MIDDLE SCHOOL EXPLORING TECHNOLOGY (ONE PERSON LAB)

New Construction

I. PROGRAM PHILOSOPHY

The purpose of this course is to introduce students to the kinds and levels of work performed in todays and our future technological world. Laboratory experiences revolving around electronics, computers, and the technology systems of communications, production, construction and transportation will allow students to explore the requisites and special skills for careers in our technological world. Laboratory experiences will acquaint students with the organization, functions, and evolving technologies in our technological world.

II. PROGRAM GOALS

Use proper and safe procedures in the technology laboratory.
Demonstrate computer literacy and application.
Demonstrate leadership and organizational skills.
Apply basic skills in English, mathematics, and science appropriate to technological content and learning activities.
Make an informed and meaningful occupational choice.
Identify kinds and levels of work common to todays and our future technological world.
List requisites and employment opportunities for employment in todays and our future technological world.
Identify evolving technologies in our technological world.
Perform special skills unique to electronics, computers, and the technology systems of communications, manufacturing, construction, energy, power, and transportation.
Express a knowledge of the essential elements and organization of the free enterprise system.

III. PROGRAM ACTIVITIES

Instruction and learning activities are provided in a laboratory setting using hands-on exploratory experiences with the tools and materials related to the content.

IV. ORGANIZATIONAL NOMENCLATURE

Teacher - Student Ratio:	1:24
Student Capacity per Period:	24 - 26
Total Number of Teachers:	1
Total Number of Aides:	1 (If applicable) For Exceptional Students
Grade Levels or Age Levels for Which Program is intended:	7 and 8
Hours per Day Space Will Be Used:	8

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V. INNOVATIONS, EXPERIMENTAL IDEAS, OTHER PLANNED USES

The Modular Concept Technology Laboratory is designed around self-contained, two-student workstations that support self-directed, individualized instructional methodologies. Everything needed to complete an assigned task is included in the module area. The modular laboratory provides the maximum in lab activity flexibility and cost effectiveness. Many topic areas can be addressed without the expensive duplication of equipment and lab space.

VI. SQUARE FOOTAGE CHANGES EXPLANATION THAT VARIES FROM APPROVED FACILITIES LIST

See attached drawing

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VIII. PROGRAM FURNITURE AND EQUIPMENT REQUEST FORM
*Shown on drawings
purchased and installed by contractor

Space or Area	Number of Items	Description of Furniture/Equipment Needed
Entire Facility	*55	Classroom Chairs
1	*1	Whiteboard
1	*9	30” x 6’ Tables
1	*3	42” Round Tables
1	*1	Day-Lite Screen
1	*8	Metal double door 24 x 36 Storage Cabinet for Materials
1	*1	Dust Collector and Mini Pickups
1	*1	3M Overhead Projector
1	*1	25” TV on an overhead carrier or a cart
1	*#6	PRIDE of Florida 5000-Double
1	*#12	PRIDE of Florida 5000-Single
1	*1	Electronic Module 13, Synergistic Model 17492
1	*1	Energy/Power/Mechanics Module 11, Synergistic Model 17493
1	*1	Applied Physics Module 1, Synergistic Model 17487
1	*1	Research and Design Module 7, Synergistic Model 17497
1	*1	Computer Graphics and Animation Module 12, Synergistic Model 20343
1	*1	Rocketry and Space Module 8, Synergistic Model
1	*1	Robotics Module 4, Synergistic Model 1749
1	*1	Engineering Towers Module 9, Synergistic
1	*1	Engineering Bridges Module 5, Synergistic Model 17494
1	*1	Digital Video Module 2 – Model 17003 Synergistic
1	*1	Flight Module 3 Synergistic
1	*1	Audio (Radio) Broadcasting Module 15, Model 19725
1	*1	Digital Design Module 10 Synergistic
1	*1	Practical Skills Module 6 Synergistic
Office	*1	Synergistic Management System for Server
1	*1	Shop Vacuum - Sears Model - 16 gallon with extension accessories
1	*#1	Book Bag Storage Shelves adjacent to entry

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Space or Area	Number of Items	Description of Furniture/Equipment Needed
2	*1	Tool Cabinet (no tools)
2	1 Set	Various Hand Tools
2	*1	Belt and Disc Sander Table Top
2	*1	10" Table Top Drill Press, 115v
2	*2	5’ x 5’ Maple Top Work Tables with Four Wood Vices on a Locker Base
2	*2	8" Table Top Band Saw, 115v
1	*1	6” Table Saw 115v
2	*1	Sanitizing Cabinet with Eye Glasses
Wash Area	*#1	Gang Wash-up Sink and Eye Wash
Wash Area	*#1	Towel Rack/Soap Dispenser
3	1	Teacher's Desk and Chair
3	1	File Cabinet, Four-Drawer
4	*1	Flammable Storage Cabinet (30) Gallon
16, 17, 18	*12 Each	Technic 1. Lego Model 1030
16, 17, 18	12 Each	Technic 11. Lego Model 1032
16, 17, 18	1 Each	Teacher Guide for Technic 1. Lego Model 1035
16, 17, 18	1 Each	Teacher Guide for Technic 11. Lego Model 1036
16, 17, 18	4 Each	Lego TC Logo Starter Pack. Lego Model 966
16, 17, 18	4 Each	Technic Control 0 Set. Lego Model 9700
16, 17, 18	8 Each	Technic Control 1 Set. Lego Model 1090
16, 17, 18	1 Each	Technic Control 1 Curriculum Guide. Lego Model 959
1	*1	Virtual Mentor Module 14

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IX. SPECIAL CONSIDERATIONS

- Doors

  One standard personnel door to the lab.
  One standard personnel door between the lab and Research and Design Module.
  One standard personnel door between the lab and the Audio (Radio) Broadcasting Module.
  One solid core door between the lab and storage area.

- Plumbing

  One emergency eye wash station in the lab served by hot and cold water.

  Eye wash system installed on sink or water fountain.

  Provide floor drain for eye wash.

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- Electrical

  Lab to have duplex outlets 12 ft. apart. Wiring for 115V ceiling drop cords outlets to be installed in conduit above ceiling level. Material storage room has to have four duplex outlets. Office area in storage room to have two duplex outlets on any two walls. The master control for lighting and all equipment should be located in the office. Provisions should be made for the master control panel to be locked when the teacher is not in the room. Provide additional 115V duplex outlets as required for equipment.

- Safety

  Panic system (kill switches) should be installed in the Research and Development room. Adequate fire extinguishers of proper size and type must be provided in the lab and in the finishing room.

- Built-in Cabinetry

  A. & B. Built-in work counter/cabinets and shelving

  Lab: 36 compartment book rack for storage of student textbooks and other personal items located near the lab entrance. Each compartment to be 12" x 12" x 12". One coat rack.

  In the Research and Design Lab base cabinets 36” tall with plastic laminate tops and lockable storage directly under the window wall looking into the Lab.

  Broadcasting room, 30” tall plastic laminate countertop under the window.

  C. Built-in Instructional Aids

  60” x 80” NTSC Format pull-down A. V. Screen in all teaching spaces.

  4 ft. x 8 ft. Markerboard behind teacher workstation in the main lab.

  Tackboard on wall adjacent to the wash area.