WEB Project Handbook
1998-1999

Background

The WEB Project, subtitled "Creating a WEB of Evidence of Student Performance in Nonverbal Inquiry and Expression," is a consortium of community organizations, private industries, and educational institutions that are utilizing new technologies to effect systemic reform in school systems throughout Vermont. The project utilizes multimedia telecommunications as:

- an educational environment for student inquiry and expression
- a medium for presenting and assessing student work
- a virtual faculty room for professional discussions about work

The WEB Project is one of the original 19 Technology Innovation Challenge Grant Programs funded by the U.S. Department of Education in the fall of 1995. With this $2.5 million grant, we have been encouraged to act on our most ambitious visions for technology in education reform. We have been encouraged to experiment, to make mistakes, and to learn from our experiences as we go along. In return, we have promised to improve student performance in the areas of Arts, Language, Literature, and History and Social Sciences.

Our aim is to be able to use multimedia technology to show what we mean rather than being limited to text and talk. For students, this translates into multimedia presentations, portfolios, or videos. For teachers, it means the ability to share multi-dimensional examples of their classrooms. For planners, it means accessing information in visual form, with data tables and lists translated into maps. For statewide leaders, it means the ability to reach out to constituents in new ways. And for all of us, it means doing things that may be unknown or inconceivable today, but that will surely become part of our awareness tomorrow.

The name WEB Project originally referred to a "web of connections." Between the time that the grant was originally submitted to Washington and the time the award was actually received, the World Wide Web became a national phenomenon, and a fuzzy grant promise of "multimedia telecommunications" took on great significance. In just 15 months, we have glimpsed the vast potential that rapid changes in technology are bringing—as well as the chaos that gets created along the way when school systems meet at the "cutting edge." Through experiences such as creating music compositions, accessing the Internet, and making digital images, multimedia presentations, or animations, students have become inspired, highly engaged, and even—in some cases—employed by local businesses.

The WEB Project brings together resources that come from local communities, statewide organizations, national, and international contacts. The web of connections that we hope to make will link individuals—with their personal visions and passionate interests—with others around the world who can help them realize these inspirations.

Frequently Asked Questions
about the WEB Project

What is the WEB Project?
The WEB Project is a U.S. Department of Education Technology Innovation Challenge Grant geared toward creating multimedia forms of evidence of student performance. This means using technology to show what students can do through digitizing images, sound, and motion. The WEB Project also hosts a World Wide Web site where teachers, students, and community members can discuss work together.

Can anyone be part of the WEB Project?
The WEB Project has two levels of participation: Statewide Initiatives and Cooperating Schools. Anyone who has the ability to access the Internet and participate in conversations about student work is welcomed to join any of the statewide initiatives of our partner organizations by request to the specific organization offering the online initiative. Cooperating schools are drawn from participants in the WEB statewide initiatives plus other schools that have demonstrated significant progress toward meeting the goals of the Green Mountain Challenge, and that include the use of multimedia technology as part of their visions, but lack the technology to go further.

Why are you emphasizing multimedia?
Students learn in many different ways. Previously, the assessment of what students know has been relegated to the areas of multiple-choice testing and written responses. Using student products to develop shared standards across a state has been cumbersome and costly. Last year, for instance, visual arts teachers brought 1,200 pieces of student art work to Montpelier for discussion. When so many pieces of work are physically transported, there is a high risk of losing or damaging precious work. New multimedia technology allows students to "show what they know" and educators and subject specialists to "say what they see" without the expense of meeting together each time such a conversation is held.

Who is learning what, where, when, and how?
Initially, teachers, students, and community members are learning the basics of how to digitize multimedia content and prepare that content for specific authoring purposes (multimedia presentations, digital portfolios, WWW site discussions, other

assessment tools). In learning that, participants are setting benchmarks for quality in the media and practicing the process of the longer-term goal—holding critical conversations between students, teachers, subject matter specialists, and community members about work. Then, as participants gain more first-hand experiences and better understand the possibilities that those elements hold for education, more specific plans will be made at the district level. Meanwhile, statewide initiatives have begun where networks of teachers are ready to hold critical conversations about work in projects that are more specifically defined. These projects are the forerunners that inform us about what is possible.

What evidence of effectiveness are you using?
Self-assessment scoring guides have been created for use of multimedia, and a process for holding respectful conversations has been set by the MIDI Distance Learning Network along with subsequent initiatives such as ARTT and Civic Discourse. Each additional WEB district and initiative will be developing other tools as well. RMC Research Corporation from Denver, Colorado serves as our evaluator and has developed a comprehensive evaluation plan.

Why are you using community partners?
We are drawing on members of the larger community so that they can share their expertise with us and so that we can share our technology expertise and pedagogical experience with them as they plan to incorporate the Vermont Framework into their educational strategies. The Vermont Center for the Book has adopted online components to enhance their statewide literacy efforts. The Vermont Alliance for Arts Education and the Vermont Arts Council are mobilizing artists across Vermont to learn how to use the new technologies and then act as artists-in-education to help meet the technical assistance needs that lie within schools. The Vermont Historical Society and the Alliance for Social Studies are helping us to develop evidence of those student performances that will be decided locally, rather than contained within the statewide assessment. IBM is designing the software necessary for scoring training in those areas that are appropriate for scoring. They are also creating a computerized system for developing Units of Study that align with our state framework, a critical element of the long-term goal. The Vermont Institute for Science, Math, and Technology (VISMT) has taken the lead in professional development around the Vermont Framework, and their organization plays a crucial role in spreading its use across the state.

Whom should I contact in your organization for fast, accurate information?

For general information about the project, contact <u>Penny Nolte</u> (**web@sover.net**) at (802) 229-4660. For specific information about the curriculum aspects of the WEB Project, its connection to the arts, humanities and social sciences, and the design of the interactive WWW site, contact <u>Fern Tavalin</u> (**tavalin@sover.net**). For specific information about the WEB Project's relationship to VISMT and the development of the Geographic Information System (GIS), contact <u>David Gibson</u> (**gibsond@quark.vsc.edu**).

People and Programs

This handbook is a work in progress. It will grow and change as the WEB Project develops and as new schools, organizations, and individuals become involved. The sections that follow include:

Cooperating Schools
In this section, the cooperating schools provide brief accounts of their goals, questions, and milestones in using multimedia technology.

Learning to Use Multimedia Technology
This section describes the different types of technology training offered by the WEB Project, including technology workshops, in-school residencies, one-day classroom consultations with other WEB teachers, independent practice with technical support, and summer intensives.

Online Communication
This section describes the different types of communication available at the WEB Project's interactive website:—threaded discussion, observation of work, real time chat, and uploadable forms and evaluation databases.

Nonprofit Partners and their Statewide Initiatives
This section describes the collaborative role of the nonprofit partners:—the Vermont Alliance for Arts Education, the Vermont Arts Council, the Vermont Center for the Book, the Vermont Historical Society, the Vermont Social Studies Alliance—and the higher education institutions that are involved: Castleton State College, St. Michael's College, and the University of Vermont.
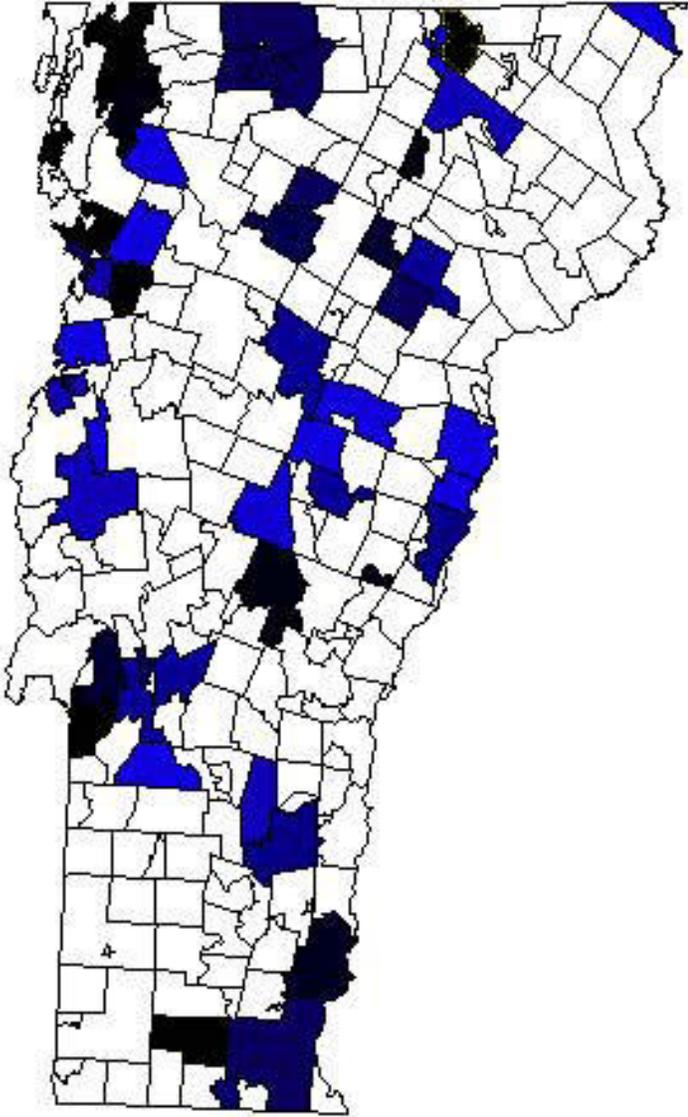
Reporting and Evaluation Responsibilities
This section describes the goals of the WEB Project and the evaluation instruments that are being used to assess its progress.

Appendix
The Appendix lists all WEB Project participants.

Map of Participants

Cooperating
Schools

Cooperating Schools

Three school districts—Montpelier, Proctor, and Franklin Northeast Supervisory Union—were among the original partners of the WEB Project. Each of these districts is working with their broader communities to establish local standards that are linked to their curriculum and assessment systems. While the curriculum pieces are being put together, lead teachers from each of these districts are exploring the possible uses of multimedia in the curriculum and with student performance assessment. Four additional schools have been added to the original three: North Country Union Junior High, Whitingham School, Edmunds Middle School, and Brattleboro Union High School.

Each WEB Project cooperating school district is involved with:

- developing a coordinated, integrated curriculum and assessment system based on the Vermont Framework
- exploring the role of multimedia forms of evidence of student learning in "bringing their frameworks to life"
- making connections across disciplines

Cooperating districts have internal professional development opportunities designed to implement their district standards. Most of them receive financial support through Goals 2000 grants to continue aligning their local curriculum with standards and assessment.

Teachers who have received WEB Project computers are asking an additional question: How does multimedia help implement our goals and demonstrate student learning? To answer this question, each cooperating school maintains local goals specifically tailored to meet their unique situations.

Montpelier Schools

Description

We are a K-12 school district, one of the smallest in the state, with about 1400 students in three buildings spread across the town in a one mile radius. The town is the nation's smallest state capitol, which brings with it, both the advantages of many state agencies, and the larger than average number of people who need access to services such as welfare, health and human services, employment, and so forth.

The WEB Project came as a surprise when one of the co-authors of the original proposal, curriculum director, announced the award. We have been working in four primary areas thus far: MIDI composition, visual arts, social studies, and multimedia (including WWW page development and video production). We have also been preparing ourselves for an increase in standards-based teaching using technology in three ways:

1. improving our infrastructure to provide universal access for all teachers and students,

2. building a capacity to use technology in teaching (image processing and GIS in science teaching, imaging in fine arts, Internet in social studies research, calculators and image display in mathematics, local web page development, independent technology studies for students, career exploration opportunities, etc.) and

3. building a capacity for administrative uses of technology in curriculum improvement processes such as articulation, assessment, etc.

