Beyond Testing:
Project-Based Learning, 21st Century Skills and ISTE Standards

Handout available at NECC website and www.peggyhealystearns.com/NECC2008

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Synopsis: This session features projects that support the development of 21st century skills while addressing cross-curricular and ISTE standards. It includes background on 21st Century skills, ISTE NETS for Students, and project-based learning along with resources, and references.

Music: "Not on the Test", written by John Forster and Tom Chapin, sung by Tom Chapin, © 2007 Limousine Music Co. & The Last Music Co. (ASCAP). Download for free at www.tomchapin.com.

Introductory References

Are They Really Ready to Work? The Conference Board Research Report
http://www.conference-board.org/publications/describe.cfm?id=1218
.
Tough Choices or Tough Times. New Commission on Skills of the American Workforce
http://www.skillscommission.org/

Report from the Partnership for 21st Century Skills and
Results That Matter: 21st Century Skills and High School Reform
www.21stcenturyskills.org

Standards Based Accountability Under No Child Left Behind
Rand Corporation Research Study
http://www.rand.org/pubs/monographs/2007/RAND_MG589.pdf

American Federation of Teachers Recommendations for NCLB.
http://aft.org/topics/nclb/downloads/NCLBRecommend060606.pdf

What is project-based learning?

- Focuses on a problem or task
- Culminates in a product, presentation, performance
- Learner-centered
- Constructivist
- Authentic tasks and assessment
- Focuses on higher order skills
- Involves collaborative teams
- Peer instruction, peer assessment
- Teacher as guide

Project-based Learning Helps Students Develop 21st Century Skills because…

- PBL addresses multiple learning styles and intelligences
- Provides opportunities for cross-curricular connections
- Lets you address multiple standards within the context of a single project
- Students are better able to internalize skills and concepts and are more likely to remember because they are…
    - Involved in choosing the focus of their projects
    - Intrinsically motivated
    - Actively engaged
    - Allowed to revisit a topic throughout the project and thus deepen learning
- Transfer of learning to other settings is enhanced because
    - Projects are authentic and closely related to real-world tasks
    - Learning skills and concepts in context makes learning relevant and meaningful
    - Students apply skills and concepts rather than simply memorize

ISTE National Education Standards (NETS) for Students.

a. Creativity & Innovation
b. Communication & Collaboration
c. Research & Information Fluency
d. Critical Thinking, Problem Solving, & Decision Making
e. Digital Citizenship
f. Technology Operations & Concepts

Open-ended tools support project-based learning and 21st Century Skills because tools…

- Are flexible and can be used across grade levels and subject areas
- Help students solve their own problems using their own data
- Help students develop essential skills in a meaningful context
- Encourage indepth projects
- Mirror professional applications

Exploring the World
Global Awareness

Kindergartners Plan Field Trips

Grade: K-2
Educator/coordinator: Paula McGirr, Maple West Elementary School, Williamsville, NY
Overview: At the beginning of the year, kindergartners collaborate with the teacher to create a map of the school neighborhood. The map is printed poster size and hung on the wall. Students refer to the map to help decide where they would like to go on their walking field trips. Before they leave, they use the map to decide their route.
Extension: Map neighborhood and plan a trick or treat route.
Standards: Social studies, language arts; cooperative learning, decision making, Student NETS
Software: *Neighborhood MapMachine*
Product Info: http://www.tomsnyder.com/products/product.asp?SKU=NEIV20
Online Tour: http://www.tomsnyder.com/products/ProductExtras/neiv20/overview/export/popup.html

Dinosaur Hunt

Grade: 2
Educator/coordinator: Robert Taylor, Central Road School, Rolling Meadows, IL.
Overview: The teacher creates two fictitious dinosaurs and provides students with a fact sheets listing physical characteristics, food preferences, and nesting habits for each. He hides two "dinosaur nests" on the school grounds. The class makes a map of the school grounds and uses the map and the fact sheets to locate the nests based on what they know about the dinosaurs. When students return to the classroom, they use grid coordinates to identify nest locations and discuss what clues they used to find the nests.
Standards: Science, social studies, math, collaborative learning, National Educational Technology Standards (NETS).
Software: *Neighborhood MapMachine*
Product Info: http://www.tomsnyder.com/products/product.asp?SKU=NEIV20
Online Tour: http://www.tomsnyder.com/products/ProductExtras/neiv20/overview/export/popup.html

Escape Via the Underground Railroad!

