

7/19/2002 Fairfax County Public Schools School and Community Technology Center	grant	FCPS ISD	Woodley Hills & Riverside ES	FCPS DIT	Fairfax County	UCM	EarthWalk	non-federal funds
1. Personnel								
project manager	43,680	16,165						16,165
clerical support	3,150	315	315					630
technology specialist	51,767		51,767					51,767
website development	0	2,000						2,000
after-school sessions teachers	20,000							0
after-school help sessions teachers and translators	9,072							0
child care worker hours	0				6,400			6,400
classroom teachers' hours of support	11,664							0
technology specialist hours of support	4,536							0
summer sessions teachers	3,240							0
child care worker hours	0				320			320
teachers' training/planning hours	810							0
substitutes	0	320						320
subtotal	147,919	18,800	52,082	0	6,720	0	0	77,602
2. Fringe Benefits								
full-time employees 26%	13,459	4,203	13,459					17,662
part-time employees 7.65%	7,356	49	24					73
subtotal	20,815	4,252	13,484	0	0	0	0	17,735
3. Travel								
attendance at conference meetings/training	0	0					2,000	2,000
subtotal	0	0	0	0	0	0	2,000	2,000
4. Equipment								
laptops, mobile carts, large screen monitors	156,181				51,000		77,000	128,000
battery replacements	4,968							0
printers and accessories	6,250	13,260	10,000					23,260
software	8,458	18,900						18,900
tutorial software	0							0
install and image	0			5,625				5,625
infrastructure support	0			22,125				22,125
repair/replacement costs	4,000							0
subtotal	179,857	32,160	10,000	27,750	51,000	0	77,000	197,910

Budget Narrative

The budget supports every aspect of the SCTC project. Roles and responsibilities are described in the narrative in the Project Management and Adequacy of Budget Resources sections. Only facts needed to generate calculations are repeated here. The budget and resources are based on providing the following:

After-School Tuesday/Thursday Schedule (40 weeks)

4:00 – 6:00 pm	Informal help from experts or special session	
6:00 – 8:00 pm	Technology session	English for Speakers of Other Languages session

After-School Saturday Schedule (40 weeks)

9:00 – 11:00 am	Informal help from experts or special session	
11:00 – 1:00 pm	Technology session	
1:00 - 3:00 pm		English for Speakers of Other Languages (ESOL) session

Summer Schedule (ten days, two weeks)

	Group A	Group B	ESOL students
12:45 – 1:15 pm	Informal help from experts		
1:15 – 1:45 pm	Technology learning session Module 1	Technology learning session Module 2	Teacher and students work with group A
1:45 - 2:30 pm	Technology practice session	Technology practice session	ESOL session
2:30 – 2:45 pm	Sharing Meeting		
2:45 – 3:15 pm	Technology learning session Module 2	Technology learning session Module 1	Teacher and students work with group A
3:15 – 4:00 pm	Technology practice session	Technology practice session	ESOL session
4:00 – 4:15 pm	Informal help from experts		

After-school sessions will align with the school year calendar resulting in 40 weeks of instruction - 8 hours per week and 6 hours of help or special sessions. Summer sessions will occur for four hours on ten days, probably 5 days one week and 5 days the next week.

Families will attend the after-school sessions during the summer thus 2 additional weeks of instruction - 8 hours per week and 6 hours of help or special sessions.

1. Personnel and 2. Fringe Benefits: The project manager will average 20 hours per week at \$42 per hour = \$43,680. The matching is based on a FCPS US24 position of \$53,884. $12/40$ of this = \$16,165 representing 12 hours per week of support from full-time Adult Education program specialist. The need for clerical support is estimated at 42 weeks of 5 hours at \$15 = \$3,150 – these hours will be added to the hours of part-time school administrative assistants. The schools and ISD contribute approximately a half-hour per week of clerical support. ($42 \text{ weeks} * 0.5 \text{ hours} * \$15 = \$315$). Each FCPS elementary school currently has a half time technology specialist, however supporting the additional equipment and the additional curriculum training requires two full-time positions. Therefore, 2 halves of these 2 FCPS US 23 positions are \$51,767 and are part of the proposal. Website development was completed in March of 2002. However, maintenance and needed changes are valued at \$2,000 given current local pricing. Classroom and/or Adult Education teachers will conduct the after-school technology and ESOL sessions for 40 weeks during the school year and 2 weeks in the summer (2 teachers for 42 weeks * 8 hours after-school sessions per week = \$ 18,085 last year). The cost this year should not exceed \$20,000. Some of the same teachers will be available during the help/special sessions (estimated at 336 hours at \$27/hour = \$9,072). Translators may also be hired from these funds as required. Ten hours have been allocated for organizational and administrative tasks for each of the 9 classroom teachers for the after-school sessions ($9 \text{ teachers} * 10 \text{ hours at } \$27/\text{hour} = \$2,430$) that's one-fourth of an hour per week. The technology specialist will be compensated for weekly status checks at the CTC and home visits. These will occur on an as-needed basis not to exceed 4 hours per

week for 42 weeks at \$27 = \$4,536. Three summer session teachers for 2 weeks of 4 hours per day 5 days per week at \$27 = \$3,240. Ten hours have been allocated for planning and training for each teacher for the summer sessions (3 teachers*10 hours at \$27/hour = \$810). Grant funds will be used to pay these teachers on an hourly basis for actual hours worked. Fairfax County will coordinate providing childcare, the value of which is calculated – 160 sessions * 4 hours * \$10 per hour fee (\$6,720) for after-school session support and 8 sessions * 4 hours * \$10 per hour fee (\$320) for summer sessions support. FCPS provides four substitutes at \$80 each = \$320 for conference travel. Fringe benefits are calculated at 26% for full-time and 7.65% for part-time.

3. Travel: A partner contributes \$2,000 for the project director's conference travel expenses for dissemination of information.

4. Equipment: The equipment (laptops, accessories, and printers) will be secured through the FCPS procurement process. To ensure an adequate budget, a price quote and letter of commitment was requested from the vendor/partner. The mobile recharging cart for secure storage of up to 30 wireless laptops (10GB hard drive, Windows, memory upgrade, CD-ROM drive, 3 yr. warranty) has a large screen monitor, remote control keyboard for teacher/trainer use and a network hub. The cost \$207,181 for the 5 carts and 125 laptops, 125 external disk drives and 125 AC adapter/chargers for home use is disbursed \$51,000 from Fairfax County and remainder from the grant. This cost represents a business partner discount of \$77,000 from EarthWalk. Batteries are consumable; therefore some will need to be replaced each year – the projected cost of replacing 72 batteries this year @\$69 each = \$4,968 is another grant item. Estimated repair and replacement costs are \$4,000, a grant request. 125 printers @ \$50 each for at home use should be adequate. FCPS will contribute

2 refills (\$30 value) for each of the 221 home printers. Larger networked laser printers are needed for the carts. Riverside will contribute five at \$2,000 each. Software includes MS Office Pro, ESOL tutorials, and instructional packages. Because it will be provided through FCPS site licensing agreements, this cost represents considerable savings. The FCPS contribution of \$18,900 represents district licenses, building licenses and volume purchases thus reducing the funding request for software to \$8,458. Results would be enhanced if online tutorial software were available so that project participants could learn to use the technology they have at home while they are at home. We expect to receive this as a donation, but were unable to finalize the deal before submission of the proposal. FCPS DIT agrees to provide the installation and imaging for 125 laptops at \$45 and infrastructure needed for \$177 each. The value placed on these services is \$27,750.

5. Supplies: FCPS will either develop or purchase the summer curriculum valued at \$1,000. Woodley Hills' and Riverside's PTAs will provide supplies, materials, printing, etc. as needed – a \$6,000 value. The same is true for snacks which are valued at \$1,680 and \$225, after-school and summer respectively: 168 sessions with 20 participants at \$.50 and 10 days with 45 participants at \$.50.