Allocation of Computer Resources

WEB Project computers and other equipment are in five different locations in the high school: media room, art room, music room, social studies room, curriculum office, and image processing laboratory. A full mapping of all computer resources and their connectivity is available in our technology plan, filed with the state as an approved local technology plan for E-rate purposes.

Type of Connectivity

As noted in our technology plan, the school system runs a WAN, with LANs in each building offering 56K or better connection to users.

Short-Term Goals

- Support teachers in summer learning - visual, music and science areas emphasized
- Complete construction and connections in high school (movement of image lab, expansion of LAN, upgrade of information technology classroom, etc.)
- Locate and begin to adapt software for student level achievement data
- Complete WWW site development for "Personal Learning Plans"
- Acquire computer for music - for Vivace practice and MIDI composition

Long Term Goals

- To have every student (grades 9 and 10 next year; grades 6 through 12 within the next four years) involved in personalized learning plans using appropriate technology
- To have every teacher using technology for personal productivity and to improve teaching
- To follow student progress through the grades using technology for multimedia standards-based records of achievement, student work, etc.
- To build new doorways for the public to become engaged in education through technology access
- To enhance student involvement with the arts using technology

Major Questions and Concerns

1. When will classrooms in the high school permit daily use of technology in teaching?
2. How can a WWW site help students and parents negotiate individualized learning opportunities?
3. How can and when will technology facilitate better standards-based teaching, planning, assessment, and records for all teachers and students?
4. When will music composition, music theory, MIDI work and Vivace assisted work become a scheduled part of the arts curriculum?

Major Milestones to Date

• Completion of state approved technology plan

• E-Rate completion of LAN-WAN for schools, new long distance learning studio, major upgrade of computers at high school, move of electron microscope nearly completed

• Increased training for science teachers in using GIS and Image software

• Increase in instrumental music teacher FTE time

• Increased involvement of new music teacher in MIDI work - scheduled for this summer

• Independent study designed for MIDI composition, and increased awareness of MIDI by jazz band players this year

• Continuation of visual image collection work, digitizing of work, animation, video and web page construction

• Continued use of Internet in social studies research and classroom presentations

Whitingham School

Description

We are a K-12 school in the southernmost part of Vermont, with an enrollment of 320 students. Our art teacher, Lisa Brooks, initially became involved with the Vermont WEB Project as a single computer grantee, in the first round of the grant. The success of utilizing that computer to teach computer graphics and multimedia skills to students gave Whitingham School the chance to be included as a participating school in the second round of the grant, and to receive more hardware support as well as support getting the school online. Our school's long range goals for technology were well established. For example, we had recently been wired with fiber optic cable, and the school directors had approved a leasing program for increasing the number of computers in the classrooms. The Vermont WEB Project has allowed us to reach our long range goals much faster than we anticipated. We are now in the process of creating new goals, including the utilization of our newly created intranet, teacher training in multimedia and Internet skills, and creating a supervisory-wide technology plan.

Allocation of Computer Resources

The Vermont WEB Project funded computers are housed primarily in the art room which has become the multimedia hub of the school. Another WEB computer is located in the social studies classroom where it is utilized for Internet and multimedia projects. The school has numerous older purchased machines and leases computers for other classrooms so that the technology can remain up to date

Type of Connectivity

LAN -- school computers are connected with a 10 base-T network

WAN -- Internet access through an ISDN connection

Short Term Goal

In April 1997 an intranet was completed. The short-term goal is to train all teachers to utilize e-mail and communication skills, such as posting information for students and parents. To that end, two week-long classes were held in the summer of 1997: one on the Internet and Web page building, and the other on general multimedia. A basic Whitingham School website was created in the spring of '97; it includes a rudimentary page for the art room, with student work displayed.

Another of our goals is to get some local PR for the program.

Long Term Goal

The long-term goal is to have a fully developed school Web site that houses pages for all areas of the school, maintained by the teachers and the technology coordinator. We would like to have students using the intranet so that integrated multimedia presentations could be started in one class and continued in another. We also want to have online interaction between students in the arts and their art works and possibly with professional artists as well. This may begin with Wilmington School who has just become involved with the WEB Project. Our two neighboring schools will be able to merge their efforts to train students and teachers in multimedia, and to experience and talk about art.

Major Questions and Concerns

1. How can we get all the staff on board regarding the use of technology?
2. How can we get funding for hardware and training in the future?
3. How can we get training to the trainers?
4. What form will the student-to-student interactions take?
5. How will the other aspects of the Vermont WEB Project dovetail with the technology/arts?
6. How can we keep everything up and running (hardware)?
7. Once people have been trained, how can we keep the energy going so that they continue to utilize the technology?
8. How can we open up the technology to the community (e.g., local historical society, art galleries, artists, musicians) and integrate their ideas and plans?

Major Milestones to Date

- *March 1997:* The ISDN line is up and running, and most computers in the school are connected (not all computers are up yet).
- *April 1997:* The portfolio of one of our students who participated in a Director authoring class last summer was selected for demonstration in a federal technology "street fair" in Washington, DC.
- *May 1997:* Our technology coordinator, David Greenberg, presents a "state of the supervisory union" technology overview at the last "superboard" meeting. This meeting brought together representatives from all five of the school boards in the Windham Southwest Supervisory Union. David talked about the WEB Project involvement and showcased the Whitingham School Web site and the art room page, which was created by a student and displays student art. The Web site was a big hit, and the technology proposal for the 1997–98 school year was fully funded later at that same meeting.
- *June and August 1997:* Two week-long WEB sponsored technology classes, taught during the summer of 1997, were filled, with waiting lists. A number of Whitingham and Wilmington teachers attended, with the remaining slots filled with community members, artists and a high school student. They were taught by Lisa Brooks, assisted by two of her high school students for the Internet and Web Building class, and Debbie Lazar, Brattleboro artist and graphic artist, for the Multimedia class.

Franklin Northeast Supervisory Union

Description

Franklin Northeast Supervisory Union (FNESU) is located in the northwestern part of Vermont and consists of five towns with five elementary schools, two high schools, one technical center, and six governing school boards. There are approximately 1,800 students in grades K–12. The poverty rate is among the highest in the state.

Some students in grades 7-12 have had opportunities to learn new technology and to produce multimedia projects through training and equipment provided through WEB Project and local curriculum/technology initiatives. Fifteen teachers have participated in workshops so that they can support students in their efforts to work in the multimedia arena. These teachers incorporate a variety of disciplines, including visual arts, guidance, library, science, math, language arts and technical education.

Participation has allowed teachers in FNESU to keep the goal of developing a standards-based curriculum including appropriate assessment in the forefront of our work. WEB Project participants have become leaders in their respective buildings in technology planning, and they are immersed in the process of developing standards-based assessment for multimedia projects.

Allocation of Computer Resources

WEB funded computers are housed two per high school and one per K–8 school in FNESU, with a concentration of 5 more computers in Montgomery, which serves as a regional training center. Schools are allocating other resources so that Internet connections can be utilized from all capable building computers. Technology, equipment, and training opportunities for students in grades K–6 are also being supported so that students will be prepared to take full advantage of the learning now made possible through the WEB computers.

Our goal is to prepare students for higher education, jobs and other opportunities when they graduate from our schools. Our communities have strongly supported improvements in curriculum and technology offerings over the last several years.

Type of Connectivity

District efforts to find funding for continued improvement of the LAN in our schools have been successful through the efforts of Dana Jewett, our technology coordinator, and the availability of the Title III Technology Challenge grants. Currently, all FNESU schools have created 10/T local area networks. Wide area networks are now connected to Enosburg's via phone lines but each will have a direct connection to the Internet by fall 1998

Short-Term Goal

- *Network:* Get all FNESU schools connected to the Internet by direct access.
- *Curriculum:* Keep teachers working on incorporating standards into their work with students

Long-Term Goal

In Franklin Northeast Supervisory Union, the following WEB Project goals were selected to specifically address district goals. They appear on all the WEB Project communication as a reminder of our work's focus.

WEB Project Vision: To improve student performance in the arts and humanities and social sciences that stems from the VT Framework, using technology, professional development and community involvement as strategies to promote the use of multiple forms of evidence of student learning, with public reporting of information.

Systemic Goal: To promote in-person and on-line discussions of student work among students, teachers, administrators, and community members that center on the VT Framework...

Systemic Goal: To use multimedia technology to connect state level systemic school reform efforts, as evidenced through the VT Framework of Standards and Learning Opportunities, to the work of local communities.

At monthly WEB Project meetings, FNESU teachers share current work and plan next steps toward implementing Vermont standards they have selected. The first two standards are the ones teachers voted highest priority for student work, but the others listed also are addressed in classroom work and WEB Project meetings.

2.1 Reasoning and Problem Solving - Types of questions - Students ask a variety of questions. This is evident when students ask critical questions that judge the quality of evidence from within a problem, text, work of art.

1.13 Communication Standard - Students listen actively and respond to communications. This is evident when students ask clarifying questions, restate, and respond through discussion, writing, and using art forms.

7.19 Science, Mathematics, and Technology Standards - Students use technological/engineering processes to design solutions to problems. This is evident when students create a design solution and evaluate and adjust design process, responding to the unique characteristics of a specific problem.

3.7 Personal Development - Making Decisions - Students make informed decisions. This is evident when students describe and explain their decisions based on evidence and recognize others' points of view, and assess their decisions from other perspectives.

5.6 Arts, Language, and Literature - Critique and Revision - Students review others' critiques in revising their own work, separating personal opinion for critical analysis.

5.3 Arts, Language, and Literature - Aesthetic Judgment - Students form aesthetic judgment, using appropriate vocabulary and background knowledge to critique their own work and the work of others, and to support their perception of work in the arts, language, and literature.

Major Questions and Concerns

Distance has been a challenge for our district as schools and the WEB Project computers are as far as 17 miles apart. While some communication occurs via e-mail and Internet, teachers still prefer to meet face to face when possible. Our monthly meetings address the need for networking and planning in an interactive, interpersonal forum.

Major Milestones to Date

District Wide
- The FNESU Curriculum Framework was completed in June, 1997 and distributed at the August in-service day. This has provided a common set of targets for students, teachers, parents, and community members to reference in discussions and further work towards aligning our curriculum with the Vermont Framework of Standards and Learning Opportunities.
- District wide activities have included a student day in which students were brought together to share some of their work-in-progress and to develop critical dialog skills. A second day is planned for May 14 so students can meet with others doing similar multimedia work.
- A district art show is also being planned for this May in which community members and students will have an opportunity to see a variety of art projects, including multimedia work.
- FNESU schools were awarded $70,000 for technology enhancement for all eight of our schools.

Richford High School
Focusing on selected Framework Standards, Richford's Multi-media Production Class offers students the opportunity to produce claymations primarily using Premiere. Students are beginning to comment on-line regarding other still graphic and motion projects.

Students are progressing through stages of learning. The questions and objectives for each new claymation become more sophisticated, whether editing images, mixing sound, or creating backgrounds. Upcoming projects include "A Portrait of Richford", radio plays, and "Art History Live". This multi-media class will upload their work to the WEB Project Observation of Projects site. Jonathan Silverman is working with two teachers, Pat Murphy and Phyllis Utigard, to integrate the Vermont Standards into the course design, implementation and assessment.

One Richford student has recently been hired for a part-time job with a local computer software company working on web design and computer graphics.

Future plans involve community members and students in an interdisciplinary project about "Richford: Past and Present". Different classes will be responsible for carrying out different parts. For example, the French class will interview community members who have French Canadian backgrounds about what it's like to be French-speaking in Richford.