Grade: 2
Educator/coordinator: Kristen Vassos, Mount Laurel School District, NJ
Standards: Social studies, language arts, visual arts, NETS
Software:
Neighborhood MapMachine, Tom Snyder Productions/Scholastic
Product Info: www.tomsnyder.com/products/product.asp?SKU=NEIV20
Online Tour: http://www.tomsnyder.com/products/ProductExtras/neiv20/overview/export/popup.html

Community Construction Kit, Tom Snyder Productions/Scholastic
Product Info: www.tomsnyder.com/products/product.asp?SKU=CCKCCK
Online Tour: www.tomsnyder.com/products/ProductExtras/cckcck/cckmovie.asp

Google Maps
http://maps.google.com/

Overview: Students recreated the area around their school including a Quaker Meetinghouse and an African American chapel, both of which were used as Underground Railroad safe houses. They used *Neighborhood MapMachine* to create a map of the area, and *Community Construction Kit* to create models of the buildings. Students were then asked to show the path they would take to try to get from the Meetinghouse to the safe house without being caught. The 3D representation of the route helped students visualize their surroundings and reinforced mapping skills. Some classes located the school on Google Maps and used the satellite view as a guide in making their Neighborhood MapMachine map.

Triangle of Hope

Grade: 4 in collaboration with grade 11 students.
Educator contact: Marianne Perko, Branksome Hall Academy, Toronto, Canada, in conjunction with Rose Avenue Public School, Toronto, Canada, and Queenstown Get Ahead Project, South Africa.
Overview: Students and teachers from two Toronto schools traveled to Queenstown, South Africa, to help teach mapping and geography skills at the Queenstown Get Ahead Project. They taught faculty and students how to use the *Neighborhood MapMachine* software and helped students develop geography skills by creating maps of their own community.
Standards: Social studies, language arts, collaborative learning, visual arts, NETS
Software:
Neighborhood MapMachine, Tom Snyder Productions/Scholastic
Product Info: www.tomsnyder.com/products/product.asp?SKU=NEIV20
Online Tour: www.tomsnyder.com/products/ProductExtras/neiv20/overview/export/popup.html

Recreating Historical Communities

Grades: 5
Schools: Camden Rockport Middle School, Camden, Maine
Educator/coordinator: Angeline Ferris
Overview: Students research a colonial community including environment, economy, lifestyle and architecture and collaborate to build an historically accurate 3D model.
Standards: Social studies, math, language arts, science, collaboration, problem solving, decision making skills, NETS.

Software
Community Construction Kit, Tom Snyder Productions/Scholastic
Product Info: www.tomsnyder.com/products/product.asp?SKU=CCKCCK
Online Tour: www.tomsnyder.com/products/ProductExtras/cckcck/cckmovie.asp

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

See also "ABC's of Manners", page 10.

Design a Community

Grades: 4 and 5, from four different CT school districts
Schools: Highland Park School, Manchester, CT; Vance School: New Britain, CT; Silver Lane School: East Hartford, CT; Hall Memorial School: Willington, CT
Educator/coordinator: Diane Novak, Principal, Highland Park School
Overview: Students plan, design, and build a three-dimensional model of a new multicultural, inclusive, and ecologically minded community. Students learn about the infrastructure of communities using Internet research, the expertise of the community experts/consultants, and the engineering design process. The goals were: (1) to have elementary students from four different schools work together to create a computer generated map of a new community; (2) to build three-dimensional model structures (buildings, bridges, stop lights/signs, etc.) for designated locations on the map; and (3) to develop multimedia advertisements to persuade people to live in the new community.
Standards: Math, language arts, science and social studies; group dynamics, problem solving, decision making skills, NETS. (See detailed standards below.)

Software
Neighborhood MapMachine, Tom Snyder Productions/Scholastic
Product Info: www.tomsnyder.com/products/product.asp?SKU=NEIV20
Online Tour: www.tomsnyder.com/products/ProductExtras/neiv20/overview/export/popup.html

Community Construction Kit, Tom Snyder Productions/Scholastic
Product Info: www.tomsnyder.com/products/product.asp?SKU=CCKCCK
Online Tour: www.tomsnyder.com/products/ProductExtras/cckcck/cckmovie.asp

INDIVIDUAL STANDARDS

Note: These standards, provided by Diane Novak for the "Engineer City" project, are relevant to other community projects described in this handout. They illustrate the broad cross-curricular base addressed by projects like these.

Learning Resources and Information Technology

Standard I - Students will define their information needs and identify effective courses of action to conduct research, solve complex problems and pursue personal interests.

Standard IV - Students will apply evaluative criteria to the selection, interpretation, analysis, reorganization and synthesis of information from a variety of sources and formats.

Standard V - Students will use appropriate technologies to create written, visual, oral and multimedia products to communicate ideas, information and conclusions to others.

Standard VI - Students will evaluate the effectiveness and efficiency of their own choices and uses of information and technology for problem solving and communication.

Social Studies

Standard VI - Students will demonstrate knowledge of the rights and responsibilities of citizens to participate in and shape public policy, and contribute to the maintenance of our democratic way of life.

Standard IX - Students will use spatial perspective to identify and analyze the significance of physical and cultural characteristics of places and world regions.

Standard X - Students will use spatial perspective to explain the physical processes that shape the Earth's surface and its ecosystems.

Standard XI - Students will interpret spatial patterns of human migration, economic activities and political units in Conn., the nation, and the world.