6. Contractual: FCPS ISD (\$4,500) and EarthWalk (\$4,500) will donate teacher training (\$500 per day) for all nine teachers. FCPS ISD will provide specifically developed curriculum (estimated value of \$5,000). The CTC \$10,000 rent is based on UCM's operational costs and on using the facilities 3 days of a 6 day week during the school year and then two weeks during the summer. It is estimated that UCM contributes services valued at \$10,000 since our participants are welcome to use the facilities the other three days. A part-time (178 blocks of 4.5 hours at \$22/hour is 100% grant) community services specialist

will be under contract through United Community Ministries (UCM) and will be available during all after-school and summer sessions. UCM will match this grant effort by contributing needed additional community-based services valued at \$8,160. It is estimated that Fairfax County staff will accept referrals and follow through by providing services valued at \$6,000. We will continue to seek out a local telecommunications company to donate the home-school-Internet-virtual community connection for families whose student is on free/reduced lunch. (A 56kb modem connection is \$10/month * 125 homes = \$15,000). Because this connectivity is imperative, FCPS DIT will ensure that all participants of the project (teachers, staff and families) are connected to Internet and have email addresses. Their infrastructure and tech support for Internet access in the schools is valued at \$45,000. A contract with George Mason University (GMU) for \$5,000 is budgeted in grant funding to purchase the time, services, and professional expertise of: an evaluation team leader (1.25% professor 26 hours) at \$2,250, assistants at \$2,250 (192 hours) and a student intern aide at a \$500 stipend. It is unknown how much more time and effort may be required to fulfill the evaluation plans; GMU has access to graduate students who may choose to participate.

8. Other: Transportation is another grant request - an estimated \$3,000 has been budgeted for contracted FCPS buses or UCM vans or for Metro bus tokens.

Indirect Costs are calculated at 2.7% (approved negotiated rate)

Other support not included in the budget.

The advisory board will be self-supporting, with any costs assumed by the organizations represented. FCPS and UCM will provide office space as needed for meetings and administration of the project. Volunteer FCPS employees will provide mentoring.

Abstract – School and Community Technology Center

By focusing on meeting the needs of a group of families, the **School and Community Technology Center** Project develops a core community. The grant directly supports the daily use of technology in the education of more than 200 families by providing wireless laptop capability and connectivity at home, at school, and at the community technology center. The learning services and social services provided through the neighborhood community technology center ensure the target group's participation. After-school sessions, summer sessions and access to an online community website foster the development of a virtual and a real world community. Discussion groups, email, and continuously updated resource material will be available 24 hours per day / 7 days per week. Adult Education and Family Literacy Activities consist of evening, weekend and summer instruction in technology use, information literacy, and English for Speakers of Other Languages (ESOL). Career development and job preparation particularly employment counseling, training and placement is provided through an on-site community services specialist with knowledge of and access to needed employment/social services, community programs, and upwardly mobile job opportunities. It is anticipated that the 540+ project participants will attend at least one session monthly and will bring others to take advantage of the services offered. Technology and multigenerational learning is being used as the means to positively affect family, community, and school interaction.

Each of the families has either a fifth grade student or a fourth/sixth grade ESOL student attending Woodley Hills Elementary School or Riverside Elementary School in the southeast area of Fairfax County, Virginia. According to the most recent available US Bureau of Census data, 50.6% of the residents of this geographic area have an annual income that is at or below the poverty level. These elementary schools with 33.6% mobility, a free and reduced lunch population of 50.4% and a 25 to 47% failure rate on Virginia's Standards of Learning tests, represent 36 different countries of origin, and have a distribution of: 31% White, 4% multi-racial, 20% Hispanic, 36% Black, 7% Asian and 1% Native American. Within this low-income, economically distressed area, a significant percentage of families have little or no access to computers or Internet. This disadvantaged population is highly mobile and ethnically, culturally and economically diverse. Almost one-in-three families speak a language other than English as their primary language.

The five project goals of:

- raising participants' English and information literacy proficiency,
- raising low-achieving students' academic performance,
- increasing participants' awareness of and access to employment/human services,
- increasing the quality and quantity of positive activities that engage students and their families, and
- increasing the number of opportunities for positive family and student interaction

will result in these students and their families developing a positive, pervasive, life-long interest in using the resources provided through technology access.

Project **School and Community Technology Center** is a collaborative effort among the school district, county agencies, business partners, community organizations and the students' families. 50.2% of the cost of proposed activities will be from non-Federal contributions. In subsequent years, more and varied partners will be sought to leverage the grant funds, sustain activities, and meet ever-changing needs as they arise.

School and Community Technology Center Grant Proposal
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School and Community Technology Center Grant Proposal Fairfax County (VA) Public Schools

Meeting the Purposes of the Authorizing Statute

What if a family had such an abiding interest in technology that they came to their Community Technology Center (CTC) every week? Suppose students and their families had common interests to talk about, so they spent more quality time together. Wouldn't it be something if students and their families worked on literacy and technology skills together?. Maybe the poor could get those high tech jobs they see advertised. And what if finding help was as easy as going to the neighborhood Community Technology Center or using an online discussion board to "talk" with other community members?

The **School and Community Technology Center** project is making these dreams come true for families of one school. This model project should be continued and expanded to other schools. Families, as project participants, are developing a positive, pervasive life-long interest in using technology focused on their education and employment opportunities. The educational effectiveness of technology and the expanded access to information technology and related services is evaluated in the following excerpt from George Mason University's evaluation report on the 2000/2001 pilot project.

The results of this research project indicate that having a wireless laptop computer may have impacted students in several ways. When compared to a control group of their peers, experimental group students had higher scores on Virginia's Standards of Learning (SOL) tests in English, Math and Science. The difference in the Science scores was significant. When 3rd and 5th grade scores for the experimental group were compared, SOL scores were

significantly higher in Reading and Science. Students also indicate expanded usage of computer skills. Parent respondents of students in the experimental group indicated their children's letter grades and test scores increased and their children enjoyed spending time on their homework. Parents in both the control and experimental groups believed that having a laptop would increase test scores and grades prior to receiving the laptops and their beliefs became a self-fulfilling prophecy for the experimental group. Students did have higher test scores and grades as compared to the control group. Parental expectations may have been a factor in some of the outcome results of this study.

In the Woodley Hills Elementary School pilot project (2000/2001), we saw glimpses of the possibilities. We found that we could greatly increase our parent involvement and help families place a priority on their children's education, when we loaned laptops to families of students in one-fifth-grade classroom. We applied and received grant funds to expand and improve the program beyond the one classroom pilot to all three fifth grades and one ESOL classroom(s). We are addressing the digital divide by focusing on the families of the students and utilizing an already established but underused employment center. The pilot design was a response to a community survey of low-income families (Appendix) that showed:

- Low-income residents in Fairfax County have limited access to computer technology.
- Cost, lack of knowledge, and lack of access to technology are the primary barriers for this population.
- These residents are ready to use technology, and have a strong desire to access technology to improve their lives.

The respondents also noted several benefits to having access to technology. Overall, the top priorities are: respondent's education or the education of the respondent's child(ren), finding information, and locating a new job or assisting with their current job. The vast majority (75%)

of children under 18 years old thought the biggest benefit to having access to computer technology would be to help them with their education.

The needs and attitudes expressed in the survey combined with our pilot experience have taught us that it is not sufficient to simply offer expanded learning opportunities. We must ensure participation in program activities through motivation and creation of the need to know or do.

We must provide everything required for full participation. We decided to develop a comprehensive approach addressing all barriers to learning. We formed a partnership of families, the school, and the community to get children excited about learning so they would seek literacy and information technology activities. Students in the pilot classroom have shown development in self-confidence, increased self-esteem, more determination to succeed, and pride in their sense of accomplishment. **In a school with a 38% mobility rate, not a single child in this classroom left and there was 100% parent participation in the program.**

As part of the expanded project, in January 2002 we implemented a community technology center, capitalizing on the strong social bonds students have with their families and their teachers. A dynamic and active community technology center was created. Families were strengthened and community bonds were formed, improving educational and employment opportunities. Our experiences and beliefs have led to the development of the following measurable objectives for the project (in most cases the participants will be compared to a matched control group):

Participants' English/information literacy proficiency will improve,

- **CTC session evaluations will show that attendees have learned,**
- **families will stated that their skills and knowledge have improved, and**

- **classroom and CTC teachers will make observations of improvement using standardized assessment procedures.**

Student participants' academic performance will improve,

- **3rd to 5th grade participants' SOL scores will increase an average of 50% or more,**
- **the average of participants' SOL scores will be 10% higher (statistically significant in Science),**
- **a higher percentage of participants will pass technology SOL tests (at least 2/3 at advanced levels), and**
- **the average of the participants' Stanford 9 scores will be higher.**

Participants' access to health/human services will be easy,

- **all requests for services will be recorded,**
- **referrals and follow-up will also be recorded, and**
- **services rendered will be documented.**

Students and families will engage in more positive afterschool activities, and

- **all families will attend at least one CTC session,**
- **50% of the families will attend three or more sessions, and**
- **25% of participants will spend more time on homework.**

Positive family and student interaction will increase.