Montgomery Elementary School

Last summer Montgomery Elementary School students started a retired teachers' video. Students videotaped interviews with several teachers and recorded teaching artifacts used by teachers in years past. Community members and teachers have also been involved in this production. They are currently in the process of digitizing these tapes on Media 100. The goal is to compare effective strategies of teachers in the past to present day strategies to determine what works or worked in the classroom and what doesn't. Once information is digitized, they plan to create a video to share with other Vermont schools.

Eighth grade students are in the process of creating a video yearbook and a hard copy of the yearbook using Media 100 and other tools of technology. Teachers not previously trained are participating in sessions to become proficient in using e-mail and Netscape in their work making this technology available to a greater number of students. Teachers are also using technology to create standards-based units of study incorporating the Vermont Framework of Standards.

Once each week in Montgomery Elementary School students and community members can meet in the evening to use the available technology and to generate ideas about the use of technology in Montgomery. A future goal for Montgomery Elementary School students is to develop a Montgomery Elementary School Home Page website.

Berkshire Elementary School

Seventh grade students have been working on a multimedia program which introduces pre-school students to the kindergarten routine and activities.

Two eighth grade students created a poster for a local arts group, The Franklin County All Arts Council. Students have been using the Internet frequently to access information for reports in their classroom work. Eighth grade students are using multi-media to create their yearbook. Two teachers have also created units of study available on their home page which are interactive and have been created on-line as virtual classroom units.

Enosburg Falls High School

The WEB Project teacher is recognized as a highly skilled technology resource in the school. Examples of this include the following.
* Journalism class has sought assistance with computer graphics for the school newsletter. Students digitized images, pulled them into Photoshop and then dot matrixed the images for print.
* The Junior English teacher is requesting training in Authorware and digitizing video. The art teacher, currently involved with the WEB Project and the English teacher are planning a student trip for art and videography students to a multi-media student festival.
* The Middle School Language Arts teacher has requested assistance in creating drama posters for a musical production.

Although the Web computers are located in the art classroom, students from other classes come in to use the technology before and after school and during this teacher's prep period. It has been necessary to schedule a boy's day and a girl's day to ensure equitable opportunity for computer access. This teacher has also shown many students how to do research on the World Wide Web and has allowed them to print out their findings using the WEB Project printer.

Bakersfield Elementary School

Seventh and eighth grade art work has been digitized and scanned onto the computer. Students have written descriptions and questions to upload work to the WEB Project's Observation of Projects site. The critique process used (description and question) has influenced how the art teacher is critiquing student work.

North Country Union
Junior High School

Description

North Country Union Junior High School is located near the Canadian border in the Northeast Kingdom. The school enrollment is 360 seventh and eighth grade students from seven towns. Our first connection with the WEB Project involved the MIDI Distance Learning initiative, with Anne Hamilton receiving a computer, a musical keyboard and software to teach music composition, and the ability to exchange student work with other schools via America Online e-mail.

During the summer of 1995, enrichment teacher Jane Halbeisen, art teacher Michelle Smyth and Anne Hamilton participated in a week-long dance class at the Making Connections Institute in Montpelier. To fulfill the requirements of the three credit graduate course, Jane and Anne created a dance research project, integrating the concept of form in dance and music composition. Students were asked to use their knowledge of simple musical form and apply it in the creation of dance phrases. Michelle Smyth used movement to teach art concepts, and completed an action research paper. Both projects focused on assessment with the idea that specific art and music standards must be effectively assessed. This work was written up and examples were videotaped. As a result, the school received another computer, an art pad, appropriate software and a videocamera to further document our work.

During the summer of 1996, Anne Hamilton participated in the MIDI II composition course at the Making Connections Institute, and Michelle Smyth took the Computer Animation course. The MIDI Distance Learning Network has continued to grow, and NCUJHS has remained an active member. However, there has been no organized network of teachers pursuing computer animation and multimedia production. Michelle began to integrate computer animation into her art program, first with an after school art club, and as the year progressed, into the regular art classes. With the idea of art and music programs sharing computers to ensure their maximum usage, our school purchased another computer, and we received a networking grant from the State of Vermont which included the purchase of another computer. The WEB Project contributed another

computer in the fall of 1996 and a Media 100 system in December 1996.

In May, the WEB Project and a school-to-work grant funded Scott Chesnut, an artist-in-residence, to work with the art students in the creation of interactive multimedia pieces. Students created computer animations, video, and still images prior to the residency. During this time, two additional computers were borrowed from the WEB project so that the art and music programs could operate at the same time.

This summer we will be offering both a MIDI workshop and a multimedia workshop at our school.

Allocation of Computer Resources

Computers are shared between the art and music rooms on a rotating basis. This gives each teacher the opportunity to use computers for part of a term while the students always have computers available in one of the two classes. Because every student takes art and music, the entire student population is engaged, and the computers are used almost all of the time.

Type of Connectivity

At present only the music room is connected with dial-up access to Together Net.

Short-Term Goals

- To refine teaching skills, and become more efficient in our teaching, focusing on specific standards
- Deal with issues of assessment and day to day student accountability in long term projects
- Integrate art and music disciplines in terms of concepts, assessments, vocabulary
- Create multimedia presentations that involve students' MIDI compositions
- More training for both teachers

Long Term Goals

- Participate further in the MIDI Distance Learning Network, sharing methods and concerns as well as student work
- Get connectivity in art room, and communicate online with other schools via a multimedia web site
- Encourage local elementary schools to integrate technology into the arts programs
- Have students use multimedia to communicate information in other disciplines throughout the school
- Train faculty and staff throughout the school in MIDI and multimedia

Major Questions and Concerns

1. How do we deal with complicated technical problems when we have so little time?
2. How do we balance the technological and the traditional parts of the curricula?
3. Where do we get funding in the future as equipment becomes obsolete?
4. How can we better share our experiences and learn from others as we invent ways to teach arts concepts using technology?
5. How do we break down the new technology into the components that will be appropriate and valuable to students in the future?

Major Milestones to Date

- **1994**: MIDI Distance Learning network created, first computer and communication with other schools
- **1995**: Dance class and research, integration of dance with both music and art
- **1996**: Summer Institute in multimedia, beginning integration of technology into art program
- **1997**: All art students in last quarter created animations and interactive presentations. Workshops being offered at school for summer.

Proctor Junior/Senior High School

Description

Proctor is a central Vermont town of 2000 people. This small bedroom community of Rutland supports an elementary school of 186 students and a junior-senior high school of 217 students.. The school is part of the Rutland Central Supervisory Union which consists of three towns with three elementary and two high schools.

Six years ago the faculty, students, and the community began a process where school-wide performance standards were identified and integrated into the curriculum. Assessment has been on the forefront of everything we do. Teachers have developed rubrics to measure student performance. During the 1996-97 school year, the faculty aligned the school's standards and curriculum with the Vermont Framework.

In Proctor, the WEB Project has helped students and adults understand the role of technology and its application to the world in which we live. Some students have developed multimedia presentations and created electronic portfolios to demonstrate their attainment of performance standards in community service activities, the communications arts class, content area classes, and as part of Independent Achievement Projects. Our work will continue to expand the school's capacity for portfolio and performance assessment into the learning domains represented by multimedia, sound graphics, movement, data and text. Teachers have been provided opportunities to participate in training to help facilitate and support multimedia production. Training has included Internet applications, Photoshop, Premiere, Media 100, and Video making and editing. Proctor Junior-Senior High School has also participated in the MIDI music project for the past three years.

Allocation of Computer Resources

In the Proctor School District, the Junior-Senior High school is the main site for the WEB Project. WEB funded resources are housed in the computer lab with some in the classrooms. The

lab is made available to the student body throughout the school day. The school has been networked and there is at least one computer in every classroom and six in the media center. The main computer lab also houses 20 networked computers, a server and the equipment for the school's 56k line. In September 1997 a video studio was setup using WEB Project resources, other grant money, and local funds. There are two computers and MIDI keyboards in the music room at the high school and one at the elementary. There has been strong support for many years in Proctor for the purchase and development of curricular opportunities using technology applications.

Type of Connectivity

Both the elementary and high school are connected to the Internet via a 56k line and GOVNET. All teachers, students, and administrators are provided with the opportunity to have personal e-mail accounts for use at home and at school. A Local Area Network is in place at both schools. A satellite at the high school is used to deliver Advanced Placement classes, enrichment, and training for teachers, students and community. The school is wired so that it is possible to take advantage of any of these opportunities in all classrooms and in the media center.

Short-Term Goals

The short term goal is to train all teachers and students to use e-mail as a vehicle to communicate with each other , the administration, students, parents and the community. During the summer of 1997, teachers, administration, and community members participated in a week long course in August where they developed a web site. It is the intent that the students and faculty contribute to the site on an ongoing basis. During the inservice in August all teachers will have the opportunity to learn how to use e-mail and to access the Internet. Another goal is to make this project an integral part of our long range plan.

Long-Term Goals

The long range goal is to have all teachers and students participate in the project and to make the development of standards based units of study and using technology as a tool for learning a driving force for systemic change. Interdisciplinary units will be developed where students are able to begin a multi-media presentation in one class and to continue to work on it throughout the day. It will also allow students to work together even when they are in different classrooms. Students will complete research that needs several forms of media to be presented with validity and integrity. Examples may include:

- an oral report on biology with data, charts and video

- microscopic images from a river study

- a high school senior's dance project

- a series of graphics showing visual design skills

- a series of musical compositions

We would like to provide all students with the skills and tools needed to create multimedia portfolios of their work.

Major Questions and Concerns

1. How can we get everyone (teachers and staff) comfortable with using the network, e-mail, etc.?
2. How can we fund connectivity once the WEB Project is over?
3. How do we keep everything up and running effectively?
4. How can we structure things so that the maximum # of students are able to be exposed to using multimedia in the classroom?
5. How can teachers use multimedia effectively in their classrooms when they only have 1 computer? 3 computers?
6. How much freedom should students have on the Internet?
7. How narrow or wide should the parameters be for student use of the Internet at school?
8. Should our next computer purchases be for the creation of a 2nd lab or should multiple computers be placed in each classroom?

Major Milestones to Date

As a result of the WEB Project, PHS has:

• Networked the entire building, giving each classroom teacher and student access to e-mail and the Internet

• Linked a Community Service Learning grant with the WEB Project to compile an oral history of Proctor

• Developed a Communications Arts class focusing on film making

• Developed an Introductory Graphic Arts class focusing on creating and editing digital images in Photoshop

• Introduced desktop publishing units into the computer curriculum

• Developed an international e-mail exchange between foreign language students and students in other countries

• Linked the Vermont Framework to the Proctor Computer Curriculum as delineated above

• Introduced music composition into its music curriculum

• Developed a multimedia class where students are learning to create multimedia presentations

Edmunds Middle School

Description

Burlington is Vermont's largest city. Situated in Chittenden County (population 133,000), its population neared 40,000 inhabitants in the last census. Burlington is a most diverse area for this rural, northeastern state and the people of Burlington work hard to make the diverse mix of business, population, and opportunity a strength. Education, clean industry, and recreation define its predominant economic activities. Generally progressive politically, Burlington has been a resettlement area for refugee populations from around the world.

Edmunds Middle School (EMS) is one of two middle schools in the Burlington School District. Located in the hill section of the city, EMS school faculty will celebrate its one-hundredth anniversary in 1997.

EMS straddles distinct population enclaves. Twenty-four languages are spoken in the district and EMS exhibits all the features endemic to an inner city school, save overwhelming size. EMS houses approximately 400 students grades 6-8 and employs an interdisciplinary team approach in its educational program. Over 50% of our students are on free or reduced lunch and approximately 20% of the city's population falls below federal poverty levels. The district qualifies as a Title I district.

