD Card, 8 GB+ (for use with digital camera) | 1 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| S-Hook, 1.75 Inch, Pack of 10 | 1 |
| Single AAA-battery holders, 10 pack | 3 |
| Slide staple remover | 3 |
| Solderless Breadboard with 300 Tie Points | 13 |
| Spring Clamps, 3 inch jaw opening | 3 |
| Spring Scale, Push and Pull, 1 Kilogram (10.0 N) capacity | 7 |
| Steel balls, 1/2 inch, 100 pack | 1 |
| Storage Organizer (for small hardware), 4 pack | 3 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Syringes, 10 cc/mm, 10 pack, standard tip | 1 |
| Syringes, 20 cc/mm, 10 pack | 1 |
| Syringes, 30 cc/mm, 10 pack, standard tip | 1 |
| Tape measure, steel, 25 foot with thumb lock | 7 |
| Tape measure. vinyl (10 pack), 60" length, inch and CM | 1 |
| Thermodynamics Heat Box classroom set (3 units) | 1 |
| Trammel toy base - 5 pack | 1 |
| Trigger Bar Clamp, Medium, 12 inch, 2 pack | 7 |
| Trigger Bar Clamp, Medium, 6 inch | 3 |
| USB A to USB B micro cable, 1.64 ft | 13 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Vernier Dual Range Force Sensor | 7 |
| Vernier Go! Link | 7 |
| Vernier Stainless Steel Temperature Probe | 7 |
| VEX DE Kit | 13 |
| VEX IQ Pin Tool (10-pack) | 1 |
| VEX POE/CIM Kit - Cortex | 7 |

| | |
|---|---------------------|
| VEX POE/CIM Transition Kit - New V5 | 7 |
| Webcam, generic USB | 7 |
| Weight,Dumbbell 2 lb, 1 pair | 7 |
| Weight/Dumbbell, 1 lb, 1 pair | 7 |
| Wood Round Balls, 1/2 inch diameter, 100 pack | 1 |
| Wrench Set, 9 piece, SAE | 1 |
| Yellow LED - 5 mm, 2.1 V, 100 pack | 1 |
| Total Cost | \$ 59,910.28 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 50,923.74 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 8,986.54 |

**Minimum Equipment List: PLTW Pre-Engineering with Engineering
Design and Development
(IED, POE, EDD)**

| Item Description | Number Required |
|--|-----------------|
| 2 Amp Multi-Output Power Supply | 13 |
| Acrylic Balls 1/2", 50 pack | 1 |
| Adjustable Wrench, 8 inch, 1.25 in max opening | 1 |
| Alligator Leads Set of 10 Leads | 5 |
| Back Saw, 14 inch, 12-14 teeth per inch | 5 |
| Banana to Alligator Test Lead Set | 7 |
| Banana to reinforced Test Pin Lead Set, 36" red and black | 13 |
| Bastard-Cut Mill File, 8 inch | 1 |
| Bucket, 6 gallon, plastic with handle | 3 |
| Building block set, wooden painted, 8 block shapes (100 pieces) | 5 |
| Carabiner Shuttle pens (6 pack) | 1 |
| Chain, 2 foot length, 3/4 inch length links | 1 |
| Clamp light, Reflector, white 6' cord, each | 7 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 3 |
| Coffee maker, basic single serve | 1 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 7 |
| Compact Scale, 1000 g x .1g accuracy | 1 |
| Compact Scale, 2000 g x 1 g | 1 |
| Compression and extension springs, assorted small | 1 |
| Concrete block , 16 inch x 8 inch x 8 inch | 13 |
| Cordless Drill, 14 Volt or higher | 3 |
| Crucible Tongs | 1 |
| Delrin balls - white 3/4"- pack of 10 | 1 |
| Desktop 3-Hole Punch | 1 |
| Dial Calipers, 6 inch, steel, graduated to .001 inches | 13 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Multimeter Super Economy Plus DMM | 13 |
| Dremel 3D Printer Bundle for IED - includes 1 x 3D45 + 9 rolls of filament | 1 |
| Drill Press Vise, 4" Capacity | 1 |
| Easy Cutter | 3 |
| Eye screws, #4 size, (25 pack) | 1 |
| File handle, For 8" to 10" files, pack of 5 | 1 |
| Fishing snap swivels (any size), 12 pack | 1 |
| Gauge block, Steel | 1 |