- **80% of students and their families will report that homework is more enjoyable,**
- **homework will be completed more often, and**
- **students and families will report that they spend more time together.**

By focusing on meeting the needs of a group of families, the **School and Community**

Technology Center Project develops a community core. This grant directly supports the use of

technology in education for 540 family members, by providing wireless laptop capability and connectivity at home and at school, and access to an online community. The learning services and social services ensure this group's participation in the community technology center located in their neighborhood. Through after-school sessions, summer sessions and a website, a virtual and a real world community will develop. Discussion groups, email, and continuously updated resource material available 24 hours per day / 7 days per week will enable the family - community – school to interact positively. Adult Education, Family Literacy and After-school Activities consisting of multi-generational instruction in technology use, literacy (basic reading and writing skills), and English for Speakers of Other Languages (ESOL) will be provided. Career Development and Job Preparation, particularly employment counseling, training and placement will be provided through an on-site community services specialist with knowledge of and access to needed employment services, social services, community programs, and upwardly mobile job opportunities. It is anticipated that this core of 200 families (approximately 540 people) will participate and will bring others to take advantage of the services offered.

Eligibility and Need for the Project

Fairfax County, the largest county in Virginia, borders portions of the Potomac River, and is located five to ten miles west of the nation's capital. With a population of 968,225, it covers an area of 399 square miles, and accounts for just over 10% of the physical area of the Washington, D.C. Metropolitan Area. However, the county includes more than 21% of the area's population.

Fairfax County is home to an exceptionally broad range of cultures. Nearly one-third of the county's households have a resident who speaks a language other than English as their primary

language, and over three hundred of different languages are spoken in the public school system. This presents unique challenges to providing services to children and families.

While Fairfax is one of the most affluent counties in the nation, it also is one of the most economically diverse. The median family income is \$84,000. However, nearly one in ten households has incomes under \$25,000, and some areas of the county have concentrations of such households. In addition to the language and cultural challenges, one in five school age children in Fairfax County are eligible for the free/reduced lunch program.

For the purposes of this grant, we have selected two Fairfax County Public School (FCPS) elementary schools, Woodley Hills and Riverside, because they have a 50.4% free/reduced lunch population and because they are located in the Southeast geographic area of the county. This residential/commercial area, known as the Mount Vernon district, can be characterized as urban rather than suburban by virtue of population density, structural complexity, ethnic, cultural, and economic diversity. The many subsidized housing units, low-income apartment dwellings, trailer parks, abandoned commercial sites, barren lots used as dumps, and high-density aging living facilities are visual reminders of the high incidence of poverty and un/underemployment.

According to the most recently available US Bureau of Census data, **50.6%** of the residents of this geographic area have an annual income that is at or below the poverty level. In 1999, there were 84,270 people living in this area. – the 2020 projection is for 225,000. Because it is the only area of Fairfax County with adequate public transportation, it will continue to attract low-income families who usually can not afford to own cars.

The following statistics further describe the **Need for the Project** in this economically distressed area:

low income	57% average free/reduced lunch rate in area schools
large number of people lack health insurance	11.8% of 84,270 = almost 10,000 in the Mt. Vernon District lack health insurance
high limited English proficiency level	29.8% of the population speak a language other than English at home
low-achieving students	21 points less than average FCPS index and averaging 56.8% passing on SOL tests – standardized tests of English and reading/writing, math, science, and history/social science. According to the state, none of the Mt. Vernon elementary schools passed more than two of the five curriculum areas.
high mobility	An average of 28.3% mobility as stated in the FCPS Student Mobility Report 1998-99 memo of April 6, 2000 (range is from 23.6% to 38% for area schools).
ethnic diversity	39% Black, 27% Hispanic, 22% White, 10% Asian/Pacific Islander, 4% multiracial, 1% American Indian/Alaskan , and 1% undesignated is the percentile summary for the 5,004 students in the area FCPS elementary schools in September 1999 as displayed on district's website.
high rates of juvenile crime, school violence and student drug abuse	1,457 of the 10,196 juvenile arrests in 1999 as reported by Fairfax County Police Department. 17% of the disciplinary incidents, which include suspensions and expulsions, although these schools comprise only 7.5% of the 120 elementary schools included in the FCPS 1999/2000 incidents report.
high illiteracy rate	One in three according to the Literacy Council of Northern Virginia, Inc. 16% of the adult population in Mount Vernon are functionally illiterate with another 17% only slightly more literate.
high percentage of Title I and Headstart students	All area schools qualify as Total Title I because a majority of the students are free/reduced lunch and 9 Headstart classes are held at these schools.
high dropout rate	The majority of the students from the area schools will attend Mt. Vernon High School, which has had the highest dropout rate in FCPS for four of the last five years - 3.7% to 5.9% range.

Clearly, the statistics reveal a very urban environment with extensive needs. A disproportionate number of these students face learning barriers and are at risk of educational failure. Our survey of low-income families indicated an awareness of these problems, and showed receptivity for assistance geared to bridge the digital divide.

Quality of the Project Design

The project addresses the needs of the students in their environment – first as a member of a family, then as a student, and then as a community member. All of the project’s activities build on strong social bonds among participants and empower them to create their own supportive learning community. The use of technology as an assistive thinking device and a communication device for these purposes is key. Because the project supports the use of the technology comprehensively and the access to the technology is ubiquitous, a positive pervasive life-long interest in technology use will develop. Family and school interactions will improve in quality and quantity. After-school and summer sessions will bring people together. The virtual, online community learning center will extend the togetherness. Families will use their wireless laptops to access Internet-based resources during after-school sessions held at a community-based employment center and at home. By encouraging family and school interactions and by providing training, support, and guidance through sessions, participants will become a community. The use of technology will help students and families feel they belong to a community because of their ability to connect to others and to extensive resources when they need to - 24 hours per day, 7 days per week. Thus, our project title, **School and Community Technology Center (SCTC)**. The following is a brief table matching the community risk factors, the objectives, and the project’s methods.

Community Risk Factors	Project Objectives	Project Methods Community Technology Center (CTC)	Project Methods Virtual online community
Low achieving students are more likely to engage in at-risk behavior	Raise low achieving students’ academic performance	Family and community involvement in the project Students and families work together Students spend more time on academics	Customized website of information, resources and discussions Online tech and morale support groups

Lack of alternative activities to juvenile crime, violence and drug abuse	Increase the quality and quantity of positive afterschool activities that students engage in	An intensive afterschool program focused on using technology Afterschool and summer sessions with child care available	Technology with connectivity available at school and at home Educationally appropriate instruction provided to all family members
Interactions are directive and sometimes negative	Increase the number of opportunities for positive family and student interaction	On-going support and guidance in the use of technology	Technology with connectivity available at school and at home
Lack of awareness of availability and how to access needed resources	Increase participants' knowledge of and access to health/human services	Counseling and eligibility determination incorporated in sessions Community services specialist links/refers participants to services	Email capability and access to discussion groups provides ease of communication and access to information
Poverty restricts access to technology for development of information technology and computer skills	Raise participants' English literacy and information technology proficiency	Educationally appropriate instruction provided to all family members	Provision of wireless laptop computer with network and Internet connectivity at school and at home Access to extensive online resources including training
Limited English proficiency and illiteracy results in unemployment/ underemployment	Increase access to employment opportunities providing a living wage	Combine literacy and technology skill development with job assessment and referral services	Online technology and morale support groups Websites of employment opportunities

Learning to use technology becomes a community activity. Families will be spending more time together developing new areas of enthusiasm, interest and expertise. A significant measure of success of the project's goal of **raising low achieving student performance** would be an increase in the educational level of the project participants as indicated by student improvement on standardized tests. In addition, (as is already evidenced in the project) attendance and behavior can be expected to improve and family mobility can be expected to decrease.

Increasing the quality and quantity of positive after-school activities that students engage

in requires that there be a reason to participate. Because the families will be involved with their children in long-term project-based assignments during the after-school and summer training sessions, and because technology with connectivity is available at school and at home, very good attendance at the community technology center sessions is anticipated.