Allocation of Computer Resources

EMS has a variety of technological resources. A majority of the district funded machines are housed in an undersized twenty station computer lab. Remaining units are spread among various teams and teachers throughout the building. A major upgrade of the EMS technology infrastructure was accomplished in the summer of 1997. It is now possible to network all classrooms and to provide Internet access to all classrooms.

The school is in the midst of testing six laptop word processors. If this is successful, it is our intention to place a class set of laptops in each language arts teacher's class. Once accomplished,

it is hoped that the computers currently used as word processors will be reallocated to other teachers.

The WEB funded computers are currently shared between the language arts and social studies teachers. Currently, the language arts teacher is using the two machines as multimedia centers to assist with the student run school newspaper. We anticipate networking these machines within the month This will facilitate Internet research and interaction with other schools and WEB Project participants. Presently, the social studies teacher has four WEB funded computers with multimedia capability, including scanning capacity. These machines are being used to create an EMS web page and a school-wide multimedia presentation slated for presentation in late December.

Type of Connectivity

The school is in the process of being wired for 56k Internet access.

Short Term Goals

• to have team members gain awareness of and familiarity with various multimedia programs, especially Photoshop and Adobe Premiere
• to have team members develop a sense of comfort with multimedia production
• to have team members begin to examine how our technology can be used to support and enhance our existing curriculum
• to develop the capacity of a small core of students to work with our technology
• to gain an awareness of the Grady Portfolio Program
• to assess our immediate needs and seek workshop help in the near future
• to inform other teams about our work
• to involve the district curriculum coordinator in our discussions and to work to achieve compatibility with our goals and the district technology plan

Long Term Goals

• to become personally competent with the software and hardware that has been provided
• to be able to troubleshoot hardware and software problems
• to implement the use of multimedia technology in the four subject areas so it happens naturally and complements what is currently going on
• to support other teachers at EMS in the use of multimedia technology
• to investigate a variety of student portfolios to explore the feasibility of having students develop multimedia portfolios, and to decide the place of electronic portfolios in our WEB Project
• to inform others about our work

Major Questions and Concerns

Personal

1. Staying focused on our own work as a first priority. Involving others as we learn how to do this work.
2. What professional growth does each of us want to get from our work in this project: resources, learning, recognition, time?
3. What professional contribution does each of us want to give to this project: knowledge, time, specific tasks, energy?

Team

4. Assuring equity across team members with regards to provision of resources
5. When should we know what the scope of our work is over the duration of the project?
6. What are we supposed to do with the standards anyway? At what point do we bring them into the activities we are doing?
7. Deciding what the VISIT portion of our work could be, should be, and how to go about using VISIT resources in our work and in our larger effort with EMS
8. Finding the time necessary to create a workable assessment system for our efforts so we know what we want the kids to "know and be able to do"
9. Deciding how to make our work standards based and how to document that work
10. Creating a way of keeping track of what each of us is doing and knowing when it is appropriate to integrate across our disciplines and when it is not. Figuring out how to do this

EMS

11. Is it our responsibility to lead the EMS faculty in the development of standards based technology instruction, curriculum, and assessment?
12. How do we bring other EMS personnel into WEB as participants?
13. What is our responsibility to other stakeholders: teachers, teams, parents, administration within EMS, and beyond?

Major Milestones to Date

EMS began its involvement with the WEB Project in fall of 1997

Learning to Use

Multimedia
Technology

Learning to Use Multimedia Technology

In order to effectively facilitate student use of multimedia, all WEB Project participants need to learn some basic skills. They must be able to create four types of media files: visual images, sound, text, and motion. They also need to be able to convert these files into universal formats that can be seen by any computer accessing the World Wide Web (WWW).

Beyond these basics—creating multimedia files and using a browser to upload these files to the WWW—the needs for more complex and specialized knowledge about the technology depend entirely on the goals and intended uses of multimedia in a given school, classroom, or community.

The WEB Project's technology workshops are designed to provide the basic skills necessary to use multimedia as evidence of student learning and to foster web-based communication about that learning. This basic level encompasses the skills described on the Multimedia Self-Assessment at Level 4 and on the On-line Self-Assessment at Level 4 (see assessments at the end of this section).

Opportunities also exist for those who wish to learn more than the basics. Some workshops are offered regularly in response to teacher demand. In addition, the WEB Project will make every effort to fulfill workshop requests that are not already listed *as long as the proposed workshop relates to multimedia or online communication.*

The computer labs of five WEB Project cooperating schools plus a UVM Southeast Regional Center classroom in Brattleboro serve as training sites for WEB activities. Those schools include: Montgomery Elementary, North Country Union Junior High School, Main Street Middle School in Montpelier, Proctor Junior/Senior High School, Green Mountain Union High School in Chester, and Whitingham School.

Five Professional
Development Options

Two self-assessment instruments identify the computer skills necessary to participate in multimedia activities at various levels of proficiency. The WEB Project's technology plan has been built to provide opportunities to learn these skills in five different ways:

- one-day workshops to introduce concepts
- in-school residencies for school-based guidance
- one-day classroom consultations with other WEB teachers
- independent practice with technical support
- summer intensives

One-Day Workshops

Held throughout the school year, one-day workshops are meant to provide introductory level multimedia experiences which can then be practiced and improved with the aid of residencies, specialized technical support, and peer assistance. Workshops are taught by professional multimedia artists and practicing educators and are held for adults and/or students.

Internet Navigation
This day-long workshop introduces participants to the Internet and to various means of Internet communication: discussion groups, Real Time Chat, and uploading and downloading of media files.

Basics I
A day-long workshop, running from 10:00 a.m. to 4:00 p.m., designed as an introduction to multimedia. Participants learn how to bring images into a computer through video cameras and scanners, and gain a basic familiarity with Photoshop.

Basics II
A day-long workshop, running from 10:00 a.m. to 4:00 p.m., designed as an introduction to multimedia authoring. Participants learn how to bring sound into a computer through video cameras, tape recorders, and microphones. After learning how to digitize sound, participants assemble a basic slide show in Authorware, using graphics, sound, and text.

Photoshop I
An entry-level workshop on the creative uses of this popular imaging software to prepare images for digital, multimedia purposes.

Photoshop II
A beginning-level workshop for those who already have some basic experience using Photoshop.

Photoshop III
An intermediate-level workshop for those who already have some basic experience using Photoshop.

Authorware Basic I
A day-long workshop designed to teach some basic authoring features of this professional software. Suitable for those who already have experience creating graphics, sound, text, and movies.

Premiere I
An introductory workshop for those who have a basic understanding of imaging and would like to incorporate the use of Quicktime movies into their work. The emphasis is on creating small files for use with multimedia authoring.

Special Topics
As participants learn more about multimedia and identify areas of interest not offered on the above list, special workshops will be designed.

In-School Residencies

While workshops are geared toward introducing a multimedia concept, residencies can be designed to give classroom-based support to teachers, students, and community members. Here are some examples of residencies that have already occurred:

MIDI Composition
Peter Tavalin has worked with students in many schools on the MIDI Project. He works closely with music or classroom teachers to expand on curriculum goals and enrich the MIDI composition program. Each residency has been tailored to the specific needs of the school.

Multimedia Basics
Natalie LaRocque-Bouchard, who spent a week with teachers at last summer's residential institute, has been working with students in Franklin Northeast Supervisory Union to prepare multimedia content for publishing on the World Wide Web and for use in multimedia presentations.

World Wide Web Publishing
Photographer Carley Stevens-McLaughlin and historian Paul Carnahan spent the winter of 1996 with a group of students from Montpelier High School preparing the Vermont Historical Society's first web site.

Multimedia Production
Scott Chesnut, formerly with Adobe, Inc., joined Derby art teacher Michelle Smyth to help students use a design production process to assemble a multimedia presentation about "self-portraits."

Residency matching support is available to those WEB Project participants who attend the summer institute or a week-long intensive and would like some classroom follow-up. Funds are disbursed on a first come, first served basis to those who send a letter of interest stating the purpose and expected outcomes of their chosen residency.

Letters will be screened beginning on August 15, 1998, and disbursement will continue until funds are exhausted. Residency funds will be distributed only to schools where teachers remain in the classroom, working side by side by side with the resident.

One-Day Classroom Consultations

The in-person exchange of practice is an important complement to online communication. The WEB Project will provide sub fees for those teachers who either wish to observe in other schools or who are willing to provide technical assistance to peers.

Independent Practice with Technical Support

Learning to use multimedia effectively consumes a lot of time. There is no way to avoid the hours of practice that it takes to become proficient. However, practice without technical support can be needlessly time consuming. The WEB Project offers this support in several ways:

Online Support
A network of people is available to answer technical problems posted at

http://www.webproject.org/exchange

hosts a Technical Support area of the WEB Exchange. Most questions are answered within 24 hours.

Computer Manuals and Professional Tech Support
Participants receive manuals for computer care and software use. The manual is often the best place to start in trying to solve simple problems. Inside most manuals you will also find telephone numbers for product-based technical assistance.

Telephone Support
When you need immediate help that is not provided in any other way, please feel free to call the WEB Project office at 229-4660.

Summer Intensives

The WEB Project offers a summer residential institute entitled "Making Connections," which provides opportunities to use the computer as a create tool under the guidance of multimedia professionals. In addition to the residential institute, the WEB Project offers funds for each Cooperating School to provide a one week class locally. Past courses have included teachers, students, and community members in topics such as: WWW Building, Multimedia Production, Music Composition.

Internet Navigation

Internet Navigation is a required half-day workshop for those who would like to use the WEB Project's interactive World Wide Web site.

Workshop Outcomes

Technology-Based
- Participants will use Netscape at a basic level.
- Participants will be able to troubleshoot simple tech problems.
- Participants will convert native file formats in text and image into universal file formats suitable for cross-platform communication on the WWW.
- Participants will learn to use the interactive components of **www.webproject.org/workplace**.

Curriculum-Based
- Participants will learn about the developing role of reflection and critique in WEB Project communication.
- Participants will learn how to examine objects to decide how to prepare them for basic WWW communication.

Prerequisites

- basic familiarity with the computer
- basic familiarity with Photoshop
- online access at school or home

This class prepares for items in the Online Self-Assessment at Level 3 and beginning Level 4.

Basics I

This day-long workshop, running from 9:00 a.m. to 4:00 p.m., is designed as an introduction to multimedia. Participants learn how to bring images into a computer through video cameras and scanners, and also gain a basic familiarity with Photoshop.

Participants with no previous computer experience begin at 9:00 a.m. with a one-hour tour of the computer.

Workshop Outcomes

- Participants will digitize images with clarity, following elementary principles of composition.
- Participants will manipulate images to improve color and contrast so that the digitized versions of objects approximate the originals as closely as possible.
- Participants will use a scanner to enter 2-D images that are small enough to fit in the scanner bed.
- Participants will use a videocamera to tape and digitize 20-second QuickTime movies.

Teaching Methods

Basics I is a combination of direct instruction, participant experimentation, and playful use of computer equipment. Much of the day is spent in an open studio setting with coaching from workshop trainers while participants use the principles being taught. As often as possible, participants will enjoy a 1:1 or 2:1 ratio of people to computers.

This class prepares for items in the Multimedia Self-Assessment at Level 2 and beginning Level 3.

Basics II

Basics II is a day long workshop, running from 9:00 a.m. to 4:00 p.m. and designed as an introduction to multimedia authoring. Participants learn how to bring sound into a computer through video cameras, tape recorders, and microphones. After learning how to digitize sound, participants assemble a basic slide show in Authorware, using graphics, sound, and text.

