After School Tutorial & Enrichment Program (A-STEP) at Grace Memorial Presbyterian Church

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Community Partner, Harold Tomlin

The After School Tutorial & Enrichment Program at Grace Memorial Presbyterian Church offers an educational and recreational program to elementary school students. They provide homework help, computer instruction, field trips, and recreational games and programs..

Organization

The After School Tutorial & Enrichment Program is run by the Grace Memorial Presbyterian Church located at 1000 Bryn Mawr Road located in the Schenley Heights area of Pittsburgh. Its goal is to provide after school computer and other educational and recreational programs for the neighborhood children. The program services around 40 of the neighborhood students.

Facilities

The Grace Memorial Presbyterian Church is a large church located in the Schenley Heights area of Pittsburgh. The A-STEP computer lab is located on the third floor in a room 15x30 feet. The room is essentially split into two halves. The rear half has bookshelves on the back wall with two long tables on the side walls where computers sit. The front half has an island arrangement in the center of the room. The computer lab is only used by the A-STEP program. Currently the more powerful networked machines which are used most are located in the rear half of the room. Harold would like to move these to the island in the front half to enable easier teaching and helping of the students.

Program

The A-STEP computer program teaches neighborhood children how to use computers and gives them the opportunity to master some of these skills. The instruction begins with younger students in teaching them the general parts of the computer, letting them play games so that they become comfortable using the computer and also instruct them on typing proficiency through the use of software tools such as Mario Teaches Typing. For older students, an emphasis is placed on word processing and the ability to do productive work with a computer. Students often come in and complete school work on the ASTEP computers, printing it out on the laser printers there. They also teach rudimentary internet skills such as web browsing and researching on the internet. In the future, Harold would like to add new subjects to be taught such as email and creating web pages.

Staff

Harold Tomlin is the director of computer education in the A-STEP program. He is relatively new. He was an assistant under the previous director and picked up much of his computer knowledge from him. Harold expresses an intense willingness to learn, and seems excited about learning. He is also not afraid to experiment with the new things that he learns.

Technical Environment

The technical environment of the computer lab is a large and various one. Currently set up and working in the lab are 5 Packard Bells (Pentium 75, 8M RAM, 600meg HD, CD, sound, 14 inch monitors), 1 Compaq(Unknown Pentium, 16M RAM, Unknown HD, nonworking CD, nonworking floppy), and a Toshiba (Unknown Pentium, Unknown ram and HD, CD, no sound). All of these machines are running Windows 95, Netscape Mario Teaches Typing and Word 95. There are also various games installed on the different computers. There are two laser printers and a scanner available and working as well. These machines are all networked via 10BaseT Ethernet and their internet connection is via an ISDN line provided by the Hill House. The lab also has verifiably working 6 386 computers with 4M RAM, and 300meg hard drives. These machines are currently not set up. In addition to the machines described above, there are a large number of either non-working or unknown condition machines being stored in the

room. There is a Packard Bell like the ones above which has a bad hard drive. There is a 486 with a bad hard drive controller. There is a Pentium machine which has an unknown problem. Many of the other machines appear to be old 386 machines with a possibility of a few 486's. There are also an abundance of old monitors.

Technology Management

There is no real technology management plan. There are a lot of unused/broken machines sitting in the lab that need to be investigated. The usability of newly donated machines goes little beyond an initial power-on test. If a machine does not work directly, it is unlikely to be used at all. Given the number of non-working machines, several working machines could probably be constructed from the parts. If machines break, they most likely will end up on the side of the room. Harold expresses a desire at greater knowledge so that he can fix simple problems. Harold can troubleshoot simple software problems. It is my belief that with a technology management plan and a little knowledge, Harold can carry out the duties required for technology management in the organization.

Problems and Opportunities

General Computer Maintenance

Given the rapidly approaching start of the program, the highest priority is to have a fully functional computer lab ready to go. Currently many of the systems suffer from a range of maladies. Among the problems are a non-working hard drive, non-working floppy drive, non-working cdrom drive, inability to print, inability to network and program errors. It also has come to my attention that every single one of the machines is infected by one or more computer viruses. The program needs these machines to be working in order to facilitate computer instruction, the main purpose of the computer lab. The impact of this project will be a fully working lab that will enable an enriching learning experience for the children, an alleviation of work-around trouble for teaching staff, and will allow further development in after school curricula. This project is highly feasible. A virus scanner should be able to alleviate the virus problem and help forestall future viral infections. It is unknown how many of the other problems are caused through this infection. There are many spare non-working machines in the room, which can be harnessed for spare parts to maintain the working machines.