Pilot Program

During the 2000/2001 school year, one class of fifth grade students was provided wireless laptop computers, printers and school-home connectivity. Each student used this technology as an integral learning tool at school and at home, and each family had the opportunity to develop computer skills/knowledge on their own. These students and their families received some informal training and support from teachers, community-based business partners and public service organizations. When needed, teachers and volunteers directed after-school training meetings. Staff from the county's Department of Social Services volunteered their time to share information regarding the availability of resources for families. They also followed-up when parents requested help. Implementation experiences throughout the pilot were noted and discussed during monthly meetings; thus we knew what improvements in the program design were needed. A summary of our learnings: Participants need to be together both physically and virtually. After-school sessions need to be frequent and well structured. The equipment proved adequate. Connectivity needs to be easy. Morale and technical support is key. Follow-up on referrals for health and human services is difficult without regularly scheduled contact. Learning to use technology is a positive topic of family-student-school interaction.

Current Expanded Program at Woodley Hills Elementary School

(selection criteria wording in bold)

Grant funds and continued generosity of partners enabled us to expand the project to all three 5th grades and the 4th – 6th ESOL students of Woodley Hills. During 2002, we developed a CTC at a non-profit, community-based organization's employment center. United Community Ministries (UCM) has a functioning storefront center in the participant's neighborhood. We provided 87 of the Woodley Hills' families (all fifth graders and the fourth/sixth ESOL students) with wireless laptop computers, printers and school-home connectivity. Structured after-school and summer sessions held at the CTC incorporated **English language instruction and basic adult education programs, introduction to computers, intergenerational** (families including students) **activities, and lifelong learning opportunities through technology and the Internet** as well as **career development and job preparation, such as computer skills training (basic and advanced)**. Regularly scheduled after-school training sessions were held on Tuesdays and Thursdays, from 6 p.m. to 8 p.m. and on Saturdays from 10:00 a.m. to 2 p.m. The design for all sessions included time to address individual questions and for supervised practice.

At the time of this application, the 2001 grant proposal has been fully implemented but not fully utilized. Last school year, two of the four classroom teachers were new to fifth grade and new to Woodley Hills. The other two classroom teachers were finishing their masters. These circumstances impacted on the time these teachers could give to the after-school sessions. This fall they intend to participate once a week. Their participation is paramount to success.

Ten four-hour days during July will be the nucleus of a summer session. During September, October, November and December new participants will be welcomed to the project by experienced classroom teachers eager to fully utilize the project's website and the informal help sessions. Special parenting classes will begin in September during the 4 to 6 time block on weekday nights and the 9 to 11 time block of Saturday mornings.

After-School Tuesday and Thursday Schedule (40 weeks, one module per week)

4:00 – 6:00 pm	Informal help from experts or special session	
6:00 – 8:00 pm	Technology session	English for Speakers of Other Languages session

After-School Saturday Schedule (40 weeks, one module per week)

9:00 – 11:00 am	Informal help from experts or special session	
11:00 – 1:00 pm	Technology session	
1:00 - 3:00 pm		English for Speakers of Other Languages (ESOL) session

Summer Schedule (ten days, twenty modules) + the above for family participation

	Group A	Group B	ESOL students
12:45 – 1:15 pm	Informal help from experts		
1:15 – 1:45 pm	Technology learning session Module 1	Technology learning session Module 2	Teacher and students work with group A
1:45 - 2:30 pm	Technology practice session	Technology practice session	ESOL session
2:30 – 2:45 pm	Sharing Meeting		
2:45 – 3:15 pm	Technology learning session Module 2	Technology learning session Module 1	Teacher and students work with group A
3:15 – 4:00 pm	Technology practice session	Technology practice session	ESOL session
4:00 – 4:15 pm	Informal help from experts		

After-school sessions will align with the school year calendar resulting in 40 weeks of instruction - 8 hours per week and 6 hours of help or special sessions. Summer sessions will occur for four hours on ten days, probably 5 days one week and 5 days the next week. Families will attend the after school sessions during the summer thus 2 additional weeks of instruction - 8 hours per week and 6 hours of help or special sessions.

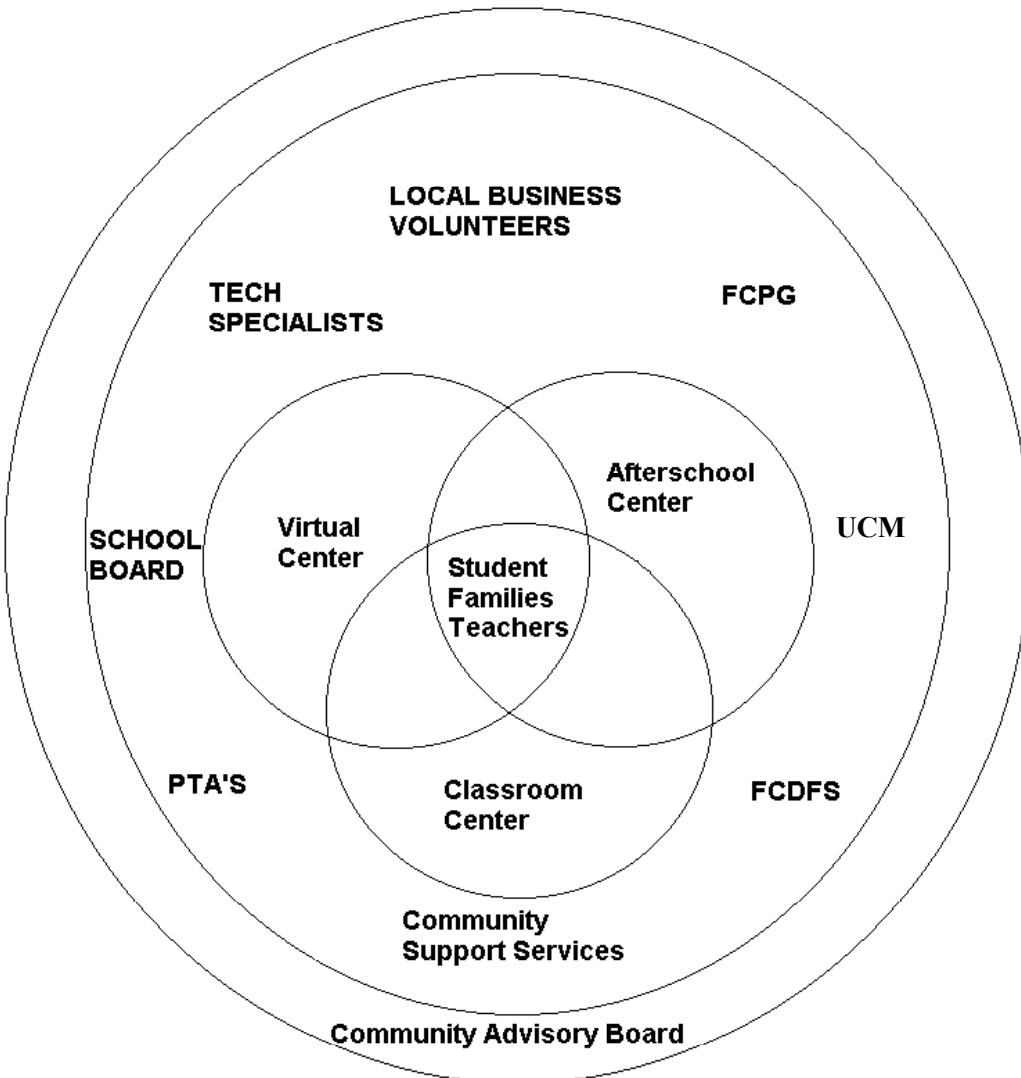
As in the pilot, a needs/preference survey was used to determine specific schedules. We have found that each family's desire to help their student ensures participation and encourages learning computer and teamwork skills. The convenient and supportive location where family

members can accompany their children encourages program participation. The training session's component is provided through FCPS Instructional Services Department, Offices of Adult and Community Education and Elementary Education.

