

AEROSPACE ENGINEERING

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 an Aerospace Engineering 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/storage, download capable)	\$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 (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: \$75,000**

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Computers (enhanced graphics/memory/speed, download capable)	\$2,500	\$62,500
1	Technology Storage/Charging System (optional)	\$2,000	\$2,000
6	Advanced Robotics Kits	\$1,750	\$10,500

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:

\$15,375

QTY	ITEM DESCRIPTION	UNIT	TOTAL
7	Dual Range Force Sensors	\$115	\$805
3	Cordless Drills (14 volt or higher)	\$100	\$300
2	Compact Scales (2000 g x 1 g)	\$85	\$170
7	Variable DC Power Supplies, 18V 0-2A	\$65	\$455
3	Balsa Wood Strips, 3/32" x 3/32"x36" (100 pack)	\$45	\$135
3	Self-Healing Cutting Mat (11.8" x 8.7", package of 6)	\$35	\$105
1	Drill Press Vise (4" capacity)	\$30	\$30
15	Digital Multimeters (DMM) w/leads	\$25	\$375
15	Dial Calipers, 6", Steel (graduated to 0.001 inches)	\$20	\$300
Varies	Aerospace Project Materials (including rocket engine build supplies, fiberglass tape, insulation, sheeting plastic, centering rings, parachute recovery, body tubes, nose cones, launch lugs, kit shock cords and mounts, rocket igniter kits)	\$10,000	\$10,000
Varies	Project Supplies (light-emitting diodes [LEDs] in various colors, single AAA battery holders, push-button switches, resistor kits and wires, solderless breadboards, alligator leads, 1" masking tape, lo-temp full-size glue gun, glue sticks, various syringes, items for sorting, etc.)	\$1,000	\$1,000
Varies	Tools and Hardware (25' metal tape measures, clamp lights and bulbs, adjustable wrenches, wrench sets, wire strippers, needle nose pliers, locking pliers, hex key sets, hacksaws and blades, files and file handles, hickory hammers, drill bits, precision screwdriver sets, S-hooks, utility knives and blades, etc.)	\$800	\$800
Varies	Computer Accessories (cases, covers, etc.) (optional)	\$500	\$500
Varies	Clamps (assorted sizes and styles)	\$250	\$250
Varies	Personal Protective Equipment (PPE) (gloves, safety glasses, etc.)	\$150	\$150

OTHER

TOTAL:

\$300

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

CATEGORY TOTALS:

CLASSROOM EQUIPMENT	\$18,310
PROGRAM EQUIPMENT	\$75,000
INSTRUCTIONAL MATERIALS	\$8,000
INSTRUCTIONAL SUPPLIES	\$15,375
OTHER	\$300
ESTIMATED PROGRAM TOTAL	\$116,985