Standard XII - Students will use geographic tools and technology to explain the interactions of human and the larger environment, and the evolving consequences of those interactions.

Standard XIII - Students will demonstrate that because human, natural and capital resources are limited, individuals, household, businesses and governments must make choices.

Standard XIV - Students will demonstrate that various economic systems coexist, and that economic decisions are made by individuals and/or governments, influenced by markets, cultural traditions, individuals and government in the allocation of goods and services.

Mathematics

Standard III - Students will make estimates and approximations, and judge the reasonableness of results.

Standard V - Students will make and use measurements in both customary and metric units to approximate, measure and compute length, area, volume, mass and temperature, angle and time.

Standard VI - Students will analyze and use spatial relationships and basic concepts of geometry to construct, draw, describe and compare geometric models and their transformations, and use geometric

relationships and patterns to solve problems.

Language Arts
Standard I - Students will read and respond in individual, literal, critical and evaluative ways to literary, information and persuasive texts.

Standard II - Students will produce written, oral and visual texts to express, develop and substantiate ideas and experiences.

Standard III - Students will apply the conventions of standard English language in oral and written communication

Technology Standards
Standard II - Students will understand the impact that technology has on the social, cultural and environmental aspects of their lives.

Standard IV - Students will recognize technology as the result of a creative act, and will be able to apply disciplined problem-solving strategies to enhance invention and innovation.

Standard V - Students will identify and develop leadership attributes and apply them in team situations.

Standard VII - Students will understand and be able to effectively apply physical, graphic, and electronic communications techniques in processing, transmitting, receiving, and organizing information.

Standard VIII - Students will understand and be able to demonstrate the methods involved in turning raw materials into useable products.

Standard IX - Students will understand transportation systems and the environments used to move goods and people, and the subsystems common to each.

Standard XI - Students will be able to apply the engineering design process to achieve desired outcomes across all technology content areas.

Science
Standard III - Students will understand that all organisms in the biosphere are linked to each other and to their physical environments by the transfer and transformation of matter and energy.

Standard VIII - Students will understand the water cycle, including energy transfers, the distribution and characteristics of water, and its influences on human activity.

Standard XXII - Students will know that energy is conserved, transferred, transformed, and appears in different forms.

Standard XXIV - Students will understand the relationships among mathematics, science, technology and the way they affect and are affected by society.

Writing Projects Across the Curriculum

References Cited

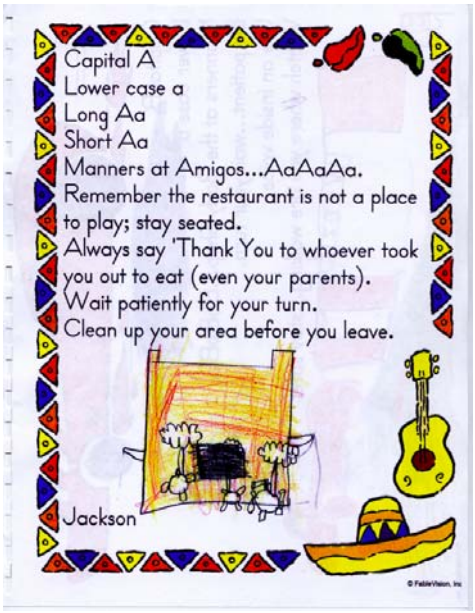
Report on Workforce Readiness
http://www.conference-board.org/publications/describe.cfm?id=1218

Reading and Writing Grade by Grade, NCEE
http://www.ncee.org/store/products/detail.jsp;jsessionid=al5D1ugeV2-4?setProtocol=true&id=7

2007 Survey on Teaching Writing, National Writing Project
http://www.writingproject.org/cs/nwpp/print/nwpr/2389

Beyond the Three R's: Voter Attitudes toward 21st Century Skillls
http://www.21stcenturyskills.org/index.php?option=com_content&task=view&id=369&Itemid=64

The ABC's of Manners



Grades: 1 and 2
Educator/coordinator: Cathy Swartz and Carol Whitehead
Overview: In conjunction with their social studies curriculum and in collaboration with Junior Achievement, students built a three-dimensional model of their community. With the help of teachers, they surveyed community businesses regarding appropriate behavior in stores, banks, restaurants, and other venues. After visiting businesses and talking with owners and employees, each student wrote about appropriate behavior in a specific venue.

Standards: Language, social studies, business and economic literacy, professionalism/ethics, collaborative learning, NETS
Software: *Stationery Studio*, FableVision
Product Info: http://www.fablevision.com/stationerystudio/index.html
Download Free Demo: http://www.fablevision.com/stationerystudio/product.htm
Product Tour: http://www.fablevision.com/stationerystudio/stationerystudio_tour.mov

Writing Across the Curriculum: Science, Language, Music, and More

Author's Night celebrates young writers!