To qualify for Basics II, participants either must have taken Basics I or must be able to demonstrate the outcomes listed for the Basics I workshop.

Workshop Outcomes

- Participants will digitize sound with the greatest clarity possible, given the objectives of their projects.
- Participants will manipulate audio to improve sound and compress file sizes.
- Participants will digitize 20-second QuickTime movies made from MIDI files.
- Participants will assemble a simple slide show in Authorware that uses images, sound, and text. If time allows, video also will be incorporated into the slide show.

Teaching Methods

Basics II is a combination of direct instruction and participant experimentation and playful use of computer equipment. Much of the day is spent in an Open Studio setting with coaching from workshop trainers while participants use the principles being taught. As often as possible, participants will enjoy a 1:1 or 2:1 ratio of people to computers.

Advance Preparation

Participants should bring the image files with them that will be used in the slide show.

This class prepares for items in the Multimedia Self-Assessment at Level 2 and beginning Level 3.

Photoshop I

Photoshop I is an entry-level workshop on the creative uses of Photoshop to prepare images for digital, multimedia purposes. Participants should already know basic digitizing concepts such as scanning and digital imaging from videocameras or digital still cameras.

Workshop Outcomes

Technology -Based
Participants will use these basic elements of Photoshop:
- Toolbox
- Selection Tools (lasso, marquis, magic wand, quick mask)
- Zooming
- Foreground/Background Colors
- Image Alteration
- Image Size
- Contrast/Brightness
- Filters
- Highlight and Change
- Moving an Image

Art-Based
Participants will be able to observe and identify the effects of resolution and composition on image quality

Prerequisites

- basic familiarity with computer
- ability to digitize an image with scanner or camera

This class prepares for items in the Online Self-Assessment at Level 3 and beginning Level 4.

Photoshop II

Photoshop II is a beginning-level workshop for those who already have some basic experience using the software. Participants should already know basic digitizing concepts like scanning and digital imaging from videocameras or digital still cameras and have mastered the outcomes in Photoshop I.

Workshop Outcomes

Technology Based
Participants will use these basic elements of Photoshop:
- Toolbox
- Eye Dropper
- Paintbrush
- Eraser
- Color Selection
- Rubber Stamp
- Magic Eraser
- Unsharp Mask/Sharpen
- Auto Levels/Curves
- Cut, Copy, Paste
- Layers
- Use of Option and Command Keys
- Image Correction

Art-Based
Participants will be able to observe and identify the effects of resolution and composition on image quality as they use more advanced features.

Prerequisites
The prerequisite for Photoshop II is possession of the skills taught in Photoshop I.

This class prepares for items in the Online Self-Assessment at Level 3 and beginning Level 4.

Photoshop III

Photoshop III is an intermediate-level workshop for those who already have some basic experience using the software. Participants should already know basic digitizing concepts such as scanning and digital imaging from videocameras or digital still cameras and should have mastered the outcomes in Photoshop I and Photoshop II.

Workshop Outcomes

Technology-Based
Participants will use these basic elements of Photoshop:
- Toolbox
- Dodge and Burn
- Blur, Sharpen, Saturation
- Gradiated Fills
- Levels and Curves
- Channels
- Fruit Salad Review of Photoshop II Skills
- More Sophisticated Use of Histograms

Art-Based
- Participants will be able to observe and identify the effects of resolution and composition on image quality as they use more advanced features.
- Participants will learn how to decide which aspects of an image to focus on as they practice using new tools.

Prerequisites

The prerequisite for Photoshop III is possession of the skills taught in Photoshop I and Photoshop II.

This class prepares for items in the Online Self-Assessment at Level 3 and beginning Level 4

Authorware Basics I

Authorware Basic I is designed to teach participants how to create a presentation in Authorware that uses image, sound, and text. Participants need to come prepared with an idea for a slide show and the materials necessary to complete their ideas.

Workshop Outcomes

Participants will create:
- an introductory sequence
- a menu display
- frameworks that utilize text, graphics, and sound
- a simple navigation

Participants will review their preliminary presentations and make changes based on suggestions from other members of the class.

Advance Preparation

Participants should come with an idea for a simple presentation. They should bring digitized graphics, movie, and sound files to be assembled at the workshop.

Premiere I

This is an introductory workshop on using Adobe Premiere for those who have a basic understanding of imaging and would like to incorporate the use of Quicktime movies into their work. The emphasis is on creating small files for use with multimedia authoring.

Workshop Outcomes

- Participants will capture smooth-playing video (with or without audio) that is appropriate for their intended use.
- Participants will understand the relationships between quality, size, performance, compression, and file size.
- Participants will use Premiere to trim clips.
- Participants will use the Premiere timeline to assemble video and audio into a coherent piece.
- Participants will use Premiere filters and transitions to enhance the video and audio.
- Participants will understand the stages of production and the rudiments of cinematic and editing vocabulary.

Advance Preparation

Participants should bring video footage (in either VHS or Hi-8 format) to be digitized at the workshop.

Prerequisites

- knowledge of computer basics
- familiarity with digital image creation
- some experience with a video camera

This class prepares for items in the Multimedia Self-Assessment at Level 3 and beginning Level 4.

Multimedia Skills:
Self-Assessment

Place a check mark next to the skills that you think you have acquired, regardless of their level. To perform at a basic level, participants need to gain the skills listed at Level 3. Some participants' goals and interests require skills listed at Levels 4 through 7. Attainment at those levels is not expected of everyone—so, please don't panic!

Level 1 = **very little to no knowledge**

_____ I have never seen a multimedia presentation or looked at a CD-ROM.

_____ I have seen some presentations.

_____ I have tried to create a few files, but would not feel comfortable doing so on my own.

Level 2 = **beginning knowledge of digitizing sound, movement, and graphics**

_____ I can use the computer and a scanner or videocamera to create an image on my computer. My images are okay, but they could be improved in terms of clarity, lighting, and composition.

_____ I can use the computer and a microphone, videocamera, or tape recorder to enter sound into the computer. I can take that file and use it in a simple presentation. My sound works, but there are a lot of scratchy noises and other interference.

_____ I can bring movies from a videocamera into the computer. My movies look a little choppy. The files are sometimes pixillated or the motion strobes, but I don't know why.

Level 3 = **ability to digitize with an eye toward maximizing quality while minimizing file size OR ability to digitize to enhance the statement being made through multimedia.**

_____ I can use the computer and a scanner or videocamera to create an image on my computer. My images are okay for the purpose that I have in mind. The file format suits my authoring purpose. The file size is the lowest that I can get it to be, considering the reason I am creating the image. Composition, clarity, and lighting have been taken into consideration.

_____ I can use the computer and a microphone, videocamera, or tape recorder to enter sound into the computer. I can take that file and use it in a simple presentation. I have reduced the amount of noise in my file through suitable and available software. The file format suits my authoring purpose. The file size is the lowest it can be, considering the reason I have created the sound file.

_____ I can bring movies from a videocamera into the computer. My movies look as smooth as they can be, considering the eventual use of the movie file.

_____ I know how to use an image file to enhance a multimedia statement.

_____ I know how to use a sound file to enhance a multimedia statement.

_____ I know how to use a movie file to enhance a multimedia statement.

Level 4 = **ability to digitize with an eye toward maximizing quality while minimizing file size AND ability to digitize to enhance the statement being made through multimedia.**

> Level 4 means that all of the skills in Level 3 have been checked.

Level 5 = **ability to take digitized information, established at Level 4, and place it into a predesigned authoring format.**

_ _ _ _ I can digitize at Level 4.

_ _ _ _ I know how to take the multimedia files that I create and use them for simple slide shows that I have made in Authorware or Director. I can also use "off the shelf" software such as Scholastic's Electronic Portfolio, ClarisWorks' slide show option, Digital Chisel, Hyperstudio, etc.

Level 6 = **ability to take digitized information, established at Level 4, and place it into a predesigned authoring format that has been modified for the authoring purpose.**

_ _ _ _ I can digitize at Level 4.

_ _ _ _ I know how to take multimedia files that I create and use them for simple slide shows that I have made in Authorware or Director. I can also use "off the shelf" software such as Scholastic's Electronic Portfolio, ClarisWorks' slide show option, Digital Chisel, Hyperstudio, etc.

_ _ _ _ I know enough about Director or Authorware (or any other professional-level authoring tool) to take existing templates and modify them to create customized versions that suit my purposes more specifically than the templates do.

Level 7 = **ability to take digitized information, established at Level 4, and place it into a custom-designed authoring format.**

_ _ _ _ I can digitize at Level 4.

_ _ _ _ I know how to take the multimedia files that I create and use them for simple slide shows that I have made in Authorware or Director. I can also use "off the shelf" software such as Scholastic's Electronic Portfolio, ClarisWorks' slide show option, Digital Chisel, Hyperstudio, etc.

_ _ _ _ I know enough about Director or Authorware (or any other professional-level authoring tool) to take existing templates and modify them to create customized versions that suit my purposes more specifically than the templates do.

_ _ _ _ I can create my own presentations in Director or Authorware (or other professional equivalent).

Online Communication Skills: Self-Assessment

Place a check mark next to the skills that you think you have acquired, regardless of their level. To perform at a basic level, participants need to gain the skills listed at Level 4. This doesn't happen overnight, so please don't panic!

Level 1 = **very little to no knowledge**

____ I have hardly ever used online communication, and most of the words used in this self-assessment sound totally foreign to me.

Level 2 = **beginning knowledge of online communications**

____ I can get online and know how to access and send e-mail.

____ I can get online and know how to browse the World Wide Web and do simple information searches.

Level 3 = **ability to configure a browser and do simple troubleshooting**

____ I can change the appearance of my browser.

____ I know how to create bookmarks and use the fundamental parts of the Netscape software or an equivalent browser software.

____ I know what to do when I get familiar error messages.

____ I know where to go for help with error messages that are not familiar.

____ I can troubleshoot simple problems to determine whether an error has been created by my computer, by my online service provider, or by my browser software.

Level 4 = **ability to upload and download files using ftp or an administrative interface designed for that purpose. Also possesses skills listed in Level 3.**

____ I can configure my browser to open helper applications for the files that I download.

____ I can locate and download updated versions of the browser that I use and all the associated helper applications and plug-ins.

____ I can create universal file formats for sound, midi, image, text, and movement that are viewable on the WWW.

____ I can reduce the file size of my universal file formatted materials to a size that is appropriate for the WWW.
____ I can upload my files either through ftp or an administrative interface.

Level 5 = **ability to publish to the World Wide Web. Also possesses skills listed in Levels 3 and 4.**

____ I know how to generate html and how to upload those files to establish a web page or site that includes graphics, text, sound, and movement where appropriate.

Online
Communication

Online Communication

The WEB Project's World Wide Web site is designed to house both a public site (http://www.webproject.org) to showcase our work and a password protected conference area (http://www.webproject.org/exchange) where teachers, students, and online mentors can exchange technical information and communicate privately about student work and other educational issues.

Our password protected area is called The WEB Exchange. The site is built to handle information in four distinct ways:

Shared Discussions -- provides the opportunity for people to generate their own topics of conversation.

Observation of Projects --

Real Time Chat --

Project Evaluation --

Non-profit Partners and their Statewide Initiatives

Non-Profit Partners and their
Statewide Initiatives

The WEB Project has established partnerships with the Vermont Alliance for Arts Education, the Vermont Arts Council, the Vermont Center for the Book, the Vermont Historical Society, the Vermont Social Studies Alliance, Castleton State College, St. Michael's College, Johnson State College and the University of Vermont. These nonprofit organizations are exploring ways in which technology can facilitate their educational missions and increase communication between them and their constituents. Some also offer professional development opportunities that are directly tied to the Vermont Framework.