The existing employment center is staffed by UCM and they work in partnership with us. The hours of this community technology center are Monday through Thursday, 9 a.m. to 8 p.m., Friday, 9 a.m. to 5 p.m. and Saturday, 9 a.m. to 3 p.m. This resource and the 24 hours per day / 7 days per week wireless Internet connectivity provides the **after-school activities for children of all ages to use software that provides homework help and academic enrichment, exploration of the Internet, and multimedia activities.**

Career development and job preparation, such as ... job assessments, resume writing workshops, and access to databases of employment opportunities, career information, and other online materials as well as small business activities, such as computer-based training for basic entrepreneurial skills and electronic commerce, as well as access to business start-up programs is coordinated by UCM and Fairfax County Department of Family Services.

County social services and other resources have provided employment counseling, training and placement and have addressed the need for health insurance, housing assistance and emergency services. The project provides multiple one-stop opportunities for initial and continuous contact during after-school sessions. UCM staff provides child day care services during after-school sessions for the siblings of the program participants. All other family members are invited and expected to participate in the program.



Above is a visual of the project design. It is meant to convey the relationships within this supportive design.

Expansion to Riverside Elementary School

This year we are requesting continued support of the current project and expansion to a second school. Riverside Elementary is just down the road from Woodley Hills; the schools are adjacent boundary –wise. The neighborhood CTC is within walking distance for many of Riverside’s families. The teachers and administrators have asked to participate. They believe as we do, that family involvement in a student’s education is the single most important factor in student achievement. Preliminary evaluation results are very positive. Woodley Hills’ teachers report many positive changes in the students and their families. Because Riverside’s profile is very

similar to Woodley Hills, the additional project participants have similar needs and thus should enhance the development of community. In the past, Riverside has been one of FCPS's lowest scoring school on Virginia's SOL tests. Therefore the need is great and the possibility of making a significant difference is great.

The following are the pass rates for the 5th grade SOL tests of Riverside E.S.:

NOTE: Caution should be used in interpreting all test scores. Percentages and average scores do not provide information about the number of students scoring at a high level or the number of students scoring at a low level. The scores for smaller schools will tend to vary more from year to year than scores for larger schools, and each year's scores represent the results for a completely different group of students.

Pass rates do not include students who entered after the 20th day of instruction, students designated as limited English proficient, or remediation recovery students. The fifth grade history test was taken by fourth grade students in 2000 and 2001.

	Writing	English	Mathematics	History	Science
1999	64.58	43.14	38.00	24.24	47.06
2000	54.72	35.71	33.93	22.64	30.36
2001	74.47	46.67	40.00	36.67	53.33

Riverside has four 5th grades and an ESOL classroom for 4th – 6th graders. The grant's website has been created and awaits full utilization – www.tjhsst.edu/grant. Virtual online learning centers of teachers, families and students will be implemented and facilitated so communication is possible 24 hours per day 7 days per week. Online computer-based training will be used for tutoring activities. Families will be involved with their children in long-term project-based assignments, which will provide a focus for regularly scheduled after-school training sessions. These training sessions will include **webpage design and creation**. The classroom teachers will direct these activities virtually and assist during the help sessions at the community technology center. Some students will have mentors/email pals through a program established by FCPS Instructional Services Department, Office of Staff Development and Training.

What are the day-to-day logistics? The wireless (infrared communication and battery powered) laptops will be loaned to the students and their families to take home and use there throughout

the year. Students will carry the (8"X11") laptops home in their backpacks each day. The students will "help" their family members use the Office software and Internet/email capability. Students also will share what they are doing in school because instructional software will be on the laptops and school/classroom agendas and assignments will be on the website. Families will bring the laptops to the community technology center where they will supplement the computer equipment already there. A student on a laptop may sit next to her parent using a desktop to participate in the training. They will be encouraged to bring friends and neighbors to expand participation. There are two large rooms and two small "interview" rooms for the CTC. One of the large rooms is a lab with 10 networked computers on tables thus providing enough space for 10 laptops. The other large room is a conference room suitable for classes of 10 to 20 or audiences of 30. The interview rooms can be used for very small groups of 2 to 4.

What is the purpose of the after-school/summer sessions? The community technology center sessions are key to accomplishing the project's goal and to developing a sense of community. A long-term project based assignment requiring teamwork will be the means to that end. Each student and a family member will be expected to participate in at least one after-school session; each instructional unit will be repeated at least twice. During the sessions technology and English literacy instruction will be available. Mentoring and employment counseling will be offered on a scheduled basis. Childcare for preschool siblings of the program participants will be available on-site – some of the pre-schoolers may even be introduced to their own computer programs. Students and their families may attend as many sessions each week as they would like.

What is the 24 hours per day 7 days per week support?

A virtual community learning center has been created on a website. Communications, information and resource materials will be posted here to be referenced at any time. The teachers

will facilitate group/team discussions. Links to training resources and employment information will be updated and customized as needed. Individual emails will be exchanged between and among students, families, teachers, mentors, and resource/project staff. Students and their families can have online discussions in a safe Internet environment where they know everyone involved.

Roles and Responsibilities

The past has helped us determine what is needed, what it will cost, and who/what is the appropriate source. Our project includes a laptop and printer for each family and large screen monitor/storage carts for each location (5 classrooms at Riverside) where the laptops will work wirelessly as a network. Laptops will be brought to the CTC. Fairfax County and the grant will jointly fund the new laptop equipment. The grant request includes rent for the UCM Employment Center facilities for half of a week. FCPS will fund maintenance of the website for the virtual community center. The necessary infrastructure and technical support is in place or will be provided by FCPS Department of Information Technology and the school-based technology specialist. The school's PTA will provide supplies (ink cartridges, disks, paper, etc.). Curriculum materials for the summer enrichment sessions will be selected from the FCPS approved companies developing Internet-based technology enrichment topics. Because the telecommunications industry is in such a state of flux, we have had difficulty finding a local Internet Service provider to donate the home – school – Internet connection and email accounts. The Fairfax County Community Action Advisory Board has made this a priority and is now actively recruiting a private sector partner to pick up this cost. If we are not able to finalize this element of the program, FCPS DIT has committed to ensuring this connectivity. EarthWalk

Communications Inc. has and will continue (till January 1, 2003) to donate online software for technology training. At that time, we will pursue other resources.

The project manager will coordinate project planning, development, and implementation including procurement and hiring by chairing a project advisory board, supervising the afterschool sessions, coordinating the activities of the community partners and ensuring tech support for project participants. FCPS has the resources to support the academic portion of this project including the software for the laptops. The classroom teachers are technology competent and the school has a full time teacher/technology specialist who will assist the teachers during afterschool and summer sessions. Home visits to ensure hardware and software operability will be made if needed by the teacher/technology specialist. Website administration will be the responsibility of the school's technology specialist. Classroom teachers, Adult Education and ESOL teachers, and the technology specialist will conduct the afterschool and summer sessions. ESOL teachers will be provided as needed by FCPS. The community services specialist will assess health insurance and employment needs of the families on an ongoing basis. Referrals for needed services and appointments will be made as appropriate. Individual and family counseling and linkage to existing community-based services, as well as assistance to fill out any needed paperwork will be provided. Upon request, Fairfax County (FC) agencies will provide the employment counselors and the social workers from their staff through appointments scheduled by the project's community services specialist. FCPS buses will transport students and their family members for afterschool and summer sessions or bus vouchers will be provided. The School and Community Technology Center project will serve a minimum of 200 students and their families members totaling 540+ each year. The requested grant amount is \$376,695 with the per person cost averaging less than \$700. The plan is to continue the project with the 4th and 6th

ESOL students' families and the next set of families of fifth graders each year. There are several existing computer recycling programs that refurbish old computers for new users. UCM will commit to supplying computers to each child from a low-income family who is identified as not having a computer in their home as the child ages out of the project. This will ensure that former project participants and their families who do not have computers available at home will continue to maintain their newly learned computer skills.