Project: General Computer Maintenance

Task Name	Who Responsible	Target Date	Sept. 2 3 4	Oct 1 2 3 4 5	Nov 1 2 3 4	Dec 1
Download Virus Scanner	C	10-Sep				
Install Virus Scanner on all machines	C/H	17-Sep				
Determine which problems still exist	H	24-Sep				
Troubleshoot/Fix cdrom problem	C/H	24-Sep				
Troubleshoot/Fix floppy problem	C/H	24-Sep				
Troubleshoot/Fix hard drive problem	C/H	24-Sep				
Troubleshoot/Fix printing problem	C/H	1-Oct				
Troubleshoot/Fix networking problem	C/H	1-Oct				
Troubleshoot/Fix program errors	C/H	1-Oct				
Take Inventory of spare machines	C/H	8-Oct				
Set up any useful spare machines	C/H	8-Oct				
Maintenance Review (Anything still broken?)	C/H	15-Oct				

Lab Relocation and Computer setup

Currently the lab consists of two halves. The back half consists of two long tables along the side walls, this is where the instructional machines currently are. The front half consists of an island arrangement of tables. We would like to move the instructional machines to the front half of the room to the island and then to install some of the older 386's in the back half of the room which the children can use for word processing. The reasoning for moving the location of the current computers, is because with the current arrangement, it is difficult for the instructor to give lessons to the children given their seating arrangement. It is also difficult to maneuver through the rear of the room in order to give one-on-one help to an individual child. Harold feels that by moving those machines to the island, children will be able to

follow along better and that he will also be able to help the children by being able to maneuver around easily. The impact of this project would be an easier working environment for Harold and other instructors and a better learning environment for the children. It is believed that this project is feasible. The main caveat is that these are networked machines and that the hub and ISDN modem will need to be moved to the other side of the room. Given the current location of the ISDN line, this will be an easily accomplished task.

Project: Software Installation			Sept.			Oct					Nov				Dec
Task Name	**Who Responsible**	**Target Date**	2	3	4	1	2	3	4	5	1	2	3	4	1
Install Windows 95 on two machines	H	8-Oct													
Create list of desired software	C/H	8-Oct													
Document which computers need what	C/H	8-Oct													
Download Netscape	C	15-Oct													
Install Netscape	C/H	15-Oct													
Install Office 97	C/H	22-Oct													
Install Educational Software	C/H	22-Oct													
Install Games	C/H	22-Oct													
Evaluate 386's	C/H	29-Oct													
Install Word 6.0 / Windows 3.11 if nec.	C/H	29-Oct													
Scanner software installation	C/H	5-Nov													
Scanner instruction	C	5-Nov													

Software Installation

The current machines are running a mishmash of different programs. Harold would like them all to be running a standard set of applications, instructional software, and games. The program recently received a donation of some Office97 discs, and Harold would like all the machines to be upgraded to that version. He would also like to see updated versions of Netscape on the machines. There are two machines which currently have blank hard drives, and Windows 95 needs to be installed on these. The older 386's will run Windows 3.1 and Word 6.0 which the program has copies of. It is unknown yet whether any of these need to be reinstalled. It was suggested by me that a virus scanner also be permanently installed on all of the machines to prevent any further virus problems. This project will be beneficial by enabling the students to all be working from a standard set of programs. Thus one computer will not be more enviable than another simply because it has programs that the other does not. It will also enable a more cohesive learning experience because they will all be working from a common base. Harold foresees this making his life easier by not having to delegate the use of certain machines based on what each one will do. The program already owns all of the software that needs to be installed with the exception of a virus scanner. Thus this is a highly feasible project would should be simple to complete and only time consuming in nature.