| | |
|---|----|
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Hack saw, For 10" or 12" blade, D-Handle, each | 3 |
| Hand lenses, 3x magnification | 13 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Hex key set, folding, 9 sizes | 1 |
| Hickory Hammer, 16 oz | 3 |
| Hook Up Wire 22 Gauge, Solid, Black, 25 feet | 1 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 1 |
| IED Material Testing Kit | 1 |
| Instant Read Probe Thermometer | 1 |
| Jaw style/Claw staple remover | 3 |
| Lamp base E10 | 1 |
| Locking pliers, 7", 1 5/8" curved jaw, each | 1 |
| Magnetic Wand, 1 piece | 1 |
| Melamine board, 4 ft x 8 ft, cut into four count 2 ft x 4 ft boards | 1 |
| Mini push button switch, 10 pack | 3 |
| Miter Box, clamping | 5 |
| Momentary switch, 20 pack | 1 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Nitinol Memory Wire, 1 ft | 1 |
| Paper Cutter, 12 inch cut length | 1 |
| PLTW IED VEX IQ Kit | 1 |
| Precision Screwdriver Set, 6-Piece | 1 |
| Protractors, Semicircular Transparent, 12 pack, 3.5 inch | 3 |
| PVC Pipe, Schedule 40, 1" x 24" | 1 |
| Reamer | 1 |
| Resistor Kit, 365 Piece, 1/4 Watt | 1 |
| RSR High Performance 25 Watt 3-Wire Iron | 13 |
| RSR Soldering Iron Stand | 13 |
| RSR Solderless Breadboard Model MB106 | 13 |
| RSR Variable DC Power Supply 18V 0-2A | 7 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 1 |
| Screwdriver Set, 12 piece, slot and Phillips tips | 1 |
| SD Card, 8 GB+ (for use with digital camera) | 1 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| S-Hook, 1.75 Inch, Pack of 10 | 1 |
| Single AAA-battery holders, 10 pack | 3 |

| | |
|---|---------------------|
| Slide staple remover | 3 |
| Socket Set, 3/8 in. Drive SAE/Metric, 19-Piece | 1 |
| Solderless Breadboard with 300 Tie Points | 13 |
| Spring Clamps, 3 inch jaw opening | 3 |
| Spring Scale, Push and Pull, 1 Kilogram (10.0 N) capacity | 7 |
| Steel balls, 1/2 inch, 100 pack | 1 |
| Storage Organizer (for small hardware), 4 pack | 3 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Syringes, 10 cc/mm, 10 pack, standard tip | 1 |
| Syringes, 20 cc/mm, 10 pack | 1 |
| Syringes, 30 cc/mm, 10 pack, standard tip | 1 |
| Tape measure, steel, 25 foot with thumb lock | 7 |
| Tape measure. vinyl (10 pack), 60" length, inch and CM | 1 |
| Thermodynamics Heat Box classroom set (3 units) | 1 |
| Trammel toy base - 5 pack | 1 |
| Trigger Bar Clamp, Medium, 12 inch, 2 pack | 7 |
| Trigger Bar Clamp, Medium, 6 inch | 3 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Vernier Dual Range Force Sensor | 7 |
| Vernier Go! Link | 7 |
| Vernier LabQuest Mini | 13 |
| Vernier Stainless Steel Temperature Probe | 7 |
| Vernier Turbidity Bottles | 1 |
| Vernier Turbidity Sensor | 3 |
| VEX IQ Pin Tool (10-pack) | 1 |
| VEX POE/CIM Kit - Cortex | 7 |
| VEX POE/CIM Transition Kit - New V5 | 7 |
| Webcam, generic USB | 7 |
| Weight,Dumbbell 2 lb, 1 pair | 7 |
| Weight/Dumbbell, 1 lb, 1 pair | 7 |
| Wood Round Balls, 1/2 inch diameter, 100 pack | 1 |
| Wrench Set, 9 piece, SAE | 1 |
| Total Cost | \$ 52,672.28 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 44,771.44 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 7,900.84 |

Minimum Equipment List: Innovations in Science and Technology (1-3)

