

**HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION (HVACR)**

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, and 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 Heating, Ventilation, Air Conditioning, and Refrigeration program.

**CLASSROOM EQUIPMENT****TOTAL: \$17,210**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Workstations w/chairs	\$400	\$10,000
1	Teacher Workstation w/chair	\$400	\$400
1	Teacher Computer (enhanced memory/storage, download capable)	\$1,400	\$1,400
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 (black/white or color)	\$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: \$53,400**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Computers	\$1,000	\$25,000
1	Technology Storage/Charging System (optional)	\$2,000	\$2,000
1	Gas Cylinder Storage	\$3,500	\$3,500
1	Heavy Duty Shop Toolbox	\$1,100	\$1,100
12	HVAC Simulators – Heating Units	\$1,000	\$12,000
1	Storage Cabinet for Eye Protection Equipment	\$800	\$800
12	HVAC Simulators – Condenser Units	\$750	\$9,000

**NEVADA CTE RECOMMENDED EQUIPMENT LIST**

**2020**

**INSTRUCTIONAL MATERIALS**

**TOTAL:**

**\$3,000**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Textbooks (Approved by NDE)	\$100	\$2,500
1	Teacher Textbook Edition and Resources	\$500	\$500

**INSTRUCTIONAL SUPPLIES**

**TOTAL:**

**\$48,000**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
Varies	HVAC Simulator Supplies (twin recovery machines, 2 stage direct drive vacuum pumps, refrigerant charging scales, hoses, ratchet wrenches, horizontal conversion kits, down flow conversion kits, multi-position coils, etc.)	\$20,000	\$20,000
Varies	Student Tool Boxes with Supplies (tool boxes, nut driver sets, 11-in-1 screwdriver/nut driver/valve core tools, long nose multi-purpose tools, high leverage diagonal cutting pliers, crimping/cutting tools, long nose pliers-side cutting, adjustable wrenches, mini cutters, mini tubing cutters, deburring tools, hex keys for service valve wrench, universal flare/burnishing tools, etc.)	\$10,000	\$10,000
Varies	Project Supplies (acrylonitrile-butadiene-styrene [ABS] pipe, ABS glue, copper pipe and fittings, solder, concrete mortar, cinder blocks, electrical wire, calculators, drywall, tape, texture, lumber, nails, screws, etc.)	\$10,000	\$10,000
Varies	Hand Tools (hammers, chisels, screwdrivers, wrenches, socket sets, pliers, wire cutters, chalk lines, hand saws, files/rasps, utility knives, shovels, picks, clamps, come-alongs, etc.)	\$3,000	\$3,000
Varies	Electrical Training Units (light bulbs, 5-amp single pole switches, metal electrical outlets, 250-volt outlet box lamp holders, microwave fuse holder blocks, various fuses and wire)	\$2,500	\$2,500
Varies	PPE (safety glasses, work gloves, masks etc.)	\$1,000	\$1,000
Varies	Measuring devices (measuring tapes, rulers, plumb bobs, levels)	\$1,000	\$1,000
Varies	Computer Accessories (cases, covers, etc.)	\$500	\$500

**OTHER**

**TOTAL:**

**\$300**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	Occupational Safety and Health Administration (OSHA) Instructor Training	\$300	\$300

**CATEGORY TOTALS:**

CLASSROOM EQUIPMENT	\$17,210
PROGRAM EQUIPMENT	\$53,400
INSTRUCTIONAL MATERIALS	\$3,000
INSTRUCTIONAL SUPPLIES	\$48,000
OTHER	\$300
<b>ESTIMATED PROGRAM TOTAL</b>	<b>\$121,910</b>