Quality of Project Personnel

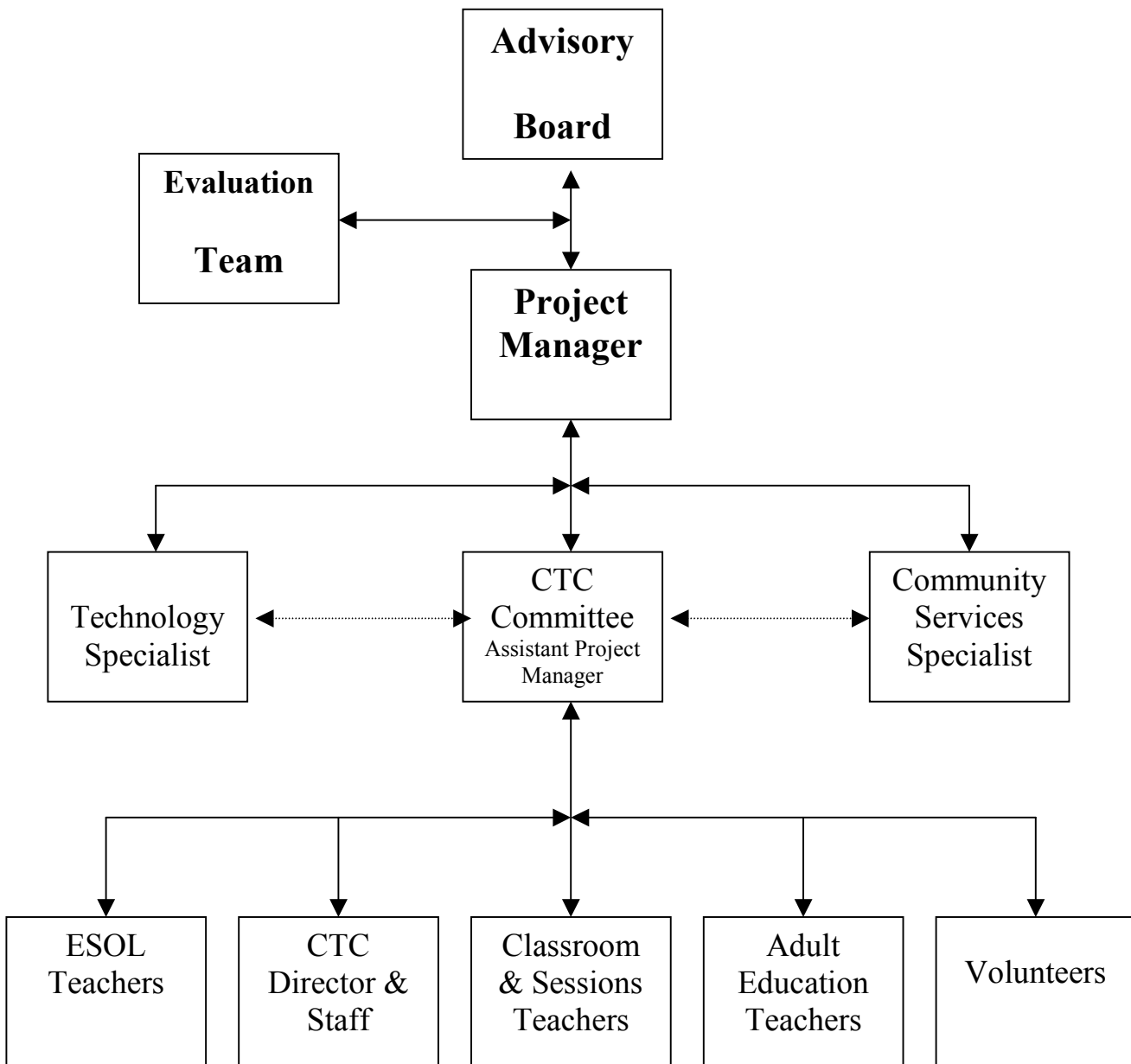
Many of the following people have worked on the pilot project and the grant project the past two years and are willing to become SCTC project personnel/volunteers next year. Resumes and letters of support are in the Appendix. We have and will continue to encourage persons traditionally underrepresented to participate; currently there are three African-American women, several people of Hispanic heritage, the age range is late 20s to early 60s and at least one person has another country of origin. Some names for the advisory board are: Sharon Kelso (Director, UCM Community Solutions), Susan Reade (Vice President Educational Services, EarthWalk Communications Inc.), Rima Vesilind (Principal of Woodley Hills E.S.), Lori Morton (Principal of Riverside E.S.), Trudy Brisendine, Kevin Filbey, Shannon Speidell (Policy Analysts, Fairfax County Department of Family Services), Bryn Pavcek (Director, FCPS Adult and Community Education), and Dr. Molly Davis (Director of Field Education, George Mason University), who will direct the evaluation team. She has written the evaluation plan included in this application. Marianne O'Brien, the former FCPS Instructional Technology Coordinator, will be the project manager. During the first year, she has volunteered her services and drawing on her 20+ years as an educator and administrator, she has ably coordinated project activities. Her assistant, Lori Baker, is a current FCPS Adult Education Specialist adept at hiring teachers, reviewing

curriculum, and implementing ideas. Matt Fry, a technology specialist with four years experience, is a former teacher with excellent technical skills who has ably supported the project for two years. UCM Community Solutions hired the Community Services Specialist, Elizabeth Rovira. She is bi-lingual and has social work experience dealing with low-income families. Adrian Vaughn (Director, UCM Employment Center) has been running the employment center for 6 years. She agrees that the partnership has increased utilization through expanded participation in programs offered at the facility. Her positive can do attitude has helped when we are trying new approaches such as bringing 5th graders into a business environment. The resumes of the ESOL teacher and the classroom teachers (Nuala Hastings, Marie Lemmon, Laurie Forrester, Diane Wilson) include relevant training and experience. Three of the four have one or more advanced degrees. Their peers recognize all four as outstanding teachers. Other teachers and specialists will be hired/called in, always with fairness and capability considerations. We are a small, strong and well-focused consortium of qualified professionals dedicated to these families and to demonstrating that access to technology can build community. In 2002, we were selected to receive a Fairfax County Team Excellence Award, which is the group equivalent of an Outstanding Performance Award. The award memo and selected resumes are available in the Appendix.

Quality of the Management Plan

An Advisory Board with representation from all parties (program manager, evaluation team, principals, school PTAs, FCPS, Fairfax County, UCM, computer company, telecommunications company) involved will continue to meet monthly to provide oversight and guidance to the program. The project manager will be the liaison with the evaluation team, the staff, the partners and the advisors. A CTC committee (composed of program manager, assistant program manager,

the technology specialist, the community services specialist, the CTC director and teacher representatives) will meet weekly. The project manager or the assistant project manager and the community services specialist will be on-site during the sessions. The technology specialist will do a weekly status check and will be on-call for tech support. The website and email will be available daily and will be used for all communication. See the next page for a graphic timeline of the management plan.



Community Technology Centers Grant Proposal

School and Community Technology Center Timeline															
activity	Oct. 2002	Nov. 2002	Dec. 2002	Jan. 2003	Feb. 2003	Mar. 2003	April, 2003	May, 2003	June, 2003	July, 2003	Aug. 2003	Sept. 2003	Oct. 2003	Nov. 2003	Dec. 2003
Planning															
Program managers (PM) review grant requirements	←→			←→			←→			←→					
Advisory board (AB) formed and meetings scheduled	←→	→								←→	→				
Detailed timeline of AB topics developed		←→	→							←→	→				
Evaluation team (ET) formed and meetings scheduled	←→	→								←→	→				
Detailed timeline of ET activities/reports developed		←→	→							←→	→				
Community Technology Center committee formed and meetings scheduled	←→	→								←→	→				
Website development group formed and work scheduled	←		→							←					→
AB plans fundraising and partnerships for next year					←→	→									
Dissemination of plans to FCPS and partners				←→	→										
Procurement and Hiring															
PM writes equipment RFPs and get approvals	←→	→								←→	→				
PM oversee bid process for timeliness	←→	→								←→	→				
PM and UCM hire community services specialists	←→	→								←→	→				
CTC committee meetings held		M M	M M M M	M M M M	M M M M	M M M M	M M	M M	M M	M M	M M	M M	M M	M M	M M
PM and Adult Education (AE) hire teachers	←→	→								←→	→				
AB develop policies recruitment/activities of volunteers	←→	→													
Developing															
Advisory Board meetings held		M	M	M	M	M	M	M	M		M	M	M	M	M
Formation of afterschool/summer schedules	←→	→										←→	→		
Development of afterschool projects	←→	→										←→	→		
Selection of summer session curriculum							←→	→							
AB does fundraising for next year						←→	→								
AB develops partnerships for next year						←→	→								
Implementing															
CTC committee meetings held		M M	M M M M	M M M M	M M M M	M M M M	M M	M M	M M	M M	M M	M M M M	M M M M	M M M M	M M M M
Afterschool sessions implemented		←→	→	←→	→	←→	→	←→	→	M M	M M	←→	→	←→	→
Websites implemented			←→	→								←→	→		
Summer sessions implemented										←→	→				
Maintenance of equipment	←						←	→			←→	→			
ET activities	←						←	→				←→	→		