| Item Description | Number Required |
|---|-----------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| 2-gal. Bucket | 1 |
| 5 LED Dynamo Flashlight | 2 |
| 9" Stainless Steel Locking Tongs | 6 |
| 92 Piece Drip Parts Assortment | 2 |
| ~Preferred Stainless-Steel Scissors, Bent-Handle | 6 |
| 1 1/2 black iron close nipple | 8 |
| 1 1/2x 3" Nipple | 8 |
| 1 GPH PC Dripper (10-Pack) | 1 |
| 1 in. x 25 ft. Self-Centering Power Return Tape Hi-Viz Orange | 6 |
| 1 Ton Arbor Press | 2 |
| 1/2"18V PLSTC W/BATT CRDLS COMPACT DR/DRVR KIT | 2 |
| 1/4 BSPT TO 1/4 BARB (PACK OF 10) | 2 |
| 1/4 in. Barb Tee Pack of 25 | 1 |
| 1/4 in. High Pressure Clamp (10-Pack) | 2 |
| 1/4 in. x 100 ft. Drip & Micro Irrigation Tubing | 1 |
| 1/4 Inch Barb Size, 1/4 NPT, Nylon Single Barbed Tube Adapter (Pack of 10) | 1 |
| 100ft. Measuring Tape | 2 |
| 1-1/2" BLK FLOOR FLANGE | 8 |
| 12-2 NM-B Wire (25 Ft Roll) | 1 |
| 12V electric Solenoid Valve | 8 |
| 12V Voltage Regulator | 6 |
| 14 amp Electric Wood Chipper/Shredder | 1 |
| 14 in. x 4 in. Finishing Trowel | 1 |
| 14-Speed Blender | 2 |
| 15" Silicone Cloth Oven / Freezer Mitts | 20 |
| 15" Standard Duty Solid Stainless Steel Basting Spoon | 6 |
| 180 Degree Protractor | 12 |
| 20 Qt InductionReadyStainless Steel Stock Pot w/Lid | 3 |
| 25 lb. White Plaster of Paris Dry Mix | 6 |
| 29 Piece Drill Bit Set | 4 |
| 3/4" ALUM CONDUIT BENDER & HANDLE | 2 |
| 3-1/2 in. x 3-1/2 in. x 1/4 in. Hinge (2 pack) | 3 |

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|--|----|
| 32-Piece Standard Tip Bit Set | 4 |
| 3-pack 60" Soft Fabric Tape Measures | 2 |
| 3QT - Saucepan Copper Bottom | 2 |
| 3-Wire Soldering Iron | 10 |
| 4 QT measuring cup | 3 |
| 443540 Permanent Magnet DC Generator~ | 6 |
| 5 gal Bucket | 6 |
| 5044 PVC (75 Gauge) Shrink Film, 10" x 500', 1 Roll | 1 |
| 600 ml beaker glass, Case 6 | 1 |
| 6-Piece Combination Hand File Set with Wood Handles, in a Canvas Roll Pouch | 2 |
| Advanced Career - Electronics Kit | 1 |
| Alligator Leads (Pack of 10) | 6 |
| APPARATUS DISTILLING | 4 |
| BEAKER, GRIFFIN 250ML | 12 |
| Bike Lock | 8 |
| Biological Evidence Collection Kit | 1 |
| Black Personal Digital Bathroom Scale with EYestra Large Backlit 4.0" Display and "Step-On" Technology | 1 |
| Brass Garden Hose-to-Pipe Rigid Adapter, 3/4" Female Garden Hose, 1/4" NPT Female | 8 |
| Burgundy Full Length Bib Apron (3 Pockets) | 20 |
| Buzzer | 12 |
| Car audio speaker | 8 |
| Caution Tape | 1 |
| Colored Card Stock, 8 1/2" x 11", Lunar Blue 250 Sheets | 1 |
| Craft sticks | 1 |
| Deluxe Gear Set | 2 |
| Deluxe Fine Kerf Razor Saw and Miter Set | 1 |
| Digital Angle Finder | 2 |
| Digital Camera | 6 |
| Digital Scale | 1 |
| DIGITAL SOUND LEVEL METER 100 HZ TO 8.3 KHZ | 1 |
| Digital Stereo Earphones | 8 |
| Disc Magnet | 25 |
| Disolved Oxygen Probe | 2 |
| Eagle Claw Round Snap-On Floats, 6 Piece (White, 2.5-Inch) | 6 |
| EZ-Vac Bagging Kit 115v (1 Kit) | 2 |
| fischertechnik Engineering Core Parts Kit 9V Add-ON | 12 |
| fischertechnik Engineering Core Parts Kit | 12 |
| fischertechnik Mechanic and Static 2 | 12 |
| Flash light bulbs 6V (Pack of 5) | 2 |
| Foam Table cutter | 1 |
| Forensic DNA Fingerprinting Kit | 1 |