Grades: 1 and 3
Educator/coordinator: Kristen Vassos, Mount Laurel School District, NJ
Standards: Language, social studies, science, math, health, NETS
Overview Students learn the writing process from the start of the year. By the end of the year, having learned to brainstorm, draft, edit, conference, revise, and write final copy, they are ready to publish their own books. Students create their books using *Stationery Studio* or *AppleWorks*, and then bind them using the Lintor bookbinding system. At our Author's Night, students' books and author biographies are on display. Students are available to answer questions and sign autographs. Fourth graders who participated as third graders in the Author's Night project the previous year, recorded their books as Podcasts.

Software
Stationery Studio, FableVision
Product Info: http://www.fablevision.com/stationerystudio/index.html
Download Free Demo: http://www.fablevision.com/stationerystudio/demo/index.html
Product Tour: http://www.fablevision.com/stationerystudio/stationerystudio_tour.mov
AppleWorks (iLife) and Garage Band, Apple Computer
Product Info: http://www.apple.com/itunes
Lintor Bookbinding System
Product Info: http://www.lintorpublishing.com/

More Info: http://homepage.mac.com/kristenvassos/iMovieTheater42.html

Teddy Bear Exchange: Something to Write About!

Grade: 1
Educator/coordinator: Agnes Zaorski, Vetter Elementary School, Eatontown Schools, NJ
Standards: Language, social studies, collaborative learning, NETS
Overview: First graders at the Vetter Elementary School exchange teddy bears with an elementary school in Japan. Students write to each other about the teddy bear's adventures.

Japan-USA Tree Watch

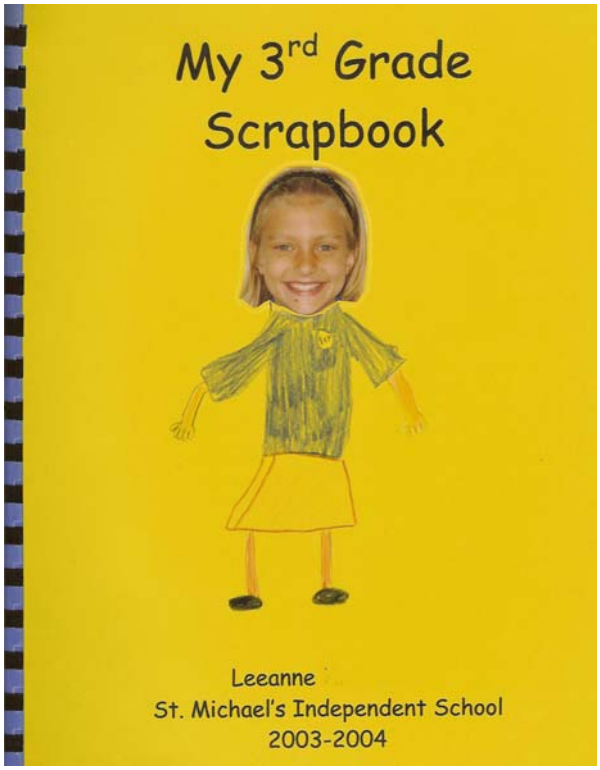
Grade: 4 and 5
Educator/coordinator: Agnes Zaorski, Vetter Elementary School, Eatontown Schools, NJ
Standards: Language, social studies, science, collaborative learning, NETS
Overview: Students in grades 4 and 5 in the US and Japan observe how the trees in their community change with the seasons. They exchange photos, Haiku poetry, and descriptions that help them compare the climate in the two countries.

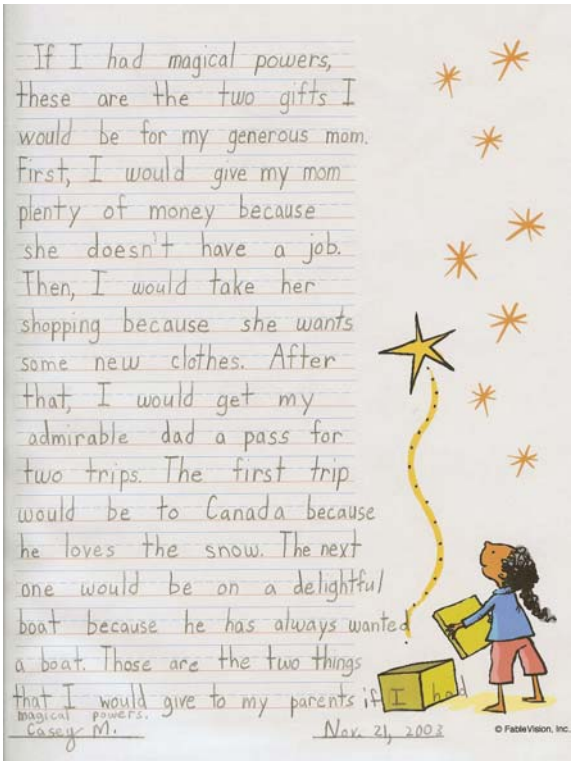
Student "Publishing Company" Creates Teacher Resources

Grade: 5 and 6
Educator/coordinator: Agnes Zaorski, Eatontown Schools, NJ
Standards: Language, social studies, science, math, health, NETS
Overview: The fifth and sixth grade students in the computer club develop take home learning games and books for K-2 students based on teacher requests outlining the skill in need of improvement and type of game desired. Students create BINGO, Memory, Matching Cards, and online games to play as a class, and paper games to take home.

