# Inventory

This inventory is designed to help you gather information about what you currently have to help you implement the PLTW pre-engineering program.

## Computers

The chart below has computer specifications for the PLTW software.  If you have an existing lab, place a check near the appropriate box.  Be sure to write down the name of your graphics card.

| Manufacturer of existing Computer: | | | |
|---|---|---|---|
| Latest Specifications | | Minimum Specifications | |
| P4 – 3.2 GHz or better | | P 2  500MHz or better | |
| 1 GIG DDR Ram Memory | | 256 Megs ram | |
| 40 + GB Hard Drive | | 10 GB Hard Drive | |
| 31/2 1.44 MB Floppy Drive or USB Memory Stick | | 31/2 1.44 MB Floppy Drive | |
| CDRW/DVD drive | | CD Rom | |
| AGP 8X 3D Graphics with 64 MB Video Memory or Equivalent (must be compatible with Autodesk Inventor software; see http://www.autodesk.com/us/inventor/graphic_cards/ for information) | | AGP 2X 3D Graphics card 8 MB Video Memory or Equivalent (must be compatible with Autodesk Inventor software; see http://www.autodesk.com/us/inventor/graphic_cards/ for information) | |
| Name of Video Driver | | Name of Video Driver | |
| 3COM or Intel 100TX Ethernet with RJ45 connector | | 3COM or Intel 100TX Ethernet with RJ45 connector | |
| 4 USB Ports Minimum - Version 2.0 | | | |

| | | | |
|---|---|---|---|
| USB Keyboard | | Keyboard | |
| 3D Optical Wheel Mouse | | Mouse | |
| Anti-Virus software | | Anti-Virus software | |
| Win XP Pro | | Windows 2000 SP2 | |
| 3 year Warranty | | | |
| 17" SVGA 1280X1024 Color Monitor or optional flat screen | | 17" SVGA 1280X1024 Color Monitor | |
| 16-Bit Sound Card (minimum) | | 16-Bit Sound Card | |
| Minimum 3 PCI Slots Before Installation of Soundcard or NICs | | Minimum 3 PCI Slots Before Installation of Soundcard or NICs | |

## Computer Lab

Your computer lab should be equipped to allow students to create and print reports, graphs, graphic solutions, and other materials, as necessary, to support the curriculum.  Networks are as individual as school districts.  There is no single correct networking solution, although some will work much better than others.

| | |
|---|---|
| Existing Network type: | |
| | Y/N |
| Existing Switches | |
| Existing Hubs | |
| Existing Router | |
| Existing Server/ 40 Gig drive for student storage | |
| Existing V-Lan | |
| Network Drops | |
| Internet connection | |
| Microsoft Office including PowerPoint | |
| Anti-Virus | |
| High speed Laser Jet Printer   Type: | |
| Large Format Printer          Type: | |
| Student Work Stations | |
| Student Chairs | |
| Conference Tables | |
| Digital Projector | |
| Screen | |
| White Board | |

# Individual Course Requirements

Each course requires some specific equipment.  People are encouraged to look at the purchasing manual to see the entire scope of necessary equipment.  The lists below are for some of the more expensive equipment that might be in existence in your school.

## POE

| Equipment | Y/N |
| --- | --- |
| Fischertechnik Kits | |
| Structural Stress Analyzer | |
| Pneumatics demonstration Module | |
| Hydraulics demonstration Module | |
| SPC MiniProcessor | |
| Digital Calipers | |
| Micrometer | |
| Work Tables | |
| Compressed Air | |

## IED

| Equipment | Y/N |
| --- | --- |
| Digital Calipers | |
| Work Tables | |

## DE

| Equipment | Y/N |
| --- | --- |
| Work Tables | |
| Proto-boards | |
| Dual Trace O-Scope | |
| PLD Burner | |
| Basic Stamp II Board of Education | |
| Signal generator | |
| Logic probes | |
| Multi-meters | |

## CIM

| Equipment | Y/N |
| --- | --- |
| Robotic Arm on Slide Base | |
| CNC Milling Machine | |
| Digital Calipers | |
| Compressed Air | |
| Fischertechniks | |

## CEA

| Equipment | Y/N |
|---|---|
| Auto-level | |
| Sieves for Soil testing | |
| Triple Beam Balance | |
| | |

## GTT

| Equipment | Y/N |
|---|---|
| Fischertechniks | |
| Multimeters | |
| Protoboards | |
| Power supplies | |
| Circuit Board Etching station | |
| Dremel drilling equipment | |
| Basic Logic Trainers | |

In addition to the above equipment, access to a prototyping lab is required for many courses especially GTT.

## Prototyping Lab

Prototyping labs are all different.  Activities can change to match the equipment at hand.  The following lists are intended for inventory only.

| Description | Y/N |
|---|---|
| Band Saw, 14" | |
| Table Saw, 10" | |
| Scroll Saw, Table Top Model | |
| Drill Press, Table Top Model | |
| Jointer, 6" | |
| Sander, 6" Belt / 12" Disc, Floor Model | |
| Sander, 1" Belt / 8" Disc, Table Top Model | |
| Grinder, 6", Table Top Model | |
| Lathe, Metal, 10" Swing, Minimum 24" Between Centers | |
| Milling Machine, Vertical, Table Top Model (note: not necessary if the CIM package has been purchased) | |
| Band Saw, Metal Cutting, Horizontal, 4" X 6" | |
| Plastic Injection Molder, ½ oz. to 1 oz. Capacity | |
| Plastic Strip Heater 23" | |
| Hot Wire Foam Cutter | |