When the WEB Project was originally funded, terms like *the World Wide Web, multimedia,* and *telecommunications* were heard on the radio or seen in newspapers, but few Vermont schools had had the opportunity to explore the technological applications of sound, image, and motion first-hand. Affordable multimedia telecommunications existed only as a far-off dream. The idea of supporting specific initiatives in Arts, Language, Literature; and History and Social Sciences originated so that schools and community organizations across the state could experiment with some potential uses of these new technologies as they pertain to the above fields of knowledge. Although early initiatives were generated by the WEB Project, our partner organizations now create their own.

Initiatives involve a mix of participants: students, teachers, community members, and folks with content expertise. Regardless of the specific topic, each initiative uses a common process of reflection, critique, outside input, and improvement of work. Although early efforts focus on learning to use technology, the underlying reason for doing so is content-oriented.

As the Initiatives progress, participants are giving careful consideration to the type of online culture they want to foster in order to maintain a healthy exchange of thoughts, ideas, and personal work. This culture was articulated in May 1997 by a group of 15 participants representing most of the Initiatives and three of the cooperating schools.

"There are two things within the culture of the Initiatives that are inextricably linked: individual expression tied to a respect for others. In doing so, we are trying to:

1. create safety in connection with risk taking
2. establish standards or expectations
3. use reflection, critique, and improvement as a process for learning according to these ground rules:
    a. be emotionally and mentally present when participating
    b. make an honest effort
    c. collaborate
    d. express yourselves creatively/artistically
4. treat others with honesty and integrity."

In addition to receiving comments from one another, participants are using mentors who work outside of the K–12 school system to give feedback. Guidelines, examples, and suggestions for improving the online aspects of mentoring are currently underway. Initiative borders extend beyond school. Students participate from home or from community sites as well.

Initiative:
Civic Discourse

In the summer of 1997, teachers from St. Albans Adult Basic Education, U-32, Spaulding, and People's Academy took an online course entitled "Civic Discourse." Under the guidance of Vermont Center for the Book and with assistance from 3 university scholars and one citizen activist, participants discussed readings online. The "academic" component of the course provided participants with the opportunity to explore civic discourse and its place within contemporary education.

At the end of the course, those who participated prepared for a second, extended phase of the online mentoring experience. Having laid theoretical foundations for their understanding of civic discourse and the challenges it faces today, teachers are exploring ways to provide students with opportunities to engage in productive discourse online about academic, social and political issues.

Teachers in the Civic Discourse initiative are looking for ways to introduce researched or referenced comments into the student online discussions. Meanwhile, other participants in the WEB Project have learned a lot from the Civic Discourse discussions.

Example: Entry in Discussion about Censorhip

Date: December 05, 1997 08:17 AM
Author: carolyn
Subject: context

This [the censorship discussion] is so interesting. It reinforces the simple rule: check it out - if you are confused, or hurt or angry from a remark made online, go back and ask and find out from the source. Often it seems we spin a whole reality out of a remark (or image in this case) that takes on a powerful energy and "carries us away!" And on the other hand, this kind of thoughtful discussion about censorship and what can be allowed online is excellent. I am not in favor of censorship. It doesn't work well. I like the idea of bringing the discussion back to the students, letting them see the impact of what they posted, and allowing them the chance to add to this discussion.

To me, getting a feedback loop going is so important. People need to know the impact of what they do, and often just that knowledge will change the scene. This is happening among some of my students. One student was deeply hurt and insulted when another student, in a very public forum with legislators present, made a slur on people on welfare who "get paid for sitting on their butts". She went home and
cried that night, told me and the whole class about it the next day. We had a good discussion about the prevalent prejudice against people on welfare, and how they get put

down. It is so hard for them to maintain a sense of self esteem. I went back and let the student know the effect his remark had, and he was really appalled, and didn't even realize that he had let that slip. Said that's not how he really feels, and that he will write a note of apology. If situations like this have an opportunity to get ventilated, it seems that they know what to do to resolve the situation. I'm excited to see how this plays out. The students on the "Introduction" thread could have gone either way. Could have escalated the nasty remarks, brought in more ammo, etc. But they chose to smooth the troubled waters, to apologize and move on. A good example for everyone.
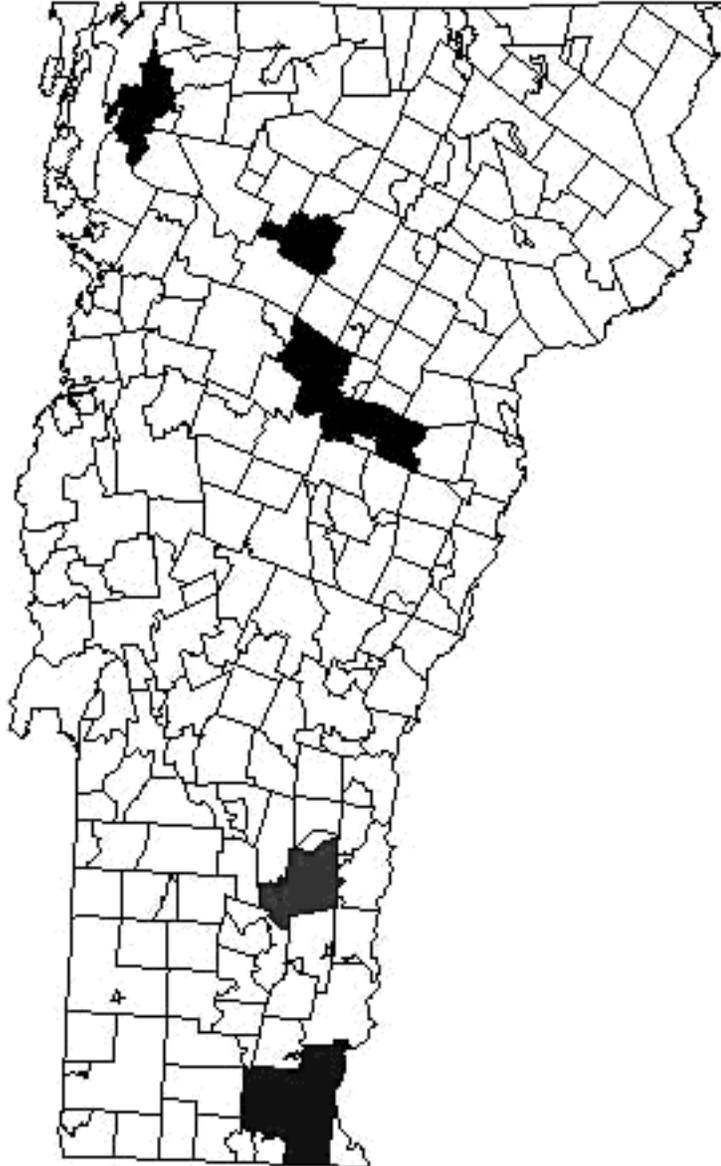
Civic Discourse Participants 1997-98

Partner Organizations: Center for the Book, UVM, WEB

Initiative:
History Day

Starting in September 1997, the Vermont Historical Society began a statewide sponsorship of History Day, a national program and competition that offers students an engaging way to learn about historical issues or themes. Students use primary resources to research a theme in history and then demonstrate what they have learned through research papers, performances, exhibitions, or media products.

To understand the historical importance of their topics, students must ask questions about time and place, cause and effect, change over time, and impact and significance. They must ask not only *when* events happened, but also *why* they happened. These questions demonstrate levels of thinking that directly align with Vermont's Framework.

In the fall of 1997, teachers from Ludlow, Ferrisburgh, and Lake Regions worked with Elise Guyette of the Vermont Social Studies Alliance to link the National History Day scoring system to the Vermont Framework. Representatives from the Vermont Historical Society, the Sheldon Museum, and the Old Stone House Museum also provided online assistance to all participants looking to find needed resources. Then, in the spring of 1998, a sample of History Day projects were digitized to be used as examples of student work exemplifying the various levels of achievement on the national scoring guide. With this information as a base, participants will improve the judging system for next year's competition.

For detailed information about National History Day, visit:
http://www.thehistorynet.com/NationalHistoryDay

For detailed information about National History Day, visit:
http://www.webproject.org/historyday

Partner Organizations: Vermont Historical Society, Vermont Social Studies Alliance, WEB, Old Stone House Museum, Sheldon Museum

Initiative:
Historical Artifacts,
Primary Sources, and
the World Wide Web

Local historical societies and museums are treasurehouses of artifacts and other primary sources, each of which is integral to our understanding of the past. This initiative is designed to explore those artifacts and present them in a meaningful way on the World Wide Web. It is also designed to bring teachers and historical society representatives together to interpret historical resources and discover ways to involve students within the context of the WWW. We generate an electronic conversation across a diverse group of people about the meanings of artifacts and how those artifacts might inform our understanding of Vermont's past.

Currently, each participating school has a locally based history project. Teachers and local historians convene online and in person to exchange information about their projects and to learn techniques in artifact examination from each other and invited guests.

Partner Organizations: Vermont Historical Society, WEB, UVM, Aldrich Library, Cabot Historical Society, Chelsea Historical Society, Guilford Historical Society, Rutland Historical Society, and Saxtons River Historical Society.

Initiative:
MIDI Distance Learning

Originally begun in the winter of 1995 through a distance-learning grant from the Vermont State Legislature, the MIDI Distance Learning Network uses the tools of technology to foster student music composition by creating a statewide exchange of student music compositions.

The goals of the Network are to:

- encourage composition for a wide range of students
- provide substantive feedback to Network participants
- share compositions with member schools and teachers
- provide a vehicle for online communication
- provide training for members and prospective members

Participants include teachers and composers across the state who exchange compositions, share lesson ideas and strategies for fostering composition in the classroom, and discuss technical problems through online communication. There is an emphasis on group compositions, reflection and critique, and problem solving. Further, the MIDI Network is working to meet standards that are consistent with the National Standards for Arts Education and Vermont's Framework Standards and Learning Opportunities.

The stages of music composition—brainstorming, drafting, revising, and completing—are similar to those of the writing process. When many students work together to create group compositions, they can rely on feedback from others to strengthen their pieces. Basic computer skills are reinforced as students enter information, establish and save files, cut and paste changing ideas, and access the Internet to share their music.

In addition to creating compositions, Network teachers have been working toward assessing what students know and can do in music. The MIDI project, with its emphasis on critique and reflection, clearly teaches students to express, listen, analyze, and

improve. They learn to use the language of music to discuss compositions by established composers, by their classmates, and by other students from around Vermont. As students listen to and view new musical ideas, their own work takes on added sophistication.

Network participants form a mix of general music teachers, classroom teachers, and instrumental and choral teachers. Teachers and students are expected to offer online comments at least once per month, although most participate more frequently. This expectation of once-a-month feedback was decided by Network participants after the first year of experience had given them an idea of what was feasible given members' time constraints.

Originally, the Network included teachers from 11 schools with MIDI stations across the state, who communicated with one another via e-mail. Today, the Network has expanded to more than 35 teachers and 4,000 students. File exchanges have moved from e-mail to a centralized World Wide Web site.

For more information, visit the MIDI web site at:

   http://www.webproject.org/midi

A videotape about this project has also been sent to each superintendent in Vermont. The tape shows specific examples of the entire process.

Initiative:
Art Responding through
Technology (ARTT)

Built largely upon the work of the MIDI Network, ARTT was developed and is used by a group of visual arts teachers from both rural and urban areas of Vermont. It is a forum for sharing and discussing the work of students with professional artists, teachers and other students from throughout the state. Teachers also discuss issues relevant to the Vermont educational standards and how they apply to the visual arts.