Software
Stationery Studio, FableVision
Product Info: http://www.fablevision.com/stationerystudio/index.html
Download Free Demo: http://www.fablevision.com/stationerystudio/demo/index.html
Product Tour: http://www.fablevision.com/stationerystudio/stationerystudio_tour.mov

Scrapbooks Inspire Students' Best Work





Grade: 3
Educator/coordinator: Adam Carswell, formerly of The Pine School, Stuart, Florida
Overview: Every student created his or her own scrapbook, which served as a portfolio of the student's best work, a memory book, and a yearbook. These were old-fashioned paper scrapbooks, which incorporated a variety of media and the use of technology where appropriate.

Throughout the year students collected examples of their writing, selected assignments, pictures of friends, and souvenirs from field trips and special events. For their writing, students used *Stationery*

Studio, which allowed them to choose writing paper that correlated with their assignments and customize the writing line style, line width, and layout to suit their needs. Some assignments were typed at the computer while others were handwritten.
Standards: Language arts, social studies, science, math, visual arts, NETS
Software: *Stationery Studio*, FableVision
Product Info: http://www.fablevision.com/stationerystudio/index.html
Download Free Demo: http://www.fablevision.com/stationerystudio/demo/index.html
Product Tour: http://www.fablevision.com/stationerystudio/stationerystudio_tour.mov

Integrate Writing and Music

My Life as an Instrument
Grade: 5
Educator/coordinator: Terry Shay, North Tama School, Traer, Iowa
Students assume the role of a musical instrument and write from that perspective.
Software: *Stationery Studio*, FableVision (See below for more information.)

Animal Rap
Grade: 2
Educator/coordinator: Terry Shay, North Tama School, Traer, Iowa
Students brainstorm a list of everything they know about an animal. Each student then writes a 2-line poem about his or her animal. Animal poems are put together to create a rap which students perform.

Software: *Stationery Studio*, FableVision
Product Info: http://www.fablevision.com/stationerystudio/index.html
Download Free Demo: http://www.fablevision.com/stationerystudio/demo/index.html
Product Tour: http://www.fablevision.com/stationerystudio/stationerystudio_tour.mov

