

EYE ON TECHNOLOGY

A curriculum for planning your technology service-learning project

The Information Age Is Upon Us. Are You Ready?

As we enter the new millennium, computers and technology play an increasingly vital role in almost every aspect of our lives. As citizens of a modern society, we already take it upon ourselves to learn about new technologies and use them to our advantage. As responsible citizens, we can use technology products to provide effective service to others in a variety of ways, as well as work to ensure that everyone in the community has the know-how and has access to the right technology that will better their lives. Utilizing the service-learning strategy is a great way to provide much-needed service to others while increasing your own level of skills and knowledge. This packet will guide you through the four steps (Preparation, Action, Reflection, and Celebration) of an effective service-learning project. The packet also contains technology service project ideas and examples of ways to integrate technology study into your class curriculum. Feel free to use any of these ideas, or to come up with a something completely different. Whatever you choose, the results of your efforts will certainly be long-term and profound.

P.A.R.C.



- Preparation:** Identifying and analyzing issues, choosing a project, learning skills needed to perform the project, and outlining the logistics (all the details) of the project.
- Action:** Performing the service as planned. Be ready for new circumstances that may arise.
- Reflection:** Enabling us to learn from the service experience. This is how service is tied back to what we learn in our classroom or to "real life."
- Celebration:** It is important for us to realize we have made a difference and we should celebrate our accomplishments.

Consider this....

More than 80% of people in the world have never used a telephone, let alone been online.

The Department of Commerce estimates that, after the year 2000, 60% of jobs will require skills with technology.

Black and Hispanic households are half as likely as Caucasian households to own a computer, and are 2.5 times less likely to use the Internet.

People living in urban areas are twice as likely to use a computer as those living in rural areas.

Only 43% of households with an income lower than \$40,000/year have internet access, while 90% of households with an income of \$80,000/year do.

Connect Service to Curriculum

Visual Arts

How is art changing with the advent of new graphics and digital imaging systems?

Business Education

Examine the ways in which computers have streamlined business processes, and how business owners can use the internet to reach larger markets.

History

Examine the recent changes in how information is being recorded. How will these changes affect the quality of historical information about our time available to future generations?

Foreign Language

How has the internet made it easier to study a foreign language? Discuss communications with native speakers and access to foreign media.

Science

Examine how computer models have been able to replace animal research and chemical laboratory work.

English/Language Arts

Explore the ways in which computers are used in the publishing of newspapers, magazines and books.

Social Studies

What is the Digital Divide? Who is affected and what are some ways of improving computer and Internet access?

PREPARATION

What kind of project would you like to do? There are many possibilities to choose from. Some projects will take a lot of planning and preparation, but the end result will definitely be worth it. The first thing you should do is decide on your objectives: what are you trying to accomplish? Then make an organized agenda of what needs to be done, and assign tasks to separate groups or individuals. This list has some suggestions for steps to take in preparing an outstanding technology service project.

1. What can we Learn and Serve?

↑Discuss how technology has become increasingly important to our lives. What can you accomplish with technology that you couldn't accomplish without it?

↑What kinds of problems in the community could be solved using technology? Does everyone have the access to technology that they need?

↑Brainstorm possible solutions for the problems that you identified.

↑Have your students vote on a project based on your solutions list.

2. How can we Learn and Serve?

↑Who will be the recipient of our service? Talk to agencies, school officials, city officials or others and find out if your idea is feasible.

↑Determine a mutually convenient time to perform service.

↑Visit site (if applicable) and get all the information you can about what you are going to do and about the problem you are addressing.

↑Decide what new skills students need to gain before starting the project, and make a plan on how to learn those skills.

3. How will we get things done?

↑Make a list of all tasks which must be completed and assign each task to a separate group or individual. Don't forget reflection and celebration committees!

↑Set up your ideal timeline and put deadlines on each task.

↑Report back to the group!

Project Possibilities

There are three types of projects from which you can choose: direct, indirect, and advocacy.

DIRECT SERVICE addresses an issue with hands-on activity. For example:

Start up an Internet or computer club at your school. Teach participants how to write their own programs, search the Net, use email, and give their pictures new effects with Photoshop.

Students in networking classes can work with school staff to fix problems in the school's networking systems.

Teach seniors how to use e-mail to communicate with family members.

Host a technology fair at your school. Design interactive activities and exhibits showing how different pieces of technology work.

Work with younger art students and teach them how make works of art using the newest graphic-design and photo-editing software.

Organize a community-wide engineering contest. Who can build the best invention? Have contestants compete against one another. Award prizes and advertise!

Learn how to make robots using Legos and simple electrical circuits. Then partner up with a local elementary school class and work together to design and build them.

INDIRECT SERVICE involves doing a service locally that helps a problem somewhere else. For example:

Create a website for a nonprofit agency or service organization to spread awareness about its activities, objectives and what citizens can do to help.

Students in desktop publishing courses can work with community agencies to

ACTION

Pointers for carrying out a successful project:

At the start:

- Sign in all volunteers and make sure everyone has a permission slip (if you will be leaving the school site)
- Define ground rules: Cooperative teamwork, positive encouragement, respect for others and for the site or service recipients, and peaceful conflict resolution.
- Introduce the site/agency contact to the group and have them say a few words about the issue, project and tasks.

- Make sure everyone knows the tasks they are assigned.

During the project:

- Take pictures.
- Keep on your time schedule.
- Stop for water or snacks if necessary.
- Have an emergency action plan.