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|---|----|
| Forged Steel Nail Hammer with Fiberglass Handle, Straight Claw, 16oz Head, 13" Overall | 2 |
| Fragrance Oil Sampler | 1 |
| Galvanized Low-Carbon Steel Sheet, .012" Thick, 24" x 48" | 1 |
| Galvanized Steel Blower Wheel - 4 1/4" Diameter 1/4" Bore | 6 |
| Gear & Pulley Combo (Pack of 20) | 6 |
| General Purpose Scissors, 8.5" | 1 |
| General Tools 6 in. 4-Way Dial Caliper | 6 |
| GLUE GUN | 4 |
| GONIOMETER | 2 |
| Hacksaw -Fractional Blade Lengths: 8, 10, 12 | 1 |
| Heavy Duty 37-Gal. Storage Tote in Gray | 6 |
| HIGH-STRENGTH CLEAR PVC TUBING, 1/4" ID, 3/8" OD, 1/16" WALL THICKNESS 100' ROLL | 1 |
| Hot Wire Foam Factory Pro Knife 2-in-1 | 6 |
| Jergens Flat Washer | 16 |
| KEYCHAIN LASER POINTER | 12 |
| Knife Switches | 12 |
| LabQuest Power Supply | 6 |
| LED Solar Stake Lights (Pack of 6) | 1 |
| Long-Nose Pliers Side Cutting | 2 |
| Low-Carbon Steel Tight-Tolerance 10.09Rectangular Bar, 1/16" Thick, 1" Width, 2' Length | 1 |
| Measuring Cup, Clear with Red Lid and Measurements | 1 |
| Mini Bulb Socket Threaded (Pack of 10) | 2 |
| MOSAIC SQUARE MIRROR TILES - (Pack of 10) | 6 |
| Motor DC 9V Heavy Duty | 20 |
| Motor Pinion Gear 2mm (Pack of 10) | 1 |
| Multipurpose 6061 Aluminum, Sheet, .063" Thick, 2" x 48" | 1 |
| Multipurpose Wire Stripper/Crimper | 6 |
| Multi-Tool | 2 |
| myDAQ adapter | 6 |
| myQuake | 1 |
| mySTEM board | 12 |
| N45 Neodymium Magnet Dia 3/4X3/8" NdFeB Rare Earth Disc Magnet | 24 |
| Nylon Tight-Seal Barbed Tube Fitting, Straight for 1/4" Tube ID x 1/2 Male Pipe, Black, 1 | 1 |
| Paper Log Maker 4-in-1 | 1 |
| PCR Based Identification of Foodstuffs for Genetically Modified Organisms Lab Activity | 1 |
| pH Paper 100 pack | 1 |
| PH Sensor | 2 |
| PIR Sensor (Rev B) | 12 |
| Plastic Memo Clipboards 6" x 9" | 24 |
| Plastic Pulleys (Pack of 20) | 1 |
| Plastic Syringe, Manual, with Luer Lock Connection, 10ml Capacity | 20 |

| | |
|---|---------------------|
| Quick Release 1-1/8 in. Mini Tube Cutter | 8 |
| Quick-Grip Bar Clamp/Spreader, 4-1/4" Maximum Opening, 35 lb Holding Capacity | 6 |
| Retractable Utility Knife | 6 |
| Screen-Sieve Kit | 4 |
| Screw Assortment | 1 |
| Semi-Clear Plastic Jar, 16 oz, 500 ml, 2-7/8" Base Diameter, 6-3/4" Height 12 Pack | 2 |
| Set of 12 La Bomb Colors | 1 |
| Set Ring Stand | 6 |
| Shake Flashlight | 6 |
| Soap Loaf Equipment Kit | 2 |
| Soldering Iron Stand | 10 |
| Spring-Tempered Steel Spring Assortment | 2 |
| Spt 1300-Watt Induction Cooktop | 2 |
| Standard Combination Slip-Joint Pliers, 8" Overall Length, 1-17/64" Jaw Length | 2 |
| Standard Corn-Fill Broom | 6 |
| Steel Ball Bearing--ABEC-1, Double Sealed Bearing NO. R4 for 1/4" Shaft Diameter, 5/8" OD | 12 |
| Steel Extension Spring, 11.0" Length (Single Unit) | 1 |
| Steel Spring Clamp, 1" Maximum Opening | 12 |
| Steel Wire (1008 Carbon), Galvanized, .029" Diameter, 1/4-lb Spool, 114' Spool | 2 |
| Stive Bolt Assortment | 1 |
| Stranded Single-Conductor Wire, UL 1007/1569, 16 AWG, 300 VAC, Black 50ft Roll | 1 |
| Tekk Protection Chemical Splash Safety Goggles | 24 |
| Temperature Probe | 2 |
| Tennis Ball | 2 |
| Test Leads - Banana to Alligator Test Lead Set | 6 |
| Threaded Brass Pipe Fitting, 1/2 x 1/4 Pipe Size, Reducing Coupling | 16 |
| Timber Cutter | 6 |
| Tools screwdriver with 32 bit set | 4 |
| Tote Box 21" x 16" x 7" | 6 |
| Tubing 1/8" 100' | 1 |
| Turbidity Bottles | 2 |
| Turbidity Sensor | 2 |
| Variable DC Power Supply 0-18V 0-3A | 6 |
| Variable Speed Jigsaw, Orbital Style | 1 |
| WARDS Simulated Blood Typing Whodunit Lab Activity | 1 |
| White Twisted Masons String Line (1000 Ft Roll) | 1 |
| Wifi 3D Printer | 1 |
| Wraparound Safety Glasses, Clear Lens, Clear Frame, Black Nylon Arms | 24 |
| Total Cost | \$57,439.58 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 48,823.64 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 8,615.94 |