Adequacy of Resources

The budget and resources are based on providing the following:

After-School Tuesday and Thursday Schedule (40 weeks, one module per week)

4:00 – 6:00 pm	Informal help from experts or special session	
6:00 – 8:00 pm	Technology session	English for Speakers of Other Languages session

After-School Saturday Schedule (40 weeks, one module per week)

9:00 – 11:00 am	Informal help from experts or special session	
11:00 – 1:00 pm	Technology session	
1:00 - 3:00 pm		English for Speakers of Other Languages (ESOL) session

Summer Schedule (ten days, twenty modules) + the above for family participation

	Group A	Group B	ESOL students
12:45 – 1:15 pm	Informal help from experts		
1:15 – 1:45 pm	Technology learning session Module 1	Technology learning session Module 2	Teacher and students work with group A
1:45 - 2:30 pm	Technology practice session	Technology practice session	ESOL session
2:30 – 2:45 pm	Sharing Meeting		
2:45 – 3:15 pm	Technology learning session Module 2	Technology learning session Module 1	Teacher and students work with group A
3:15 – 4:00 pm	Technology practice session	Technology practice session	ESOL session
4:00 – 4:15 pm	Informal help from experts		

After-school sessions will align with the school year calendar resulting in 32 weeks of instruction, 16 hours per week of 8 simultaneous sessions and 6 hours of help. Summer sessions will occur for four hours on ten days, probably 5 days one week and 5 days the next week

The CTC rent is based on using the UCM employment center facilities 3 days of a 6-day week.

Project participants would be scheduled into these sessions on a priority basis and would have priority use of the facilities on those three days. Every effort will be made to fill all available

session seats. And project participants are welcome to use UCM/CTC facilities and services during all hours of all days. There is always a receptionist and at least one of the four person employment center staff is present. This is a storefront space converted to meeting rooms, offices and a computer lab. There are two large rooms and two small “interview” rooms. One of the large rooms is a lab with 10 networked computers on tables thus providing enough space for 10 laptops. The other large room is a conference room suitable for classes of 10 to 20 or audiences of 30. The interview rooms can be used for very small groups of 2 to 4.

The advisory board represents all partners. FCPS and UCM will provide office space and materials as needed for meetings and administration of the project. Volunteer FCPS employees will provide mentoring. It is also anticipated that other community members will step forward, as they have in the past, when help was needed. We simply asked.

The project manager will work 20 hours per week to coordinate project planning, development, and implementation - including procurement and hiring. The designated assistant project manager will average 8 hours per week as a full-time contact person within FCPS. Other support personnel will contribute another four hours per week. The flexibility will allow personnel’s work hours to coincide with after-school and summer sessions while allowing time for meetings and planning. Clerical support needs are estimated at 5 hours per week for the 42 weeks after-school sessions are offered. Woodley Hills and Riverside Elementary Schools will require a full-time technology specialist to support the technical and training needs of this project. In addition, these tech specs will be compensated for weekly status checks at the CTC and home visits on an as-needed basis.

Website development was done by FCPS high school students through the senior mentorship program at Thomas Jefferson High School for Science and Technology, a nationally recognized

regional magnet school of academic excellence. This year's seniors will change and maintain the website as needed.

Classroom, ESOL and/or Adult Education teachers will be paid to conduct the instructional sessions. Two or three of these same teachers will be paid to develop and deliver special sessions and to be available during the help sessions. To ensure the best communication with parents, each of the nine classroom teachers will be compensated for one hour per week for organizational and administrative tasks such as facilitating online discussions. The three summer session teachers will be compensated for eight additional hours to be used for planning, training and other tasks. FCPS ISD assumes the responsibility for teacher training, as it is needed.

A part-time (4.5 hours per session) community services specialist will be under contract through United Community Ministries (UCM) and will be available during all after-school and summer sessions. UCM will match this grant effort by contributing needed additional community-based services such as emergency food, housing counseling, tutoring and referrals to other resources.

Transportation will be provided, if needed, either through contracted FCPS buses, UCM vans or tokens for Metro bus. Donated snacks will be provided for all sessions by the schools' PTAs.

On-site child day care will be available through paid providers working with a curriculum developed by the FC Department of Family Services for non-participating family members.

Partners will contribute a small amount of travel monies, so that project staff can participate in sharing opportunities. The evaluation of the current project will be presented at the National School Board Association's Teaching and Learning Conference in November, 2002.

We will continue to seek out a local telecommunications company to donate the home-school-Internet-virtual community connection. But this connectivity is imperative, therefore FCPS DIT will ensure that all participants of the project (teachers, staff and families) are connected to

Internet and have email addresses. Communication needs and access to resources can be addressed only when connectivity is reliable.

The equipment: laptops, external disk drives, printers and AC adapter/chargers for home and CTC use have proven adequate. The mobile recharging cart for secure storage of 25 wireless laptops (large hard drive, 12 in screen, CD ROM drives, Windows, memory upgrade, external floppy disk drives, 3 yr. warranty) has a large screen monitor, remote control keyboard for teacher/trainer use and a network hub. Instructional needs are met. Each year the computers with printers will be loaned to another set of families. This year there was no vandalism or theft although we did have several accidental drops. The cost to repair the laptops is considerably less than the cost to insure them. Batteries are consumable; therefore some will need to be replaced each year – the projected cost of replacing 72 batteries this year @\$69 each is another grant item. Grant funds are requested to purchase 125 “deeply discounted” ink jet printers with cartridge, cable, and warranty to loan to participants for at home use. FCPS will supply refilled ink cartridges. Larger networked printers will be procured for the carts as part of the school’s contribution. FCPS DIT has ably done the installation and imaging. They have addressed all infrastructure issues. And they agree to continue this support. Software including Windows, MS Office Pro, ESOL tutorials, and instructional packages will be provided through FCPS site licensing agreements on a shared cost basis with grant funds. The school and their PTA will provide materials and supplies to the families, the CTC, and the project as needed. FCPS will either develop or purchase the summer curriculum.

Currently a George Mason University professor is directing the evaluation of the program at Woodley Hills. The expansion to Riverside will entail more students therefore more data but the evaluation’s design and measuring instruments are essentially ready to reuse. Therefore, the cost

of the evaluation is reduced to \$5,000 in grant funding to purchase the time, services, and professional expertise of an evaluation team leader (1.25% professor 26 hours) at \$2,250, an assistant at \$2,250 (3.75 hours per week) and a student intern aide at a \$500 stipend.

Quality of Project Evaluation

Schools are implementing technological innovations of all kinds across the nation. Those who are funding such innovation want to answer the question, “How does technology impact student learning?” The answer is complex and worthy of sound evaluative studies designed to provide an answer. The 1999 DOE Conference on Educational Technology has provided significant guidance to evaluators in structuring evaluation designs that help to understand the multiple ways in which educational technologies might impact students and their learning.

The evaluation plan which is being implemented through this project is one which recognizes the multiplicity of outcomes which may be a product of using technology in new and innovative ways, in this case as the focus of an after-school program. The evaluation plan being developed for the School and Community Technology Center Project (SCTC) is both formative and summative. This project is based upon a pilot evaluation design that implemented strategies and measured project outcomes. The prior experience through the pilot allowed for the identification of the most effective and least effective strategies for implementation.

The project goals of :

- raising participants’ English and information literacy proficiency
 - raising low achieving students’ academic performance,
 - increasing participants’ access to health/human services,
 - increasing the quality/quantity of positive after-school activities that students engage in, and
 - increasing the number of opportunities for positive family and student interaction
- should result in these students and their families developing a positive pervasive life-long interest in using technology.

In the following narrative, each goal (**in bold**) will be used as a point of reference throughout the text.