Our goals are:

• to work with each other, arts organizations, and Vermont artists to provide students with the opportunity to share and critique their work-in-progress with artists and teachers from throughout the state.

• to give students the opportunity to observe, reflect, and comment on the work of other students and professional artists.

The success of ARTT network members this year has led to a Vermont Arts Council effort to take online arts mentoring statewide in the fall of 1998.

Initiative:
Arts Partnership for
Online Mentoring

Beginning in the fall of 1998, the Vermont Arts Council will work together with the Alliance for Arts Education and various local arts agencies to expand the community of online exchange.

Partner Organizations: Vermont Arts Council, Alliance for Arts Education, WEB, UVM, Johnson State College, Castleton State College, 6 local arts agencies (TBA).

Initiative:
Governor's Institutes
of Vermont

Beginning in the summer of 1998, Governor's Institutes of Vermont will begin working with the WEB Project to expand some of its Institutes beyond their two week summer periods.

Current Issues and Youth Activism: focusing on public issues, youth empowerment and leadership, this social science Institute accepts 40 high school students for a week of community building and an examination of the commitment required to "make a difference." Supervision for further involvement in community service is offered to interested students for a 10-12 week period once they return home. This year the follow-up will be web based.

Science and Technology: the Vermont environment is the focus of this one week science Institute. The Institute blends field research, high technology lab work, and state-of-the-art computing to give a taste of what scientists really do and think about. A one year follow through with Christine Massey, UVM Geology Dept., is planned with interested students.

Asian Cultures: the 24 students enrolled will engage in hands-on activities with experts of China, Asian nationals, and experienced teachers. Students will continue their study after the Institute with follow-up and support from faculty throughout the year. Efforts will be made to seek funding for a possible visit to China in the summer of 1999.

Arts: artistic excellence, challenge and excitement describe this two week Institute that is designed to celebrate and explore the creative experience. The Arts Institute enrolls about 125 students and is the largest of all the Governor's Institutes. A year long follow through with poet Verandah Porche is planned.

Engineering, Mathematics, and Computer Sciences: 26 students from across Vermont and 34 from out-of-state will explore various engineering disciplines as well as statistics, mathematics, and computer applications through presentations by guest speakers, lectures, and lab experiences provided by UVM professors. Attendees will be able to continue contact throughout the year via Internet based threaded discussions.

Nonprofit Partners

Computer training represents only one aspect of the skills necessary to reach WEB Project goals. The broader goals of this project are intricately tied into the larger school reform agenda in Vermont, as articulated by the Green Mountain Challenge and the Vermont Framework of Standards and Learning Opportunities. To help implement the standards defined in the Framework, the Vermont Department of Education and many statewide agencies with an interest in education are lending their particular expertise to the goal of improved student learning in Vermont.

The WEB Project, in particular, has established partnerships with the Vermont Alliance for Arts Education, the Vermont Arts Council, the Vermont Center for the Book, the Vermont Historical Society, the Vermont Social Studies Alliance, Castleton State College, St. Michael's College, and the University of Vermont. These nonprofit organizations are exploring ways in which technology can facilitate their educational missions and increase communication between them and their constituents. Some also offer professional development opportunities that are directly tied to the Vermont Framework.

Vermont Alliance for Arts Education

The Vermont Alliance for Arts Education exists to ensure that all Vermont students are exposed to high-quality arts education. The Alliance recognizes the vital role of technology in realizing that goal. Together the WEB Project and the Alliance are:

- working to design, field-test, and improve workshops that engage teachers, artists, and students in using multimedia design
- fostering websites that provide these experiences beyond the timetable of the WEB Project
- building on the WEB Project's pioneering experiences in online music exchanges to develop a full range of arts applications
- connecting students and teachers with professional artists to maintain arts-based resources of high quality and content

The Vermont Alliance for Arts Education provides technical assistance to schools beyond the basic level provided by the Vermont Arts Council's introductory workshops.

Vermont Framework of Standards and Learning Opportunities
The Alliance sponsors in-depth workshops and consulting to schools that are just beginning the process of developing district standards and assessments. Experienced arts teachers provide examples and specific guidance to schools upon request.

Reflection and Critique of Work in Progress
The Alliance is beginning to develop a pool of online mentors for students whose interests are matched with the expertise of artists in the field.

Skills Assessment
The Alliance is a partner in the effort to use statewide benchmarking as a professional development activity by collecting samples of work (from beginning students to accomplished artists) to establish levels of accomplishment in the arts.

Vermont Arts Council

The Vermont Arts Council's involvement with the WEB Project has enabled the Arts Council to offer Internet access for artists, teachers, students, and staff. With WEB Project support, the Arts Council has also launched a new website:

www.state.vt.us/vermont-arts

On it you will find:

- an Artist's Directory
- a Gallery with rotating exhibits by Vermont artists
- links to hundreds of art and art education sites
- information and updates on Arts Council programs, including:
  — Opportunity Grants
  — the Partners in Arts Education initiative
  — an arts and arts-education calendar
  — an artist's showcase for marketing arts services

Plans also include a chat room on the website for art educators.

In addition, over the past three years the Vermont Arts Council has channeled talent, energy, and dollars into helping schools build an assessment process for the arts. Currently, they are offering several workshops that are the prerequisites to receiving funds for their new educational initiative. The workshops have been designed to introduce the educational components necessary for successful communication about student work in the arts.

Vermont Framework of Standards and Learning Opportunities
A one-day introduction to the framework designed for artists, members of arts organizations, and art teachers. Includes the basics of reflection and critique, content in the arts, alignment of curriculum with standards and assessment, implications for the school and the community, and the provision of equitable learning opportunities.

Reflection and Critique of Work in Progress
A one-day introduction to the idea of reflection and critique of work in progress as a means of providing meaningful

feedback. Broad overview, spanning dance, music, theater, and visual art and using many modes of reflection and critique.

Skills Assessment
A one-day workshop, primarily for classroom teachers, designed to introduce the basic elements and principles of dance, music, theater, and visual art, using an experiential approach.

Vermont Center for the Book

The Center for the Book and the WEB Project are in the process of establishing a partnership whose focus will be to:

- develop online information about reading and books for babies and toddlers based on its Mother Goose programs, with links to other pertinent agencies
- organize the Red Clover information so that teachers, students, and home schoolers may access the information more efficiently
- encourage education professionals, parents, students, and others to participate in online conversations established by the WEB Project that relate to their own areas of expertise
- create online information and promote discussion of books, humanities, and civic discourse
- create links to the other Centers for the Book in the Library of Congress

The Center for the Book is especially interested in providing information about reading to young children and about book-related activities in Vermont, with connections to bookstores, libraries, and schools. Also included will be the standards-based work done by the Vermont Center for the Book, workshop content, and other new and varied project content.

Vermont Historical Society

In 1996 the Vermont Historical Society worked with five students at Montpelier High School and with artist-in-residence Carley Stevens-McLaughlin to produce an online exhibition of treasures from our collection. The project also provided the core of a website that has been expanded to include interactive pages on Vermont history, created by both students and Historical Society staff.

In 1997–98 the Vermont Historical Society will be working with the WEB Project to expand National History Day by providing online resource materials and advice to teachers and their students. In addition, the Vermont Historical Society will participate in an online course through the University of Vermont that is geared toward helping teachers and local historical societies explore their collections and present them in a meaningful way on the World Wide Web.

The VHS Education Coordinator will serve as mentor for National History Day and will participate in the "Historical Artifacts, Primary Sources, and the World Wide Web" initiative. The Historical Society will supply remote access to its collection through the use of scanned images, with regulated use of such images as defined by the Vermont Historical Society. An additional goal for 1997-98 will be to engage the public in online activities relating to the Historical Society, and to participate in online conversations that relate to the expertise of Vermont Historical Society staff.

Support from Higher Education

Castleton State College

The Communications Department at Castleton State College maintains an active partnership with Proctor Junior/Senior High School. Castleton students and professors have attended WEB workshops and have served as assistants to teachers in Proctor and Poultney.

St. Michael's College

St. Michael's College provides a Curriculum Consultant to work with teachers and administrators in the Franklin Northeast Supervisory Union as they implement their goals. An emphasis is being placed on incorporating the arts into their curriculum and using reflection and critique as a process for improvement of student performance and teaching practice.

University of Vermont

The University of Vermont (UVM) uses Montpelier High School (MHS) as a professional development school and places student interns with teacher mentors. In addition to the professional development provided directly to MHS, UVM is establishing an online mentor program with the WEB Project through a recent grant from NYNEX. Beginning with the areas of history, civic discourse, and music composition, the university will be looking for methods of incorporating the online mentoring of students in K–12 settings into some of their university courses. UVM also offers an online course to the two newest cooperating schools.

Reporting and Evaluation Responsibilities

Reporting and Evaluation Responsibilities

In receiving our original grant from Washington, we promised to achieve three goals:

Goal 1: Promote in-person and online discussions of student work among students, teachers, administrators, and community members that center on the Vermont Framework, especially in the areas of Arts, Language and Literature, and History and Social Sciences.

Goal 2: Link the WEB Project's internal database to a Geographic Information System (GIS) interface for public reporting of information such as distribution of technology, frequency and level of use of that equipment, and rubrics for scoring the level of discussion about student work; and to relevant external databases that report school performance.

Goal 3: To use multimedia technology to connect state-level systemic school reform efforts as evidenced through the Vermont Framework of Standards and Learning Opportunities to local communities.

RMC Research of Denver, Colorado serves as evaluator to the WEB Project grant to ensure that these goals have been met. Because the major purpose of their evaluation effort is to help us improve our performance and reach our goals, they will be taking a multilevel, participatory approach to assessing the project.

RMC's multilevel data gathering will include some quantitative measures, such as statistics about WWW site use, the QED Survey of Technology administered by the Vermont Department of Education each fall, and the Technology Self-Assessments that each of you has already completed. These data will be collected annually to show progress. Qualitative measures will include interviews, in-person and online observations, and participant self-reports.

Local goals, specific to individual initiatives and cooperating schools, also have been established. Many of these local goals reflect the larger project goals as well and will, therefore, be included in the RMC evaluation. Some local goals are highly

site- or project-specific. The attainment of these goals will be evaluated by the participants alone.

The password-protected part of the WEB Project WWW site contains some of the evaluation instruments. Most important are the Goals Progress Reports, which you will be asked to fill out quarterly, and the Training Evaluations, which you will be asked to complete whenever you receive any of the five training options presented in "Learning to Use Multimedia Technology." Other instruments will appear periodically, and participants will be asked to complete them from time to time.

Evaluation Instruments

Goals Progress Report

You will be asked to report activities that relate to the major goals and strategies of the WEB Project three times per year: October, January, and April. These reports can be filled out by individuals or by teams, whichever is the most appropriate method for your given situation. All of the strategies are listed below, but not all of them apply to each school, initiative, or non-profit. So don't worry if you find yourselves reporting on only a few of the strategies. The information you provide about your progress will be publicly available on the World Wide Web.

Goal 1: To promote discussion of work among students, teachers, administrators, and community members, both in-person and online.

Strategies for Attaining Goal 1
- **Strategy: 1.1:** Provide a system of continued technical support through one-day workshops, one-week summer intensives, in-school residencies, peer tutoring, and supplementation of existing district technology efforts.
- **Strategy: 1.2:** Provide a WWW site to host discussions, display student work, and announce WEB Project activities.
- **Strategy: 1.3:** Foster peer networking, support, and professional development in cooperating schools.
- **Strategy: 1.4:** Support statewide organizations in their use of technology to implement aspects of the Vermont Frameworks.
- **Strategy: 1.5:** Foster an active Action Research Team.
- **Strategy: 1.6:** Establish links with colleges.
- **Strategy: 1.7:** Build a video library of student work samples.
- **Strategy: 1.8:** Establish a network of online mentors.