**Minimum Equipment List: Computer Science – Software
Development/Engineering**

| Item Description | Number Required |
|---|------------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Laser Printer | 1 |
| Total Cost | \$28,500.00 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 24,225.00 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,275.00 |

Minimum Equipment List: Computer Science – Mobile Applications Development

| Item Description | Number Required |
|---|--------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| IPOD Touch/Android Phone (Most Recent) | 25 |
| Ipad/Android Tablet (Most Recent) | 25 |
| MacBook Pro (teacher) | 1 |
| Media Cart | 2 |
| Teacher Ipad | 1 |
| Teacher Android Tablet | 1 |
| Ipad/Android Tablet Case | 25 |
| IPOD Touch/Android Phone Case | 25 |
| Apple Developer License | 1 |
| VGA Adapter Cables | 1 |
| Headphones | 1 |
| Total Cost | \$58,121.20 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 49,403.02 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 8,718.18 |

Minimum Equipment List: Computer Science - Cybersecurity

| Item Description | Number Required |
|---|--------------------|
| Necessary cables-(computer adapter cable; wire cable; interface cable; speaker cable; serial cable; patch cable; audio cable) | 1 |
| Wall Mount for LCD screen | 2 |
| Teaching wall display | 1 |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Keyboard and mouse set-wireless | 25 |
| LED Monitor VGA | 25 |
| Presentation Enclosure system, 19 rack space & necessary panels, shelves and screws | 1 |
| LED Backlit Display with Tuner, HDMI, USB, x3 VGA and necessary fittings and cables | 2 |
| HDMI Distribution Amplifier | 1 |
| HDMI Audio De embedder | 1 |
| LED digital signage 1080 and necessary cables, wall plates, screws and mounts | 1 |
| Midspan PoDM Injector and all necessary cables, modules and screws | 2 |
| Dual Desk Mount Monitor Arm Swivel | 25 |
| CAT Transmitter 100 | 1 |
| Surge Protectors | 10 |
| 10 ft high speed cable with ethernet for 4K devices | 25 |
| HDMI Adapter Cable 6 ft | 25 |
| LED Monitor 20: 1600X900 IPS HDMI, VGA, Display Port | 50 |
| Total Cost | \$50,916.17 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 43,278.74 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 7,637.43 |

Minimum Equipment List: Computer Science - Robotics

| Item Description | Number Required |
|---|--------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Laser Printer/Scanner | 1 |
| Student Robotics Kit | 7 |
| Digital Camera | 1 |
| Total Cost | \$36,378.00 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 30,921.30 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 5,456.70 |

Middle Level Courses

| Minimum Equipment List: PLTW Design and Modeling | |
|---|------------------------|
| Item Description | Number Required |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Colored permanent markers, 8 pack | 3 |
| Dial Calipers, 6 inch, steel, graduated to .001 inches | 13 |
| Digital Camera, 10.0 Megapixel | 1 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 6 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| SD Card, 8 GB+ (for use with digital camera) | 2 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| Stopwatch, handheld, LED, 10 pack | 2 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Design and Modeling Consumable/Refill Kit | 1 |
| Miscellaneous Recycled and Reused items | 25 |
| PLTW Gateway Notebook - 30-pack | 1 |
| Total Cost | \$ 29,632.47 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 25,187.60 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,444.87 |

