

Littleton Academy Three Year Technology Plan 1996-1999

Philosophy Statement

We believe...

- that computers and related technology are tools, not toys, to help us do our work more efficiently
- that students must be literate in these skills to be competitive in the marketplace
- that students must have access to these tools, for without access, they cannot master their use
- that teachers must have access to these tools, be trained in their use, and held accountable for the incorporation of their use into classroom instruction
- that to create a “cutting edge” school of demonstrated academic excellence, effective use of technology must be an integral component of the school’s academic program

Proposed Technology Acquisition of Littleton Academy

Proper implementation of a technology program requires computers available in both a lab setting for general instruction and within the classroom for ongoing general instruction and individual student production. Littleton Academy is a new school, established in 1996, and therefore there are no existing technologies with which to connect.

Phase 1A includes immediate purchase from the Operating Budget state-of-the-art computers for the office and the 26 Student Station Computer Lab (computer lab), with typical peripherals (printers, scanner) and software. **Phase 1B** involves the purchase of new or used equipment for the classroom’s immediate use. These machines will provide teachers with easier access to administrative functions (mid-quarter reports, report cards, classroom newsletters, parent correspondence) and student access to basic word processing and other applications.

Phase 2 involves upgrading classroom computers to multimedia machines, capable of running state-of-the-art software. Since these are likely to be funded with grant monies, they are not likely to be available until next 1997.

Phase 3 involves networking all computers within the school, and extending access to on-line services. Again, since this cannot occur until the completion of Phase 2 and will also likely be funded by grant monies, it is not expected to be completed until 1997.

Timeline & Cost

1996-1997	1997-1998	1998-1999
<p>1A: Establish 26-station multi-media computer lab, essential software, 2 printers. <i>Estimated Cost: \$50,000</i></p> <p>Network printer. <i>Estimated Cost: \$600</i></p> <p>1B: Donations of used computers. <i>Estimated Cost: \$0</i></p> <p>Peripherals: projection unit, digital camera for presentations and website development. <i>Estimated Cost: \$2,500</i></p>	<p>2: Purchase at minimum one multi-media computer per classroom with TV/VCR supporting technology: TV projection and video input capability. <i>Estimated Cost: \$42,000</i></p> <p>3: Purchase server/hubs, network all computers, maintenance contract, and online service. <i>Estimated Cost: \$20,000</i></p> <p>Peripherals: Winnnebago for book inventory. <i>Estimated Cost: \$4,000</i></p>	<p>Infrastructure in place and operating. Focus on teacher training for technology integration with curriculum, implementation of technology instruction, other programs (<i>Accelerated Reader</i>), accountability measures. <i>Estimated Cost: \$20,000-\$50,000</i></p>

Progress Summary	(as of 4/98)	
<p>1A: Completed 1B: Obtained 30 donated MACs; projected deleted, not worth upgrade cost, compatibility issues 2: Computers per classroom purchased, 1 laptop, 10 TV/VCR units on carts to share Digital camera purchased <i>Training: In house during inservice, regular staff meetings</i></p>	<p>3: Server/hubs purchased, building wired, maintenance contract with district <i>Training: In house during inservice, regular weekly staff meetings, district MS Office training during inservice</i></p>	

Curricular Focus

The Core Knowledge scope and sequence defines the content and timing of Littleton Academy's curriculum, which has been referenced against the Colorado State Content Standards, which define the benchmarks for student learning. Technology will be integrated into instruction as follows.

The primary objective of Phase 1A of our Technology Plan is to establish a computer lab where centralized instruction can take place. Designed so that each student will have his/her own computer, the classroom teacher and the Computer Specialist will direct lessons in one or more of the following areas at each 50 minute visit. The lab arrangement allows instruction of a whole class at a time in essential skills or completion of classroom assignments.

The five areas in which computer instruction will focus in the Computer Lab include:

1. Basic Keyboarding Skills, PC Management and Basic Applications

All students, 1-8, will learn to “touch-type” on the keyboard, including use of the number pad. They will learn how to manage a computer and its software. Most importantly, as LA students go through our program they will learn how to use Microsoft Word, Excel, PowerPoint and Publisher to produce high-quality documents for their school assignments, across all subject areas. About 25% of lab time is spent in this area of instruction.

2. Extension of General Instruction in the Classroom

The classroom teacher will generally be present and actively involved in the student’s instruction during lab time. There are many CD-ROMs now available that directly reinforce information taught in the Core Knowledge curriculum – in exciting, interactive ways. Software can be used to introduce, extend or reinforce concepts taught in the classroom.

3. Acceleration and Remediation of Individual Students

Some students have special needs that are ideally met by a one-on-one tutor- essentially what a computer and appropriate software application can deliver. Our multimedia library will allow teachers to select materials to meet particular instructional goals, enabling students to progress as quickly as they are able. This maximizes instructional time for all students, regardless of their mastery level.

4. Research in our “virtual library”

Our Computer Lab will provide cost effective, up-to-date research resources in three ways: through the use of CD-ROM encyclopedias, through access to our local library via CARL (the on-line ordering service) and the Internet, which the teachers can use to explore resources around the world. There will be an emphasis on research at LA, which will include searching through and note taking from electronic media sources.

5. Reading Reinforcement Program: Accelerated Reader

All students will participate in the school’s *Accelerated Reader* Motivation Reading Project. Classroom computers will be networked to the server, on which test titles for the program reside. Students will access tests from classroom or lab computers.

The five areas in which technology will be used to deliver and enhance instruction in the regular classroom include.