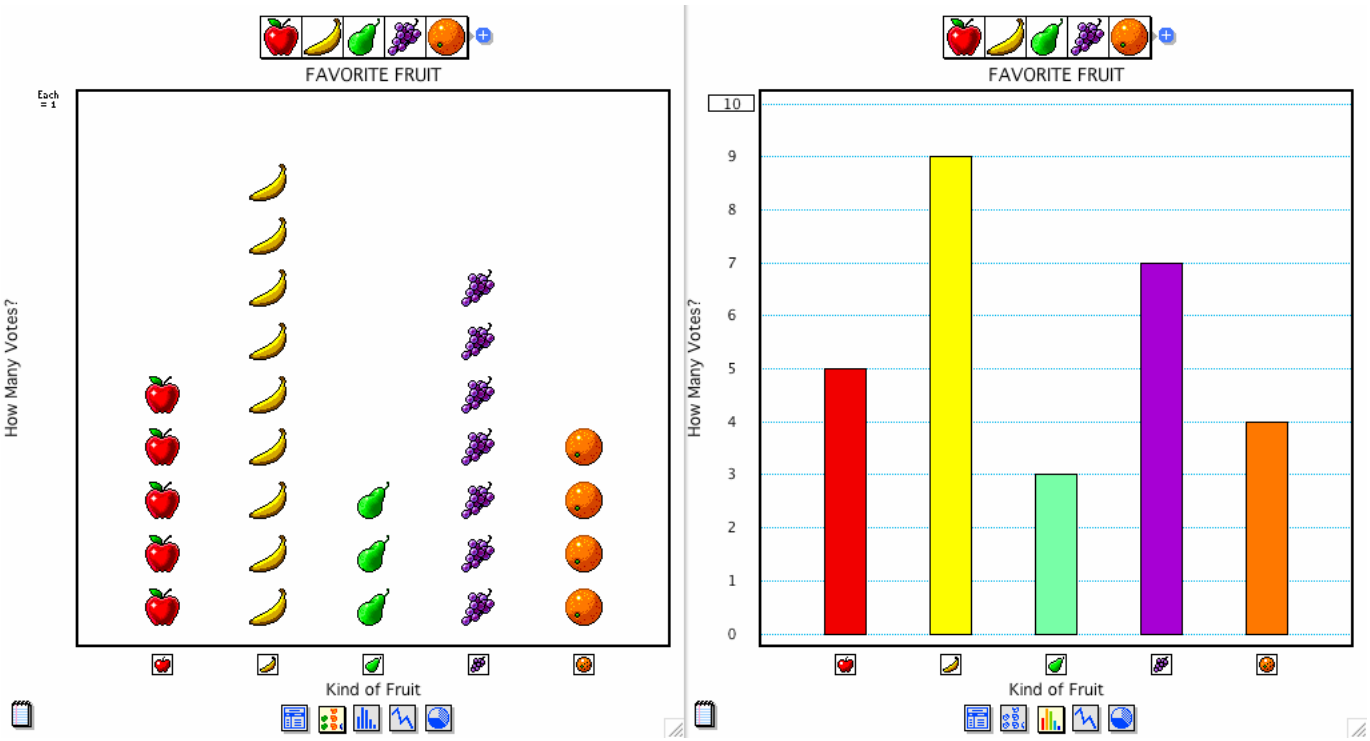
Animate Your Curriculum

Animate a Song
Grades: 3-8
Educator/coordinator: Terry Shay, North Tama School, Traer, Iowa
Students create an animation that conveys one or more lines of a song, the overall meaning, or the general mood.

Political Cartoons
Grades: 4-12
Educator/coordinator: Terry Shay, North Tama School, Traer, Iowa
Classroom teacher: Brent Thoren, North Tama School, Traer, Iowa
Students create animated political cartoons that represent a point of view.

Software: *Animation-Ish*, FableVision
Product Info: http://www.fablevision.com/animationish/index.php
Download Free Demo: http://www.fablevision.com/animationish/index.php (Click upper right)

Samples available at http://tjonajourney.blogspot.com



Everything You Ever Wanted to Know About Our Class

School: Springfield Elementary School, New Middletown, OH **Grade**: 3
Educator/coordinator: Colleen Moritz
Overview: Every day students respond to a survey question like "What is your favorite fruit?" Each student writes his or her answer on a piece of paper and drops it into a bucket. Later that day, during math class, we do a classroom tally sheet and create a graph using The Graph Club. Students also create a five-question quiz with an answer key, using the information on the graph. (i.e., How many more people picked bananas than pears?) Not only do students become experts on creating and interpreting graphs, but they also learn a lot about their classmates! All of the computer-generated graphs are compiled in a notebook entitled "Everything You Ever Wanted To Know About Our Class."
Objectives. Collecting, organizing, and interpreting data. **Standards**: Math, social studies, language arts; cooperative learning, NETS

Software: *Graph Club*
Product Info: http://www.tomsnyder.com/products/product.asp?SKU=GRPV20
Online Tour: http://www.tomsnyder.com/products/ProductExtras/grpv20/overview/export/popup.html

3rd Graders Poll and Quiz Underclassman on the Results

Schools: Mill Creek Primary, Middleton, ID
Grade: 3
Educator/coordinator: Angie Young
Objectives. Collecting, organizing, and interpreting data

Standards: Math, social studies, language arts; cooperative learning, decision making, NETS
Software: *Graph Club*
Product Info: http://tomsnyder.com/products/product.asp?SKU=GRPV20
Online Tour: http://www.tomsnyder.com/products/ProductExtras/grpv20/overview/export/popup.html

Overview: First students used The Graph Club to display results of a survey they took during a November elections unit. After completing that unit, students generated questions to survey a "sample" of the second grade "population." The students tallied their results and created a table and two different graphs of the same information.

Using their graphs, the 3rd graders created test questions for the 2nd graders. They used these test questions and graphs to create posters, which traveled through the 2nd grade classrooms and were used in whole class discussions about the results. Third grade students loved using The Graph Club and the 2nd graders enjoyed seeing the colorful results of their own opinions. All the students were motivated to learn more about graphs.