Goal 2: To link state performance reports to pictorial maps (Geographic Information System, or GIS) that graphically show statewide educational information; to create a mappable database of the WEB Project's internal information to show project impact.

Strategies for Attaining Goal 2
- **Strategy: 2.1:** Build an internal database for WEB Project–related information.
- **Strategy: 2.2:** Consult with GIS specialists on the design of a mappable interface.
- **Strategy: 2.3:** Link to Vermont Department of Education school database.

Goal 3: To use multimedia technology to connect state-level systemic school reform efforts, as evidenced through the Vermont Framework of Standards and Learning Opportunities, to the work of local communities

Strategies for Attaining Goal 3
- **Strategy: 3.1:** Coordinate designation of new initiatives and placement of computers with statewide agencies
- **Strategy: 3.2:** Serve on advisory boards to IBM Reinventing Schools Grant and the Technology Literacy Challenge Grant
- **Strategy: 3.3:** Assist arts, literature, and social science agencies to develop their use of technology as it concerns agency educational goals that relate to the Vermont Framework
- **Strategy: 3.4:** Link participants to statewide curriculum and assessment support that is based on the Vermont Framework

Milestones Report

At the end of each school year, participants will be asked to submit a brief overview of what they view as major milestones and major questions and concerns. These are the summaries that appear in the *Cooperating Schools* section of this handbook. The information you provide will be used to update each other as to successes, trials, and tribulations as we strive toward the goals we've set. The information in the *Milestones Report* will also be used in planning for future professional development.

Reporting Responsibilities
for Matching Funds

In addition to reaching certain performance goals, the federal government requires at least a 2–1 match of all monies spent. Over a five-year period, the WEB Project must show over $5 million in match to the federal monies given to Vermont. Our match is allowed as in-kind donations of time, services, equipment, and cash. The only restriction is that federal dollars are not allowed to match federal dollars. The WEB Project Manager collects matching forms on a quarterly basis.

Matching Funds Worksheet
for the WEB Project,
1/1/98–12/31/98

The WEB Project is required to match its Challenge Grant with "in-kind" funds. It is very important that we document any expenses that you or your school/organization has incurred that have made it possible for you to participate. This will not cost you or your school/organization anything, and does not obligate you to any other activities or paperwork.

Please complete the information below:

WEB Project Meeting: _____

Date: _____

Your Name: _____

School or Organization: _____

Type of Contribution (please check those that apply and give a brief description):

___ Time: ___ (# people) x ___ (# hours) x $35/hour = _____
    (include time on project, planning time, and travel time)

___ Round Trip Mileage: _____ x $0.28/mile = _____

___ Service: _____ = _____

___ Materials: _____ = _____

___ Cash: _____ = _____

___ Other: _____ = _____

Total: _____

If you have questions regarding the appropriateness of possible in-kinds, please call Penelope Nolte at (802) 229-4660.

Matching Funds

Time, such as:
hours x people

in-service, professional development, classroom, substitutes, meetings, brainstorming, training (WEB Project training and other computer training), installation, interviewing, computer technicians, physical plant, etc.

(If the person donating time normally earns more than the $35/hour listed on the form, give credit for their full salary.)

Mileage, such as:
miles x .28/mile

Services, such as:
insurance, phone, Internet servers, leases, wiring, postage, faxes, utilities

Materials, such as:
Hardware, software, and support materials such as computers, MIDI interface, keyboards, headphones, software, MIDI cables, data disks, modems, paper, computer-related library/study materials, printers, installation materials, video tapes, video cameras, scanners

equipment = Any computer purchases between January 1, 1997, and December 31, 1997 (please date the Matching Funds form to reflect the time period)

Cash, such as:
residencies, community matches, incentives

Other, such as:
space, at rental rate

Appendix

WEB Project Participants

COOPERATING DISTRICTS

Technology Coordinators

Eric Achenbach, Brattleboro Union High School
Melissa Brooks, Proctor Junior/Senior High
Rich Davidian, Main Street Middle School
David Greenberg, Whitingham
Georgette Huffman, BFA Fairfax
Dana Jewett, FNESU
John McSweeney, Cabot School
Vince Rossano, Montpelier Public Schools

Lead Teachers

Rome Aja, Montpelier Public Schools
Barbara Austin-Hutchins, Montpelier Public Schools
Gary Blomgren, Brattleboro Union High School
Jennifer Botzojorns, Montpelier Public Schools
Lisa Brooks, Whitingham
Tom Button, Lamoille Union High School
Sue Corry, Montgomery Elementary School
Roberta Cota, Montgomery Elementary School
Roger Crowley, Montpelier Public Schools
Lisa Denton, Bakersfield Elementary School
Ray Fish, Proctor Junior/Senior High School
Barb Flack, Lamoille Union High School
Kathy Frankfurter, Lamoille Union High School
Robert Gervais, Bakersfield Elementary School
Nancy Guiette, Lamoille Union High School
Melissa Haberman, Montgomery Elementary
Anne Hamilton, North Country Union Junior High
Jane Harvey, Brattleboro Union High School
Bill Holiday, Brattleboro Union High School
Karen Horton, Whitingham
Steve Hyde, Edmunds Middle School
Ruth Kaldor, Cabot
Whitney Kaulbach, Lamoille Union High School
Robert Kramsky, Brattleboro Union High School
Pam Krout-Voss, Berkshire Elementary School
Holly Kruse, Cabot
Daryl Kuhn, Edmunds Middle School
Jane Lavigne, Edmunds Middle School
Ed Lewis, Cabot
Doug MacDonald, Richford High School
David McGraw, Montpelier Public Schools
Karen Molina, Whitingham
Jeff Moorman, Edmunds Middle School
Greg Mott, Proctor Junior/Senior High School

Patrick Murphy, Richford High School
Wayne Nadeau, Lamoille Union High School
Pat O'Shea, Enosburg High School
Ed Pelkey, Montpelier Public Schools
Kris Pettit, Lamoille Union High School
Regina Quinn, Walden School
Charlie Rathbone, Edmunds Middle School
Phyllis Rowell, Montpelier Public Schools
Tom Rushford, Cabot
Michelle Smyth, North County Union Junior High
Christina Toner, Proctor Junior/Senior High School
Linda Tuscano, , Proctor Junior/Senior High School
Brent Truchon, Edmunds Middle School
Phyllis Utigard, Richford High School
Sandra fw Vaillancourt, Enosburg High School
Kathy Mehurin-Volk
Deb Walford, BFA, Fairfax
JoAnne Wazny, Berkshire Elementary School
Brian Vogel, Enosburg High School
Maggie York, Cabot
Bev Youree, Berkshire Elementary School

Curriculum Coordinators

Tony , Principal, Proctor Junior/Senior High
Mary Helen Hart, Franklin Northeast Supervisory Union
David Gibson, Montpelier Public Schools
James Maland, Brattleboro Union High School
Amy Mellencamp, Edmunds Middle School
Jonathan Silverman, St. Michael's College

NON-PROFIT INITIATIVES

The MIDI Project
Sandi MacLeod, Coordinator, Founders Memorial School

Brenda Bandy, Newbury Elementary School
Diana Burritt, Shelburne Community School
Sandra Button, Beeman Elementary School
Neal Camp, Essex Middle School
Rich Davidian, Main Street Middle School
Glory Douglass, North Country Union High School
Cindy Fay, Hinesburg Elementary School
Deborah Foster, Beeman Elementary School
Betsy Greene, Champlain Elementary
Cindy Hall, Oxbow High School
Anne Hamilton, North Country Union Junior High School
Barb Heath, Mater Christi
Charlene Helman, Williamstown Schools
Sue Hogan Bellows Free Academy, Fairfax
Karen James, Proctor Elementary
Jim Kurty, Brattleboro Schools
Linda Leach, Lincoln Elementary
Allyson Ledoux, Colchester Middle School

Steve Light, Hazen Union High School Dave Tisdell
Jan Little, Folsom School, South Hero
Kathy Luzader, Wallingford Elementary School
Bonnie Machia, JFK Elementary
Peggy Madden, Randolph
Bruce McRae, Bellows Free Academy, Fairfax
Allegra Miller, Mallets Bay School
Chuck Miller, Mary Hogan Elementary School
Gary Moreau, Albert D. Lawton Middle School
Bill Moulton, Canaan Memorial School
David Myers, Shelburne Community School
Ed Pelkey, Montpelier High School
Tony Pietricola , Charlotte Central School
Steve Rice, Brattleboro Schools
Mary Ann Samuels, Isle la Motte School
Christina Scheindel, Randolph Union High School
Marilyn Sink, Georgia Elementary School
Margaret Smith, Founders Memorial School
Larry Solt, Barre City Elementary & Middle School
Amy Southworth, Shelburne Community School
Bob Stone, Essex Middle School
Peter Tavalin, The Putney School
John Tisbert, Barre City Elementary & Middle School
Dave Tisdell, Hazen Union High School
Christina Toner, Proctor Junior/Senior High School
Mike Turk, Flood Brook School
Julie Urquhart, Founders Memorial School
Rosemary Zamore, Folsom School

Civic Discourse
Nick Boke, Coordinator, Vermont Center for the Book

Carolyn Bronz, Adult Basic Education, St. Albans
Meg Hadley, Spaulding High School
Marty Jezer, Brattleboro
Dave Schoales, People's Academy
Al Stephens, U-32

History Day
Sarah Rooker, Coordinator, Vermont Historical Society

Elise Guyette, Vermont Social Studies Alliance
Kathy Douglas, Ferrisburgh School
Elaine Magalis, Old Stone House Museum
Holly Noordsy,Sheldon Museum
Sue Pollender, Black River Union High School
Sally Rivard, Lake Regions High School

Artifacts, Primary Resources, and the WWW
Sarah Rooker, Coordinator, Vermont Historical Society

Elise Guyette, Vermont Social Studies Alliance

ARTT
Judy Tiplady, Coordinator, Grand Isle Elementary School

Fran Allyn, Colchester High School
Alice Bourgoine, Charlotte Elementary
Rebbie Carelton , Randolph Elementary
Joan Curtis, Fair Haven
Barb Flack, Lamoille Union High School
Marty Leech, Missiquoi High School
Ken Leslie, Johnson State College
Mary Lou Marcussen, Williston Central School
Ellie Morency, Founders Memorial
Jim Robinson, Randolph
Sally Timmons, Poultney High School

<u>Digital Online Mentors</u>

Scott Chesnut
Ann De-Marle Pollak
Deb Ellis
Michael Hanish
Beth Hughes
Deb Lazar
Lia Roozendaal

<u>Governors Institutes of Vermont</u>
Jean Olson, Executive Director

<u>Advising Council</u>

Nick Boke, Vermont Center for the Book
Tim Flynn, Vermont Department of Education
David Gibson, WEB Project Co-Director
Sarah Rooker, Vermont Historical Society
Fern Tavalin, WEB Project Co-Director
Sarah Weber, Project Manager, IBM Reinventing Education
Martha-Ming Whitfield, Vermont Arts Council

<u>Action Researchers</u>
Anne Hamilton, North Country Union Jr. HS
Sandi MacLeod, Founders Memorial School
Michelle Smyth, North Country Union Jr. HS

<u>Evaluators</u>
RMC Research Corporation in Denver, Colorado

<u>WEB Project Staff</u>
David Gibson and Fern Tavalin, Co-Directors
Penny Nolte, Project Manager

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