Minimum Equipment List: PLTW Automation and Robotics

| Item Description | Number Required |
|---|---------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Back Saw, 14 inch, 12-14 teeth per inch | 5 |
| Bastard-Cut Mill File, 8 inch | 2 |
| Butter Knife, metal | 5 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 2 |
| Colored permanent markers, 8 pack | 3 |
| Desktop 3-Hole Punch | 1 |
| Digital Camera, 10.0 Megapixel | 1 |
| File handle, For 8" to 10" files, pack of 5 | 1 |
| Meter Stick, Wood, Case of 6 | 2 |
| Miter Box, clamping | 5 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| SD Card, 8 GB+ (for use with digital camera) | 2 |
| Storage Organizer (for small hardware), 4 pack | 2 |
| VEX Gateway Kit - Cortex | 7 |
| VEX Gateway Transition Kit - New V5, Select Optional filter to view pricing | 7 |
| VEX Performance Tool Kit | 2 |
| Total Cost | \$ 37,588.72 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 31,950.41 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 5,638.31 |

Minimum Equipment List: PLTW Energy and the Environment

| Item Description | Number Required |
|---|-----------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Bin with Lid, 62 Qt | 2 |
| Box Fan, 20 in | 7 |
| Clamp light, Reflector, white 6' cord, each | 7 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 2 |
| Colored permanent markers, 8 pack | 3 |
| Compact Scale, 2000 g x 1 g | 2 |
| Desktop 3-Hole Punch | 1 |
| Digital Camera, 10.0 Megapixel | 1 |
| Energy Crossroads DVD | 1 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| Ice cube tray | 6 |
| Leads with Alligator Clip ends, 10 packs of 10 leads | 2 |
| P4400 Kill-A-Watt Power Meter | 2 |
| Pair of Wool Socks | 2 |
| Paper Cutter, 12 inch cut length | 1 |
| Plastic Bin With Lid, see through, 13 x 7-1/4 x 4-1/2 | 10 |
| Plastic Tray, 10 x 14 x 1 inches | 2 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| SD Card, 8 GB+ (for use with digital camera) | 2 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| Small Metal Tray | 1 |
| Snap Circuit Kit - Energy and the Environment | 6 |
| Spoons, silver, 6 pk | 2 |
| Stopwatch, handheld, LED, 10 pack | 2 |
| Styrofoam cutter, Table top, each | 1 |
| Thermometer, digital instant read | 13 |
| Thermometer, LCD, Stick-On Aquarium | 3 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Vernier PLTW Wind Energy Custom Kit - 24 | 2 |
| VEX Alt Energy Pack - Gateway | 6 |
| White Cotton Socks | 2 |

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|--|--------------|
| Total Cost | \$ 32,689.39 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 27,785.98 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,903.41 |

Minimum Equipment List: PLTW Flight & Space

| Item Description | Number Required |
|---|---------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Balloon Air Pump, handheld | 9 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 2 |
| Digital scale, 500 gram capacity, 0.1 gram accuracy, 11.7x11.7 cm pan | 8 |
| Electrolysis Apparatus Kit, 1 unit | 1 |
| Flight and Space custom print set - game cards, target cards, runway cards, and dice | 1 |
| Graduated Cylinder, 100 mL, Polypropylene, case of 12 | 1 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Measuring Spoons, 1/4, 1/2, 1TSP, 1TBSP, Set of 4 | 2 |
| Measuring Tape, 60 inch, dual scale (in and cm), flexible plastic | 13 |
| Paper Cutter, 12 inch cut length | 1 |
| Paper Punch, single hole | 3 |
| Resistance Band, 12 in | 9 |
| Safety Goggles, Anti-fog Indirect Vent, 10 pack | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| Stopwatch, handheld, LED, 10 pack | 2 |
| Washers, Zinc 9/16 size, flat, 50 pack | 1 |
| Wood clothespins, with springs, 36 pack | 1 |
| Total Cost | \$ 29,514.25 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 25,087.11 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,427.14 |

Minimum Equipment List: PLTW Green Architecture

| Item Description | Number Required |
|---|---------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Architectural triangular scale, Plastic, white, open divided, pack of 4 | 7 |
| Back Saw, 14 inch, 12-14 teeth per inch | 6 |
| Camera Tripod (that fits your digital camera) | 1 |
| Caribeener tape measure, 10 ft | 25 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 2 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 8 |
| Desktop 3-Hole Punch | 1 |
| Diagonal Cutter, 4.5-Inch (Locking) | 9 |
| Digital Camera, 10.0 Megapixel | 1 |
| Furniture template, architectural, Includes 50 illustrations, each | 9 |
| Hammer, Ball Peen, 8 oz. | 3 |
| Hickory Hammer, 16 oz | 3 |
| Home furnishings template, Dimensional furniture for kitchen, dining, bedroom and living room | 9 |
| House plan template, Architectural Template, 1/4" = 1' | 9 |
| Meter Stick, Wood, Case of 6 | 2 |
| Miter Box, clamping | 6 |
| Oscillating Table Fan 12 inch | 3 |
| Paper Cutter, 12 inch cut length | 1 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| SD Card, 8 GB+ (for use with digital camera) | 2 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| Styrofoam cutter, Table top, each | 1 |
| Thermometer, digital instant read | 13 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Total Cost | \$ 30,198.71 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 25,668.90 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,529.81 |