Student Achievement Measures

Measuring achievement among students having wireless laptops in an after-school program that utilizes educational technologies is a key focus of this project - **raising low achieving students' academic performance**. It is not the only outcome, which is viewed as potentially significant and worthy of measurement. The evaluation plan will assess and compare at least two kinds of standardized test scores. The Standards of Learning (SOLs) have been developed by the State of Virginia and are used as a significant indicator of student achievement in K-12. The Stanford 9 is administered at the beginning of the sixth grade year and provides an additional measure of student achievement. Student scores prior to the fifth grade and prior to participating in the project will be compared to scores during or after the project. It is recognized however that student achievement is related to a number of variables. Attendance, project completion, conduct and general attitudes about school also impact student achievement. As the relationship between technology use and student achievement is fully understood, school districts around the country will be able to determine appropriate use of technology to impact student performance. In addition, this project will also assess student achievement based on comparative displays of student work produced during the after-school sessions.

Intensity of Use and Attitudes toward Technology Measures

Measurement of use is an important variable to assess. This project involves students having their own computers that are available for classroom and home use. The after-school program with its virtual community school connection is designed to increase the amount of interaction between parents and the school. In addition, the involvement of family members is a project goal. Although these tools are available, it is critical to measure the intensity of use by students and family members. The primary methods for obtaining use data will be sampled surveys

(which ask about interactions) based upon self report data verified by teachers and families - **increasing the number of opportunities for positive family and student interaction.**

The pilot project revealed that providing students with their own wireless laptop resulted in a significant boost to student confidence, self-esteem and aspirations. Since this project targets, low-income students who are considered at risk for drug abuse, delinquency and violence, positive attitudinal changes can promote resilience. Positive attitudes and increased aspiration paired with enhanced critical thinking and problem solving skills can make a difference in the lives of at risk children - **increasing the quality/quantity of positive after-school activities that students engage in.** Technology can improve student attitudes toward the learning process. Since this project expands beyond the classroom to after-school, to families and to the community, it recognizes that the attitudes of parents about technology and their children developing technology literacy impacts the student, as well as their own interest in developing technology skills - **increasing the number of opportunities for positive family and student interaction.** This project will provide opportunities for students and families to be trained and to develop technological skills and improve English proficiency - **raising participants' English and information literacy proficiency.** From an evaluative perspective measuring the outcomes of this training as well as parental attitudes provides a framework for understanding student attitudes about technology. The SCTC Project seeks to promote a positive life-long interest in education and technology use among parents and students.

Improved School Community Relations

The SCTC project will provide a virtual online community learning center, which will promote increased school and family interactions. After-school/summer sessions, online communication and joint student and family assignments are designed to increase the linkage between the school

and families. The community school concept is a critical aspect of the project and there will be measurement of the extent in which there is increased school community collaboration.

Improved English and Information Literacy Proficiency

FCPS Office of Adult and Community Education will hire ESOL and technology teachers to work at the CTC during after-school and summer sessions. They will evaluate class participants continuously and will share progress data in aggregate form. The school based technology specialist will do likewise in a much more informal manner.

Framework for Evaluation The evaluation design will provide evidence that:

The project attains the goals and meets the objectives outlined in the proposal	Description of project activities Timelines Outcomes
Student scores on standardized test have improved	Comparative scores on Virginia SOL tests Comparative scores on Stanford 9
Classroom educators are integrating technology in instruction	Comparative student assignments Description of strategies used in classroom
Students are using technology as a tool for learning	Description of ways students use technology at home and school
Students demonstrate improvement in project completion, letter grades, and mobility and classroom conduct.	Comparison of September and June project completion rates Comparison of 4 th and 5 th grade letter grades Comparison of 4 th and 5 th grade classroom conduct
Students have a more positive attitude toward technology and greater self confidence	Pre- and post-survey of students
There is an increased intensity of use of the computer	Sample surveys to record computer use and ways in which it is used (parent and student)
Parent knowledge and experience with technology has increased	Pre- and post-session evaluation of sessions Pre- and post-survey of parents
Collaboration is promoted between community partners and schools	Process description of regular meetings Description of composition of planning committee Description of joint activities and contributions
Increased community school interaction with families of students	Participation in training Participation in technical assistance Participation in virtual online community
Parent child interaction and collaboration has increased in ways which enhance the educational experience	Pre- and post-surveys of students and parents
Reduction of at-risk behavior associated with violence and school disruption	Monitor Code of Conduct violations Compare tardiness rates, absentee rates, counselor referral rates, and school suspension rates
Increased parent participation in after-school programs over the school year	Participation in information technology training Participation in technical assistance Record participation in after-school program

The implementation framework is:

Time Interval	Objectives	Indicators	Project Activities
Year 1	Project goals and objectives are met	Project Activities Description Timelines Project Outcomes	Process evaluation of project implementation. Write and review project evaluation report.
Once per year	Improved student scores on standardized tests	Students will demonstrate improved Stanford 9 scores At least 50% of students will demonstrate improved SOL scores Students' average SOL score will be 10% higher	Students will take the Stanford 9 and SOL exams. Comparative scores will be recorded from prior testings.
Daily	Teachers are integrating technology into after-school instruction	Lesson plans After-school observation Student work	Development of lesson plans that reflect technology integration. Development of student portfolios. Comparative technology based assignments.
Every 9 weeks	Students are using technology as a tool for learning	Student use logs Project completion rates	Students record use of computer at school and home. Teachers monitor project completion.
Every 2 weeks	Participants increase their use of the community services specialist	Specialist logs visits and referrals Pre- and post-survey of participants	Analysis of data Comparison of pre- and post- participant survey about access to health/human services.
Each report card period	Students increase their attendance at after-school opportunities	Pre and post after-school ratings	Comparison of pre- and post- after-school ratings.
Beginning of Project and End	Students have a more positive attitude and greater self confidence	Pre-survey of students Post survey of students Parent survey of students	Pre-survey of students at project start and post-survey of students at end of school year. Pre- and post-survey of parent perceptions.
Random Intervals	Students will increase their computer use at school and home	Student use logs Parent use logs Teacher use logs	Random periods of recording computer use (logs) will determine time and manner computer is used.

Time Interval	Objectives	Indicators	Project Activities
Beginning of Project End of Project Following Training	Parent knowledge and experience with information technology will increase	Pre and post test of computer training Pre and post test survey of Parents Post training survey(self report)	Parents will be assessed prior to and after participation in training. Parent perception of their knowledge and experience with computer is assessed pre- and post-project.
Ongoing	Collaboration is promoted between community partners and schools	Participation on Advisory Board List of contributions of resources to project List of collaborative activities	Record # of community and school partners serving on Advisory Board. Record contribution of resources from community partners and schools. Record specific joint activities and those who participate. Process description of advisory meetings through minutes.
Ongoing	Increased community/school interaction with families of students	Participation in training Use of technical assistance resources Virtual on line connectiveness Participation in family meetings Attendance at after school community programs	Record # of training parents receive. Record # of virtual online hits. Record attendance at family meetings. Record attendance at school community programs.
Ongoing	Increased parent participation in after-school programs over the school year	Participation in training Virtual connection Time spent at after school programs	Record # attending training. Record # of virtual connection hits. Keep record logs of time spent at after -school program.
Pre test-project start Post test-project end/yearly Ongoing logs	To increase parent child interaction and collaboration in education related activities	Pre and Post student survey(self report) Pre and Post Parent Survey Computer Use Logs	Students will be surveyed to determine level of interaction with parent during education activities. Parent surveyed to determine level of educational related activities with student.
Ongoing	Reduction of at risk behaviors associated with violence and school disruption	Code of Conduct Violations Tardiness Rates Absentee Rates Counselor Referral Rates Behavioral and emotional health referral School suspension rate	Record improvement in code of conduct referrals. Record and compare past and present tardiness rates. Record and compare past absentee rates.

Evaluation Plan of Work

The evaluation of this project will proceed using an evaluation team composed of a university professor from George Mason University who has been involved in the pilot evaluation. In addition, the normal cost for evaluation research will be greatly reduced due to the participation of George Mason University as a community partner in this endeavor. The evaluator will utilize student resources and also teach advanced research students the principles of evaluation while serving as the project evaluator. The team will minimally consist of the Evaluator Team Leader, a graduate assistant, and at least one student intern. There may be additional student interns involved in various ways in the evaluation process under the supervision of the Evaluation Team Leader. The evaluation team leader will be Dr. Molly Everett Davis, Associate Professor at George Mason University, as evaluation assistants, two Graduate Assistants and as student intern aide(s), independent studies students.

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- New Directions in the Evaluation of the Effectiveness of Educational Technology
www.ed.gov/Technology/TechConf/1999/whitepapers/paper9.htm

List of Consortium Partners

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