At the end:

- Clean up site, put away any supplies. You want to leave a good impression!
- Finalize details (on a long-term project)
- Talk about the project with your agency contact or host.
- Do reflection activities (see next page).
- Send thank-you notes.



create and distribute publications/newsletters covering important news items and volunteer opportunities.

Put together a booklet listing Internet resources about different subjects that students can use to get help with their classes.

Make colorful instruction books showing how to search for information on the Internet, set up an e-mail address, or use various software programs. Donate the books to computer labs and resource centers.

Make up special lesson plans that teachers can use to incorporate the Internet or a special software program into their class curriculum.

Give new life to your school or community computer lab with paint, original artwork, new learning materials and software. Visit local businesses and computer professionals to get donations of games, multimedia programs, publishing programs, and graphic-design and photo-refinement systems.

Organize a technology job-shadow event bringing together computer, engineering and biotech companies and professionals to provide an inside look for local students interested in technology careers.

ADVOCACY is working toward a lasting solution to a problem and informing the public. For example:

Produce a multimedia presentation for your school news raising awareness about needs and issues in the community and what students can do to get involved.

Research the "Digital Divide" and put together awareness pamphlets that contain information and statistics, and tell ways in which ordinary citizens can help create lasting solutions.

Write letters and talk to officials of local colleges to persuade them to offer free computer courses to members of low-income households.

REFLECTION

Reflection is thinking about what you have learned. It is the key to turning one project into a useful service-learning experience. It can be a journal entry, a presentation, or even a group discussion. Reflection should occur throughout the service project so students can have time to process what they are learning, and also learn about the experiences other students are having.

The following is a list of questions you should consider in your reflections:

1. What did we do?
2. What did the project do to fill the community needs we identified?
3. How did we make a difference?
4. What was the biggest challenge?
5. What did other people learn from us?
6. What was surprising?
7. Has this project changed the way we think about technology and the ways it can benefit us?
8. How does serving make us feel?
9. Does what we learned apply to any other areas of our life?
you've helped

An idea: Create a multimedia presentation detailing your service.

An idea: Make drawings and collages about your project or how you made a difference. Have each student explain their artwork.

An idea: Using a publishing program, create a page for the school yearbook detailing your service. Include photos.

An idea: Tell other classes about your project. Help them organize a similar one.

An idea: Write letters to newspapers and public officials to tell about how you've helped.

An idea: Create a reflection video to show to other classes and raise awareness of community issues and of the ways technology can be used to perform service.

CELEBRATION

You have done such a great job planning and carrying out your project! It's time to organize a fun way to celebrate what you have done. Be sure you give recognition to every person that participated. Here are some ideas to get you started:

- ◆ Throw a pizza or ice cream party!
- ◆ Give out certificates for participants.

◆ Give out special rewards like coupons, free admissions, buttons and special awards.

◆ Play games.

◆ Write up the project for local newspapers or school newspapers.

◆ Show a video or slide show with pictures from your service.



Resources: More Info?

The following is a list of agency and information resources that you may find useful in planning your technology service-learning project. This is by no means a complete list, though. Some of your best resources can be your local schools, community agencies and businesses.

Volunteer San Diego , 4699 Murphy Canyon Rd., (858) 636-4129, savy@volunteersandiego.org	
San Diego City Schools/Learn and Serve , (619) 293-8676	
AmeriCorps.....	www.americorps.org
Center for Youth as Resource.....	www.yar.org
Computers for Kids.....	www.c4k.org
Computers for Youth.....	www.cfy.org
Corporation for National Service.....	www.nationalservice.org
Digital Divide (PBS).....	www.pbs.org/digitaldivide/
Digital Divide Network.....	www.digitaldividenetwork.org
Do Something.....	www.dosomething.org
How Stuff Works.....	www.howstuffworks.com
Kids and Computers.....	www.kidsandcomputers.com
Middle School Computer Science & Business Education.....	www.crews.org/media-tech/compsci/
Technology Buzzwords for Students.....	www.tekmom.com/buzzwords
Volunteer San Diego.....	www.volunteersandiego.org
Youth Build, USA.....	www.youthbuild.org
Youth Service America.....	www.youthserviceamerica.org
Youth Service California.....	www.yscal.org

Success Story in Technology Service-Learning

This spring, budding computer scientists at Mission Bay High School in Pacific Beach turned their Web skills into a powerful tool for helping others. Moved by the work of Harvest for the Hungry, a local charity that feeds and cares for the homeless, five students from a computer science class volunteered to create and maintain a sophisticated and inter-

active Web site for the nonprofit organization. “This is truly real-world experience. This kids get the hands-on experience and the organization gets a Web site that it could never have afforded,” said teacher Gail Lake. Earlier this year, Lake invited Mary May, founder of Harvest for the Hungry to speak to her students. The class decided to spend a day with the homeless during a field trip to the Pacific Beach Organization. It was there that they thought of a way to use their skills to help those they visited. “When you meet them, talk with them and sit down to a meal with

them, it really changes your view on the homeless,” said student Dagoberito Aceves. “It makes you want to get involved and help.” The website project is an excellent example of powerful service-learning because it effectively connects service to the classroom by allowing students to better their own skills in technology while performing valuable service. The website contains information about the organization as well as student essays and poetry on the subject of homelessness. You can visit the website at <http://www.harvestforthehungry.org>.

SAVY—VOLUNTEER SAN DIEGO
 4699 MURPHY CANYON RD.
 SAN DIEGO, CA 92193
 (858) 636-4129
savy@volunteersandiego.org