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| Sheet Metal Equipment (table top) | |
|       shear | |
|       Adjustable Break | |
|       Slip Roller | |
| Mig Welder, Wire feed, 130amp Output, 120 volt, ¼" penetration | |
| Portable Power Tools | |
|       Power Miter Box, 12" | |
|       Portable Drill, Reversible, Variable Torque, 3/8" Keyless Chuck, 2 Batteries with recharger | |
|       Portable Belt Sander, 4" X 24" Belt with Dust Collection Bag | |
|       Portable ¼ Sheet Palm Grip Sander with Dust Collection | |
| Woodworker's Vise with Dog | |
| Machinist Vise, 4" Jaw Width | |
| Furniture | |
|       **Note**: Wooden base units and wall hung units with over counter florescent lighting is recommended. This may reduce the number of benches and storage cabinets recommended below. | |
|       Bench, 2 ¼" X 30" X 6' Maple Top, 2 Steel Base Units Each, 18"W X 21"D X 31"H, 4 Drawers | |
|       Bench, 2 ¼" X 30" X 6' Maple Top, 2 Steel Base Units Each, 18"W X 21"D X 31"H, Single Door with Padlock Hasp, Center Adjustable Shelf | |
|       Two Station Bench, Top: 2 ¼" X 28" X 64" With Steel Legs and Bracing | |
|       Safety Glass Cabinet, Capacity 25 Glasses and 10 Goggles | |
|       Storage Cabinet, 36" W X 78 – 84" High | |
|       General Tool Cabinet, Wooden, 60" W X 22" D X 84" H | |
|       Flammable Liquid Storage Cabinet, 35" X 35" X 22", Under Counter Model | |
| Ball Pein Hammer, 8 oz | |
| Ball Pein Hammer, 12 oz. | |
| Claw Hammer, 16 oz. | |
| Dead-blow Hammer, 12 oz. | |
| Rawhide Mallet, 9 oz. | |
| Center Punch, 3/8" | |
| Center Punch, 5/16" | |
| Saws, Wood Crosscut, 26", 10pt. | |
| Back Saw, 12" | |
| Compass Saw, 10" long 10 Pts per Inch | |
| Coping Saw, Frames and blades. | |
| Hack Saw Frame, & Assorted blades | |
| Miter Box, Hard Maple | |
| Combination Square, 12" | |

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|---|---|
| Try Square, 8" | |
| Steel Framing Square, 24" X 16" | |
| Drywall T-Square | |
| T-bevel, 8" | |
| Awls | |
| Utility Knife, Retractable Blade | |
| Putty Knife, Stiff Blade, 1 ¼" Wide Blade | |
| Steel Rule, Graduated in 1/8", 1/16" & 1/32' | |
| Steel Rule, 36" !/8 * 1/16 Graduations | |
| Steel Tape Measure, 24' X 1" wide Blade | |
| Divider, 6" | |
| Compass, Pencil, 6" dia. | |
| Adjustable Wrench, 8" | |
| 9 Piece Combination Wrench Set, ¼, 5/16, 3/8, 7/16, ½, 9/16, 5/8, 11/16, 3/4 | |
| Socket Set, ¼ & 3/8" drive | |
| Nut Driver Set, 3/16, 7/32, ¼, 9/32, 5/16, 11/32, 3/8 | |
| Hex Key Wrench Set,  .05" – 3/16" | |
| Slip-Joint Pliers, 8" | |
| Long Nose Pliers, 5 ½ or 6 ½" Long | |
| Lineman Pliers. 8" | |
| Diagonal Pliers, | |
| Slip Joint Pliers, 9 ½" | |
| Vice Grip Pliers, 6 – 8" long | |
| Assorted Metal Files, Flat, Round and Half Round, With Handles | |
| Assorted Wood Rasps, Flat, Round and Half Round, With Handles | |
| File Card & Brush | |
| Assorted Flat Blade Screwdrivers | |
| Assorted Phillips Screwdrivers | |
| Jeweler's Screwdriver, Set of 6 | |
| HSS Drills, 1/16" – ½" by 64ths, With Case | |
| Spade Bit Set, 3/8", ½", 5/8", 3/4", 7/8", 1" | |
| Counter Sink, ½" | |
| Drill Gauge | |
| Hand Drill, ¼" | |
| Tap & Die Set, 4-40 NC" – 1/2", NC & NF | |
| Whitney / Pexto #5 Jr. Hand Punch Kit | |
| Assorted Cold Chisels, 3/8" – 1" | |
| Wood Chisel Set, ¼, ½, ¾ & 1" | |
| Sharpening Stone (India) Combination Grit – Course and Fine | |
| "Surform" File Flat, Regular Cut | |
| "Surform" File Round, Regular Cut | |

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|---|---|
| "Surform" File Flat, Regular Cut | |
| Aviation Snip, Combination – M-3 | |
| Aviation Snip, Left, M-1R | |
| Aviation Snip, Right, M-2R | |
| Pattern Snips, Straight, 8" | |
| C-Clamp, 4" | |
| C-Clamp, 6" | |
| Quick Grip Bar Clamp, 6" jaw X 36" Long | |
| Spring Clamps, 4" Long | |
| Spring Clamp, 6" Long | |
| Level, Torpedo, Magnetic, 9" | |
| Level, 24" | |
| Pop Rivetool & Assorted Pop Rivets | |
| Drill Press Vise, 2 ½" Opening | |
| Grinding Wheel Dresser | |
| Pump Oiling Can | |
| Hot Glue Gun | |
| Staple Gun | |
| Goose Neck Ripping Bar | |