

MANUFACTURING TECHNOLOGIES

This recommended list is based upon a classroom size of 25 students. All costs are estimated and should be adjusted and verified with current quotes. No specific equipment vendor or brand names are endorsed due to various possibilities, but school districts should consult with stakeholders to ensure industry-recognized equipment and software are purchased. The intent of this list is to provide school districts with guidance on the equipment needed to cover the state standards for a Manufacturing Technologies program.

CLASSROOM EQUIPMENT**TOTAL: \$18,310**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Workstations w/chairs	\$400	\$10,000
1	Teacher Workstation w/chair	\$400	\$400
1	Teacher Computer (enhanced graphics/memory/speed)	\$2,500	\$2,500
1	Presentation Equipment (e.g., interactive whiteboard (IWB), or other interactive display system with software and accessories)	\$3,000	\$3,000
1	Networkable Laser Printer	\$400	\$400
1	Vertical File Cabinet (lockable)	\$330	\$330
2	Storage Cabinets (36" x 12" x 72") (lockable)	\$300	\$600
2	Bookcases (36" x 12" x 42")	\$115	\$230
2	White Boards (4' x 8')	\$110	\$220
1	Eyewash Station	\$300	\$300
1	Fire Extinguisher	\$130	\$130
1	Sink with Soap Dispenser	\$100	\$100
1	First Aid Kit	\$100	\$100

PROGRAM EQUIPMENT**TOTAL: \$335,200**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Computers (enhanced memory/speed)	\$1,500	\$37,500
1	Technology Storage/Charging System (optional)	\$2,000	\$2,000
1	Computer Numerical Control (CNC) Mill (4' x 8')	\$20,000	\$20,000
6	Motor Control Trainers	\$12,000	\$72,000
6	Sensor Trainers	\$12,000	\$72,000
1	Pneumatic and Hydraulic Trainer	\$12,000	\$12,000

PROGRAM EQUIPMENT (CONT.)

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	CNC Router	\$10,000	\$10,000
1	Virtual Welder	\$10,000	\$10,000
1	Laser Cutter	\$10,000	\$10,000
3	Welding Simulators w/software	\$7,000	\$21,000
1	Bench Lathe	\$4,500	\$4,500
6	Electrical Trainers	\$3,200	\$19,200
1	Combo Horizontal/Vertical Bandsaw	\$3,000	\$3,000
6	Advanced Robotics Kits	\$1,750	\$10,500
3	Gas Tungsten Arc Welders (GTAW)	\$1,600	\$4,800
1	Manual Mill	\$1,500	\$1,500
3	Plasma Cutters	\$1,500	\$4,500
3	Gas Metal Arc Welders (GMAW)	\$1,200	\$3,600
1	Air Compressor w/accessories	\$1,000	\$1,000
1	Full-size Color Printer/Plotter (24")	\$1,000	\$1,000
1	Hazmat Locker (45-gallon capacity)	\$1,000	\$1,000
1	Storage Cabinet for Sanitized Eye Protection Equipment	\$800	\$800
3	Oxy-fuel Welders/Cutting Equipment	\$600	\$1,800
3	Welding Tables	\$500	\$1,500
Varies	3D Printers and Supplies	\$10,000	\$10,000

INSTRUCTIONAL MATERIALS**TOTAL:****\$8,000**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Textbooks (Approved by NDE)	\$100	\$2,500
1	Teacher Textbook Edition and Resources	\$500	\$500
1	3D Modeling Computer-aided Design (CAD) Software with Site License	\$5,000	\$5,000

INSTRUCTIONAL SUPPLIES

TOTAL: \$21,625

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	Electrical Lockout Station	\$445	\$445
1	4-Lock Lockout Station	\$180	\$180
Varies	Power Tools (dependent on materials used, includes grinders, reciprocating saws, soldering, rotary tools, grinders, saws, etc.)	\$5,000	\$5,000
Varies	Measuring equipment (framing squares, measuring tapes, calipers, micrometers, levels, multimeters, tachometers, etc.)	\$3,000	\$3,000
Varies	Welding Materials (electrodes, metal, wire, gas, etc.)	\$3,000	\$3,000
Varies	Hand Tools (socket sets, vise, clamps, hammers, utility knives, hex keys/Allen wrenches, etc.)	\$2,500	\$2,500
Varies	Welding Personal Safety Equipment for (welding hoods, gloves, ear protection, and aprons, etc.)	\$2,500	\$2,500
Varies	Welding Tools (clamps, slag hammers, electrode tip cleaners, flint strikers, carts, etc.)	\$2,000	\$2,000
Varies	Lockable Toolboxes	\$1,500	\$1,500
Varies	Personal Protective Equipment (PPE) (class sets)	\$1,000	\$1,000
Varies	Computer Accessories (cases, covers, etc.) (optional)	\$500	\$500

OTHER

TOTAL: \$325

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	Occupational Safety and Health Administration (OSHA) Instructor Training	\$300	\$300
1	OSHA Lockout/Tagout (LOTO) Instructor Training	\$25	\$25

CATEGORY TOTALS:

CLASSROOM EQUIPMENT	\$18,310
PROGRAM EQUIPMENT	\$335,200
INSTRUCTIONAL MATERIALS	\$8,000
INSTRUCTIONAL SUPPLIES	\$21,625
OTHER	\$325
ESTIMATED PROGRAM TOTAL	\$383,460