1. Delivery of General Instruction in the Classroom

As appropriate, the classroom teacher will routinely use the classroom computer and media peripheral to introduce and extend curricular concepts.

2 Extension of General Instruction in the Classroom

The classroom teacher will routinely include student activities for practice, production, research and remediation using classroom computers. Software will be used to introduce, extend, or reinforce concepts taught in the classroom.

3. Acceleration and Remediation of Individual Students

Classroom teachers will use technology to help provide the one-on-one interaction in special instruction of exceptional students.

4. Research in our "virtual library"

All students will develop their research skills using CD-ROM encyclopedias, by providing access to our local library via ACLIN and CARL, and the Internet, as appropriate to grade and project.

5. Reading Reinforcement Program: Accelerated Reader

All students will participate in the school's *Accelerated Reader* Motivational Reading Project. Classroom computers will be networked to the server, on which test titles for the program reside. Students will access tests from classroom or lab computers.

Technology Plan Review

At the end of each year, LA will evaluate progress toward goals. Adjustments will be made to the plan as needed, including budgetary reallocations for new and existing projects.

The summary of desired results of the LA Technology Plan was originally listed as follows.

LA Administrative Staff will, with the assistance of parents, district, and business resources:

- Solicit individuals to create TechCorp, a group of LA and community members knowledgeable about computer systems, dedicated to completing and supporting this project. (*Volunteers solicited through Volunteer Coordinator, Newsletter bulletins, community press and business groups*).
- Determine and bid hardware, software and installation requirements to create the system described. (*Educational and administrative needs analyzed: plans drawn: bids obtained*).
- Define expectations for teacher's use in the classroom, for instructional, communication and administrative purposes. (*To be presented to LA Governing Board and staff*).
- Arrange for installation of the system. (*Parent Workday(s) to accomplish tasks scheduled*).
- Provide training and ongoing support for teacher and staff implementation of the above, in house and/or in conjunction with a facility such as TCI's

Sparkman Center. *(Training sessions planned and executed: TechCorp volunteer assistance to be provided as needed).*

- Purchase the hardware, software, and installation materials to create the system. *(Purchase orders written, orders received).*
It is anticipated some costs associated with the Tech Plan will be paid by grant funding.

Once classroom computers are obtained, all LA teachers will:

- Demonstrate lessons to students as a regular part of instruction, at least 3 times per week. *(Integration noted in lesson plans, observed in classroom instruction)*
- Provide students with computer time to complete work in the classroom. *(Teacher schedules to manage student time, observe student activity)*
- Target computer-driven lessons for at-risk students. *(Lesson plan notations, student activity)*
- Access CARL to obtain library resources for themselves and students. *(Demonstrated use by teacher).*
- Teach students how to use CARL, grades 2-8. *(Evidence of student use)*
- Access WWW generally, and for Core Knowledge network CoreNet@Trinity. *(Demonstrated knowledge about information obtained through this source)*
- Create at least one project requiring student on-line communication with another school, grades 4-8. *(Student work)*
- Access Colorado Education On-line, to work with CDE, other Charters, and other schools. *(Evidence of communication, projects, etc.).*
- Communicate with parents through individual and classroom newsletters, letters, etc. *(Evidence of products)*
- Record grades. *(Grade Book files up to date)*
- Generate mid-quarter grades and quarterly Report Cards to go home to parents. *(Reports issued)*
- Track daily attendance at completions of Phase 3. *(System Use)*

Professional Development

Finding the time to train for computer literacy while creating all other school operations, obtaining resources and assuring accountability is nearly impossible for a start-up operation. For the first year in particular, organizational emphasis needs to be on program definition and delivery. Thereafter, teacher training needs should be assessed and appropriate strategies for training of the entire staff developed and implemented.

Ongoing strategies for improving teacher computer literacy at LA currently include:

- A mini-lesson delivered by the Computer Lab Manager at weekly staff meetings, highlighting an aspect of a commonly used application, introducing new software or refining tech operations within the school.
- Half-day instruction during teacher inservice days before, during and at the end of the school year, to teacher new applications (e.g., Making the Grade, the report card software, *Accelerated Reader*).
- Team Captain peer-to-peer coaching to resolve application problems.
- District inservice on MS Office applications.
- Outside Training Consultants, on site or at such locations as TCI's Sparkman Center.
- Reimbursement of fees for classes successfully completed.

Coordination of Grant Funding

All grant funds are deposited with Littleton Public Schools. LA purchases business services from the district, which includes all accounting functions. LA follows all bidding procedures and submits purchase orders, invoices and receipts according to district procedures. Items to be purchased are allocated to specific grant funds, and recorded at the district LA budget line items.

Outside Program Collaboration

Once LA has established its basic operations, attempts will be made to establish working relationships with outside agencies such as libraries, Arapaho Community College, and other organizations that might be interested in using the lab facilities. It is anticipated that an exchange of services or lab rental fees could provide additional contributions or revenue sources to LA.

Compliance with State of Colorado Technology Plan, 1996-2000

Littleton Academy's philosophy, goals and operations, as detailed in this plan, support those of the state, which are itemized below.

- Goal 1: Technology should support curriculum and learning
- Goal 2: Technology planning should be an ongoing process
- Goal 3: Technology training should be ongoing and integral to all areas
- Goal 4: A support infrastructure must be created, strengthened and maintained
- Goal 5: The State of Colorado should create, maintain and support an effective state-wide electronic network
- Goal 6: Colorado school districts should have management systems in place that facilitate electronic information transfer