Neighborhood MapMachine 2.0

Product Info: http://www.tomsnyder.com/products/product.asp?SKU=NEIV20#

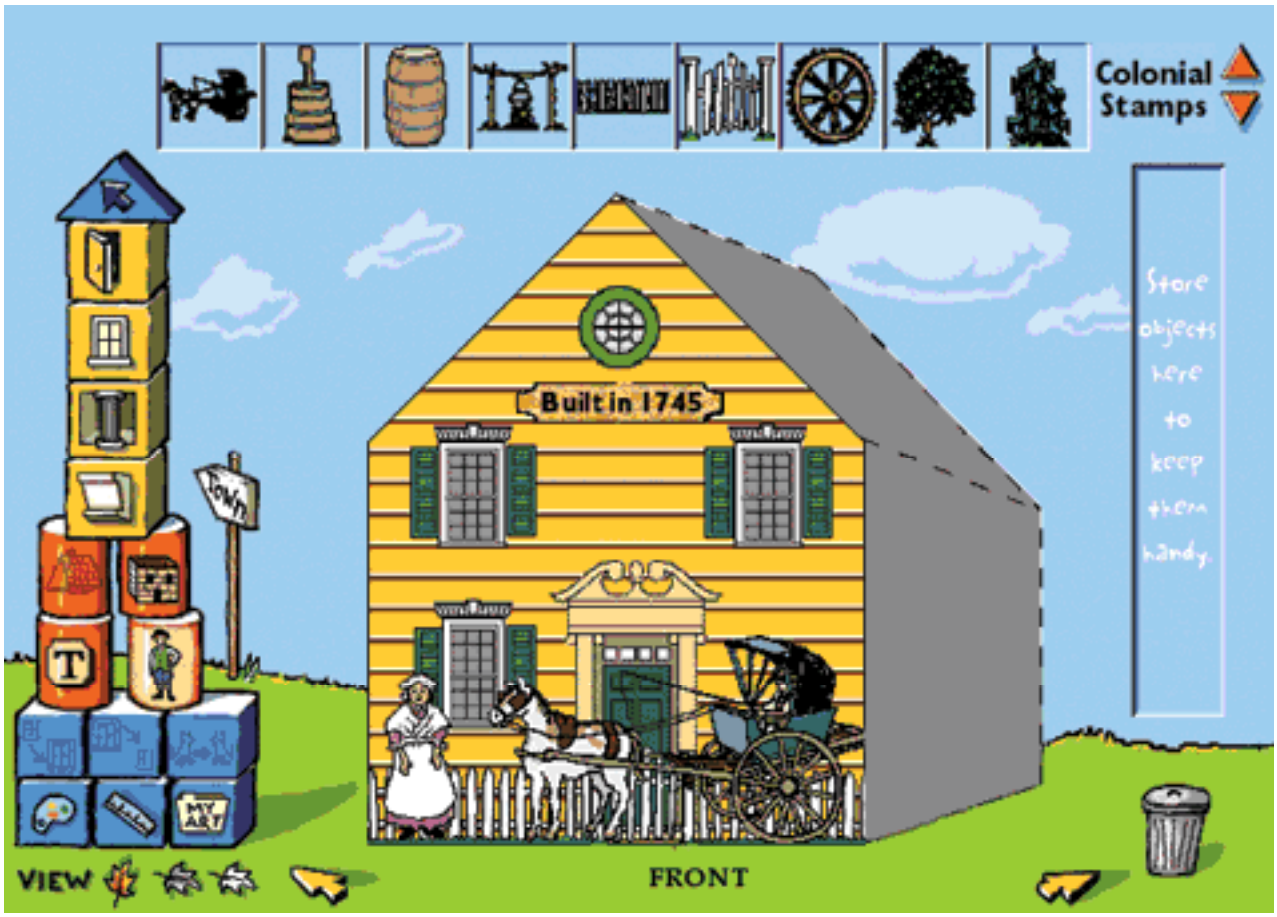
Program Overview: Neighborhood MapMachine is an easy-to-use bilingual tool that lets students in grades K-5 create maps of neighborhoods and communities from around the world and throughout history. Students choose from 80 map symbols and can add their own drawings, photos and movies. They travel around maps onscreen and print maps in multiple sizes from one to six-by-six pages. Students can solve mysteries and create their own mysteries. In the process, they learn important geography and mapping skills including the use of symbols, compass direction, scale, grid coordinates, and more.

An onscreen notebook lets students record or type notes that can be printed with the map. A slide show tool lets you show change over time or provide tours of towns and neighborhoods. Includes printable flat patterns to create 3-D models of every home and building.

MEETS STATE AND NATIONAL STANDARDS -- Your students will:

- Locate places using the four cardinal directions
- Use scale to determine the distance between places on maps
- Identify and use the compass rose, grid, and symbols to locate places on maps
- Use written language to communicate directions
- Calculate, compare, and convert length, perimeter, and area

Community Construction Kit



Product Info: http://www.tomsnyder.com/products/product.asp?SKU=CCKCCK

Program Overview: *Community Construction Kit* for grades K-5 is an easy-to-use tool that lets students design homes and buildings on the computer and then print them as flat patterns. Students cut, fold and tape to create 3-D models. The program includes hundreds of historically accurate architectural elements from four eras – Medieval, Native American, Colonial, and Today. There are over 30 ready-made buildings that students can use as models, modify, or print as is. A Photo Gallery provides background information and inspiration with narrated descriptions of famous and noteworthy homes and buildings. Creatures and Things includes cut-outs of people, animals and objects to add to your community.