Project: Lab relocation			Sept.			Oct					Nov				Dec
Task Name	**Who Responsible**	**Target Date**	2	3	4	1	2	3	4	5	1	2	3	4	1
Develop a moving plan	C/H	5-Nov													
Move instructional machines to island.	C/H	12-Nov													
Set up instructional machines.	C/H	12-Nov													
Move ISDN modem and hub closer to island	C/H	12-Nov													
Re-Network instructional machines	C/H	12-Nov													
Set up 386's in rear of room.	C/H	19-Nov													

Outcomes and Recommendations

Evidence of Expanded Capacity

Harold Tomlin now feels more comfortable with the technology he is using and also understands it at a deeper level than previously. Harold is able to troubleshoot simple software problems. He is also able to troubleshoot printer problems to determine whether they are software or hardware based and then take the appropriate path to resolve the problem. Harold understands how the computers in the lab are networked and is also now able to use Microsoft Networking in order to transfer files between individual computers. He also feels comfortable installing new software and has demonstrated on several occasions his willingness to do so without supervision. He is also now able to use the scanner in the lab to scan pictures and documents into his computer.

The technical environment has been improved greatly. The elimination of a virus from all the machines has increased their utility greatly. All of the machines had been notoriously slow and several crashed or hung repeatedly during a common days usage. Eliminating the virus has increased the speed of all the machines greatly, eliminated some perceived hardware problems such as malfunctioning cdrom drives, and Harold also reports that not one of the machines has crashed since we removed the virus. All of the machines now have Mcafee VirusScan on them. Word97 was installed on all of the Pentium machines and Word 6.0 on all of the 386's. PowerPoint and Excel on were installed on three of the machines which had sufficient hard drive space. We also installed a cdrom version of the Encyclopedia Britannica on two of the machines, which should be greatly beneficial for students doing research. The lab is now completely fully operational and running smoothly.

The organization as a whole is also experiencing expanded capacity. Harold was able to take some of the things we did in the lab and carry them over to other computers and users throughout the organization. Such things as installing VirusScan and Word97 on other machines and also in troubleshooting problems that arise on the other machines.

Evidence of Sustainability

Harold has now become quite proficient in solving many of the problems that can occur. He is able to troubleshoot many simple problems that previously were left unsolved. His greater understanding of the environment and the different interactions that occur also give him a powerful base to work from. Harold has demonstrated that he is able to operate without my supervision by fixing printer problems, installing software, and copying files over the network in my absence. I often find that things that were planned for our meeting are already done when I arrive due to Harold's willingness to try. Harold is sharing the new things he learns with other people in the organization. As Harold learns more, the organization as a whole learns more. This is important because if Harold ever needs to leave the organization in the future, the knowledge that has been acquired will not completely leave with him. Harold is also now able to share some of the things he has learned with the children who use the lab.

Some of the more common problems that seem to pop up in the lab have been documented along with their solutions. This way, if a problem occurs and Harold is not around, consulting this documentation may lead to a simple solution. Other members of the organization are also often in the lab. Whenever they run into problems, Harold and I are able to work out a solution with them, thus enabling the learning process for all of us.

Recommendations

The program sometimes receives grant money and is currently in line to receive some money to purchase computers for the lab. My recommendation is that instead of buying 3 top of the line machines, that they instead purchase 6 or 8 new machines which are not top of the line, but which are new and will do everything that the program requires them for. The reasoning behind this recommendation is that with more machines, the organization will be able to further it's goals more easily. The more machines they have, the more kids they can accommodate. This will also help further some of the other goals they have such as implementing an adult evening programs or placing a few computers in a local school.

I also recommend that the programs hold off on acquiring any new software for the time being. Office 97 is quite sufficient for their productivity needs and is still the prevalent office suite in use in business today. Windows 95 is also still sufficient with windows 98 offering no essential functionality. The exception to this software lockout is the acquisition of new educational software. Anything that will aid the children or further interest them in the use of computers is to be recommended.

Another recommendation concerns the acceptance of software and hardware donations. I recommend that they deny any donations that do not advance the goal of the program. Some examples of this are outdated software, broken or incompatible machines, etc. Harold and I spent much time going through the storage rooms evaluating machines which had been donated. The majority of them were useless yet a lot of space and time was used accepting these machines. A community organization cannot afford to waste either time nor space. A comprehensive plan should be laid out for what and what not to accept.

Resources

There are a number of resources available to Harold and the organization.

- The windows help system is available to them in order to troubleshoot simple software and hardware problems. The system also includes troubleshooters to guide them through determining a specific problem.
- Harold is now interested in upgrading certain components of the computer systems as well as acquiring some new systems as grant money comes in. www.pricewatch.com can help him determine which upgrades are feasible as well as give him a general idea of how much things will cost.
- www.microsoft.com/support provides troubleshooting help on Microsoft products such as Windows and Office
- www.mcafee.com provides information about virus scanning as well as updates for any new computer viruses.