Minimum Equipment List: PLTW Magic of Electrons

| Item Description | Number Required |
|---|---------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| 10k Thermistor, 10 pack | 2 |
| Back Saw, 14 inch, 12-14 teeth per inch | 5 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 2 |
| Colored permanent markers, 8 pack | 3 |
| Cordless Drill, 14 Volt or higher | 3 |
| Desktop 3-Hole Punch | 1 |
| Digital Camera, 10.0 Megapixel | 1 |
| Digital Multimeter Super Economy Plus DMM | 13 |
| Dowel rod , Hardwood, 1" x 36", pack of 10 | 2 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 2 |
| Leads with Alligator Clip ends, 10 packs of 10 leads | 2 |
| Maglev magnets, 250 pack | 2 |
| Miter Box, clamping | 6 |
| Multipurpose Wire Stripper and Cutter For Wire AWG 14 to 24 | 13 |
| Nails 20D, 4 inch, 1 lb | 1 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Paper Cutter, 12 inch cut length | 1 |
| RSR High Performance 25 Watt 3-Wire Iron | 13 |
| RSR Soldering Iron Stand | 13 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| SD Card, 8 GB+ (for use with digital camera) | 2 |
| Snap Circuit Kit - Magic of Electrons | 13 |
| Storage Organizer (for small hardware), 4 pack | 2 |
| Total Cost | \$ 32,199.97 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 27,369.97 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,830.00 |

Minimum Equipment List: PLTW Medical Detectives

| Item Description | Number Required |
|---|---------------------|
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8”, 2 monitors under 23.8”, or 15” minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Forceps, Fine-Point with Guide Pin, 4 1/2 inch, 10 pack | 2 |
| Headphones, basic, 5 pack (for audio in course & assessment) | 5 |
| Medline Blood Pressure/Pulse Monitor | 5 |
| Plastic Pan - 8 quart (16 x 12.25 x 5.75 in) | 1 |
| Rubber Laboratory Apron, 27 inch x 42 inch, case of 25 | 2 |
| Ruler, Clear Plastic, 15 CM / 6 IN, 10 pack | 3 |
| Safety Goggles, Anti-fog Indirect Vent, 10 pack | 3 |
| Spray Trigger Bottle - 16 oz | 5 |
| Stainless Steel Scalpel, 1 piece with cover, 10 pack | 2 |
| Stopwatch, handheld, LED, 10 pack | 2 |
| Test Tube Rack - Polyethylene | 2 |
| Total Cost | \$ 29,068.00 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 24,707.80 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,360.20 |