MEETS STATE AND NATIONAL STANDARDS -- Your students will:

- Learn about cultures from different historical periods
- Examine the interaction of humans and their physical environment
- Understand why artistic creation is a cultural expression
- Identify and use various sources for reconstructing the past
- Communicate their understanding of history in visual form
- Develop skill with spatial relationships

Stationery Studio

Product Info: http://www.fablevision.com/stationerystudio/
Download Free Working Demo: http://www.fablevision.com/stationerystudio/demo/index.html

Program Overview: *Stationery Studio* supports writing both at the computer and by hand. The program is actually two tools in one - an introductory word processor with all of the basics and none of the confusion *and* it is a tool for customizing stationery for students' handwritten activities. Choose from 226 curriculum-based borders and shapes, then customize writing line style (primary, primary skip-a-line, standard lines), line width, layout (full page, half page, columns, letters, envelopes and five more), text and color. Stationery can be printed in a variety of formats for stories, reports, shape books, mini-books, postcards, note cards, letters, envelopes and more. *Stationery Studio* includes 30 ready-made activities and lessons correlated with the curriculum, plus additional sample projects and a photo gallery of completed work. The program features 8 school fonts including dotted fonts for handwriting practice. Add-on packs available with more activities and 80 additional borders and shapes.

MEETS STATE AND NATIONAL STANDARDS -- Your students will:

- Use the writing process to communicate with different audiences for a variety of purposes
- Apply knowledge of language structure, language conventions
- Participate as knowledgeable, reflective, creative, and critical members of literacy communities
- Create readable documents with legible handwriting.

Graph Club 2.0

Product Info: http://tomsnyder.com/graphclub/

Program Overview: *The Graph Club 2.0* for grades K-5 is an easy-to-use tool that provides a manipulative environment in which students create, interpret, and print graphs and tables in a variety of formats. The program helps students make the transition from graphing with manipulatives to graphing in the abstract, and helps students see that the same data can be represented differently as picture, bar, line and circle graphs and tables. This bilingual tool includes over 350 symbols, the ability to import your own symbols, 30 ready-made activities correlated with the standards, and a fun and challenging game.

The Graph Club addresses multiple learning standards across the curriculum including the following: (For a complete listing by state and subject area, go to **http://tomsnyder.com/products/standards/)**

- Students understand and use the tools of data analysis for managing information.
- Students interpret and use graphic sources of information such as maps, charts, graphs and diagrams**.**
- Students develop their own questions and conduct their own investigations.
- Students construct simple graphs, tables, maps and charts to organize, examine and evaluate information.

For a complete listing by state and subject area, go to
http://tomsnyder.com/standards/Correlations_Menu.asp?SKU=GRPV20

Teacher Resources

Print

Boss, Suzie and Krauss, Jane. *Reinventing Project-Based Learning: Your Field Guide to Real-World Projects in the Digital Age*. Eugene, OR: International Society for Technology in Education, 2007.

Flynn, Pat, Mesibov, Don, et al. *Applying Standards-Based Constructivism: A Two-Step Guide for Motivating Elementary Students*. Larchmont, NY: Eye On Education, 2004.

International Society for Technology in Education. *National Educational Technology Standards*. Eugene, OR: Author, 1998, 2007.

Moursund, David. *Project-Based Learning Using Information Technology*. Eugene, OR: International Society for Technology in Education, 2003.

Internet References and Resources

American Federation of Teachers Recommendations for NCLB
http://www.aft.org/nclbrecs.pdf

Are They Really Ready to Work?
The Conference Board Research Report
http://www.conference-board.org/publications/describe.cfm?id=1218

Institute for Learner Centered Education and the Constructivist Design Conference
http://www.learnercentereded.org/

Assess 21 from the Partnership for 21st Century Skills
Background information on current assessments of 21st century skills.
http://www.21stcenturyskills.org/assess21/

National Center on Education and the Economy
http://www.ncee.org/

New Commission on Skills of the American Workforce
http://www.skillscommission.org/
See their report "Tough Choices or Tough Times".

Partnership for 21st Century Skills
http://www.21stcenturyskills.org/

Center for Problem-Based Learning
http://www2.imsa.edu/programs/pbln/

Constructivist Consortium
http://www.constructivistconsortium.org/

Problem-Based Learning Clearinghouse
https://chico.nss.udel.edu/Pbl/

Constructivism as a Paradigm for Teaching and Learning: Online Workshop
From PBS WNET New York
http://www.thirteen.org/edonline/concept2class/constructivism/index.html

The National Center for Fair & Open Testing
www.fairtest.org

Common Core
http://www.commoncore.org/

High Planes Regional Technology in Education: Project-Based Learning Resources
http://pblchecklist.4teachers.org/

Buck Institute for Education: Project-Based Learning Resources
http://www.bie.org/pbl/

Edutopia: The George Lucas Education Foundation
http://www.edutopia.org/

Where Do Children Play?
Reconnecting Youth and Families to Outdoor Play
www.childrenplay.org

Parents Choice Foundation (Resources for parents and teachers)
http://www.parents-choice.org/

Additional Professional Organizations
International Society for Technology in Education
www.iste.org

International Reading Association
http://www.reading.org

National Council of Teachers of Mathematics
http://www.nctm.org/

National Council for the Social Studies
http://www.socialstudies.org

National Council of Teachers of English
http://www.ncte.org

National Science Teachers Association
http://www.nsta.org