| Minimum Equipment List: PLTW Science of Technology | |
|---|------------------------|
| Item Description | Number Required |
| Student Computer Minimum Specs – Processor: Intel 8 th Gen i5/AMD Ryzen 5 2 nd Gen or Equivalent; Memory: 16 GB; Internal Storage: 128 GB SSD + 1TB HDD or 512 GB SSD; Graphics Card: 2 GB of GPU VRAM or equivalent for integrated graphics; Display: 1 at 23.8", 2 monitors under 23.8", or 15" minimum on laptop; Input Devices: Mouse & Keyboard; Ports: 3 USB (at least 1 a USB 3+), Audio Input/Output; 64-bit OS | 25 |
| Back Saw, 14 inch, 12-14 teeth per inch | 5 |
| Band saw, Bench top, 9" Throat, 115V, 1/5HP, Tilting | 1 |
| Bean bags, 12 pack | 3 |
| Brick, 4" x 8", solid concrete | 5 |
| Bucket, 6 gallon, plastic with handle | 3 |
| Camera Tripod (that fits your digital camera) | 1 |
| Classroom Storage Cabinet - 36 x 36 x 18 | 2 |
| Colored permanent markers, 8 pack | 3 |
| Combination Square, 12 inch with grooved markings | 8 |
| Compact Scale, 2000 g x 1 g | 2 |
| Cordless Drill, 14 Volt or higher | 3 |
| Desktop 3-Hole Punch | 1 |
| Diagonal Cutter, 4.5-Inch (Locking) | 9 |
| Digital Camera, 10.0 Megapixel | 1 |
| Door stop, rubber wedge type, 4 pack | 2 |
| Drill press, bench top, 8", 5-speed, 1/3HP, 1Ph, 120V, each | 1 |
| Drywall Screw No 8 x 2 inch, Phillips, 1 lb | 2 |
| Feathers, pack of 25 | 3 |
| Flashlight UV LED (3 x AAA batteries not included) | 13 |
| Foam Pipe Insulation, 3/4" x 6 ft, Pack of 12 | 13 |
| Glue Gun, Lo-Temp Full Size, 110 Volt | 13 |
| Hammer, Ball Peen, 8 oz. | 3 |
| Hand Strainer, Small | 5 |
| Hickory Hammer, 16 oz | 3 |
| Hooked Weights, set of 9, 10 g to 1000 g | 3 |
| HSS Drill Bits, 1/16" - 1/2" by 64ths, With Case, 14 piece | 2 |
| Kosher Salt, 3 lb box | 1 |
| Machine screw, 8-32 x 2", round head, slotted, steel, 100 pack | 2 |
| Marble, Pack of 15, 1 inch | 5 |
| Medicine Ear/Eye Dropper | 8 |
| Metal Clamp Pulley, 1-1/2 inch, pack of 6 | 2 |

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| Metal Salad Tongs | 2 |
| Meter Stick, Wood, Case of 6 | 2 |
| Metric Measuring Spoons, Set of 6 | 5 |
| Miter Box, clamping | 6 |
| Needle Nose Pliers, 5 inch, 5 pack | 3 |
| Nutcracker, Metal | 3 |
| Pack of 20 Marbles, 5/8" | 6 |
| Paper Cutter, 12 inch cut length | 1 |
| Pennies, approx \$5 worth (or 500) | 2 |
| Physical Science in Action: Simple Machines Video | 1 |
| Plastic Bin With Lid, see through, 13 x 7-1/4 x 4-1/2 | 10 |
| Polyethylene Widemouth Bottle | 8 |
| Powdered Milk, 10 oz container (9.6 oz bag) | 1 |
| Putty knife, 1 1/4" steel stiff blade, each | 3 |
| Rubber Laboratory Apron, 24 inch x 30 inch, case of 25 | 2 |
| Ruler, Clear Plastic, 12 inch / 31 cm, metric and English, 10 pack | 3 |
| Safety Glasses, 12 pack, black frame | 3 |
| Scissors, 7 inch, plastic handle, pointed tip - 12 pack | 2 |
| Scratch awl, Wood handle, 3 3/8" blade, each | 2 |
| Screwdriver Set, 12 piece, slot and Phillips tips | 2 |
| SD Card, 8 GB+ (for use with digital camera) | 2 |
| Self-healing cutting mat - 11.8 in x 8.7 in - pack of 6 | 3 |
| Set of 4 Measuring Cups | 8 |
| Spade bit set, 6 Bit Set, 3/8" - 1" with plastic roll, set *** | 1 |
| Spring Clamps, 4" Long, 1" opening | 3 |
| Spring Scale, Push and Pull, 1 Kilogram (10.0 N) capacity | 8 |
| Staple gun, Heavy-duty, 3 in 1, each | 2 |
| Steel balls, 1/2 inch, 100 pack | 1 |
| Stopwatch, handheld, LED, 10 pack | 2 |
| Styrofoam cutter, Table top, each | 1 |
| Tape measure, steel, 25 foot with thumb lock | 8 |
| Thermometer, digital instant read | 13 |
| Trigger Bar Clamp, Medium, 12 inch, 2 pack | 8 |
| Trigger Bar Clamp, Medium, 6 inch | 3 |
| Tweezers, metal, basic, 10 pack | 2 |
| Utility Knife, metal, with 5x replacement blades | 13 |
| Washers, 100 pack, assorted sizes | 1 |
| Wood chisel set, 1/4", 1/2", and 1" | 3 |
| Wood screw, 2"L x 8D, Philip flat head, steel, pack of 100 | 2 |
| Wooden Block, 2" x 4" x 6" | 3 |
| Wooden Dowel, 7/16" D, 36" L | 2 |

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| Total Cost | \$ 33,013.66 |
| 85% Cost -- If funded by State Start-Up Grant | \$ 28,061.61 |
| 15% Cost -- Responsibility of district if funded by State Start-Up Grant | \$ 4,952.05 |