



Project-based Learning



Where Do You Begin?

- ISTE
 - <http://cnets.iste.org/currstands/>
 - NETS for Students
 - NETS for Teachers
 - NETS for Administrators
 - [New Standards for 2007](#)
- Your local standards

What constitutes a good student project?

- Addresses students needs, interests and learning styles
- Promotes higher level thinking skills
 - What's that Bloom thing again?
- Cuts across the curriculum while meeting a healthy range of standards
 - For both students and teacher

TechToon

As part of my social studies project, I am about to show you my Web page on the exotic dancers of the South Pacific.



What Is Project-Based Learning?

- In project-based learning, students work in teams to explore real-world problems and create presentations to share what they have learned.
 - *Student benefits:*
 - Deeper knowledge of subject matter
 - Increased self-direction and motivation
 - Improved research and problem-solving skills

What Is Project-Based Learning?

- “Project-based learning emphasizes long-term, multidisciplinary assignments and activities that are student centered and focus on real-world problems and issues.”
 - Microsoft Education

Are you promoting project-based learning?

- Do you:
 - Address real-life issues?
 - Stress problem-solving skills?
 - Serve as a facilitator?
 - Let students self-assess progress?



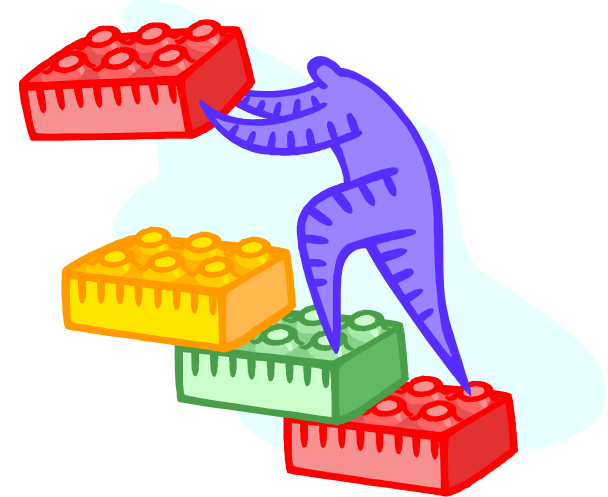
Five Principles of Effective Tech Integration

- Identify learning objectives
- Determine what technology can enhance learning objectives
- Review underlying tech skills needed
- Organize classroom environment
- Set student expectations and define outcomes



PBL: Planning to Assessment

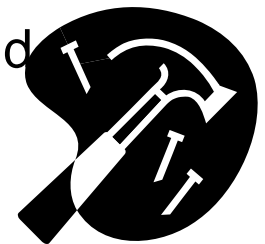
- Four Step Process
 - Lesson Planning
 - Lesson Delivery
 - Collecting Student Work
 - Assessment



Online Productivity Tools

■ Google Docs

- <http://www.google.com/google-d-s/b1.html>
- **Create, edit and upload**
 - Import your existing documents and spreadsheets, or create new ones from scratch.
- **Edit from anywhere**
 - Using your Web browser, access your documents and spreadsheets.
- **Share changes in real-time**
 - Invite people to your documents and spreadsheets and make changes together, at the same time.



Planning

- Planning tool
 - Checklist
 - Preparation
 - Delivery
 - Collection
 - Assessment



Where Do You Begin?

- Do some research first
 - George Lucas Foundation
 - <http://www.glef.org>
 - Best practices
 - Assessment
 - Knowledge Loom
 - <http://knowledgeloom.org/index.jsp>

Choices, Choices, Choices

- **Use a “plug & play” online project**
 - Advantages
 - Less prep time
 - Disadvantages
 - May not dovetail to your curriculum needs
- **Create your own online project**
 - Advantages
 - Customized learning
 - Disadvantages
 - Labor intensive
 - Content
 - Tools



Teacher Generated Projects

- Sites include all content, resources and tools
- Examples
 - Communication
 - Data Collecting & Exchanging
 - Adventure Learning
 - Virtual Fieldtrips
 - Problem-solving
 - Electronic Publishing
 - Digital Photography
 - Collaborative Sites



Samples: Plug & Play Projects

- Explore

- Project FeederWatch

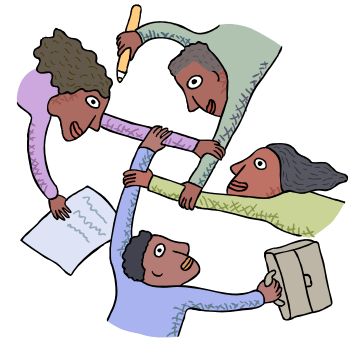
- <http://birds.cornell.edu/PFW/>

- Journey North

- <http://www.learner.org/jnorth/>

- Ciese Projects

- <http://www.k12science.org/currichome.html>



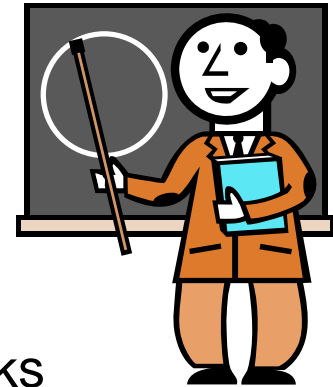
Project Development

- Sites include the tools, resources and examples of online projects
- Projects include:
 - Hotlists
 - Research investigations
 - Hunts
 - WebQuests



Dr. Bloom I Presume

- **Knowledge:**
 - Building the informational base
- **Comprehension:**
 - Processing information so that the meaning is clear
- **Application:**
 - Apply information to a new situation
- **Analysis:**
 - Ability to take apart the complex to show how it works
- **Synthesis:**
 - Creating or producing something new with current knowledge
- **Evaluation:**
 - Making value judgments based on reason



Bloom's Taxonomy: Question Cues

- **Knowledge:**

- list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where,

- **Comprehension:**

- summarize, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend

- **Application:**

- apply, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover

Bloom's Taxonomy: Question Cues

- **Analysis:**
 - analyze, separate, order, explain, connect, classify, arrange, divide, compare, select, explain, infer
- **Synthesis:**
 - combine, integrate, modify, rearrange, substitute, plan, create, design, invent, what it?, compose, formulate, prepare, generalize, rewrite
- **Evaluation:**
 - assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize

Online Activities/Projects

■ Hotlists

- A **hotlist** is a list of Internet resources that are related to a certain theme, topic, subject, and/or project.

■ *Advantages*

- Provides appropriate resources
- Requires no searching
- Allows more “time on task”

■ *China On The Net*

- <http://www.kn.pacbell.com/wired/China/hotlist.html>

Online Activities/Projects

■ Hunts

- A treasure hunt is an activity in which one searches for clues and answers

■ Advantages

- Promote searching skills
- Develop basic Internet skills
- Gathering relative and meaningful information

■ *Cindy O'Hora's Internet Hunts*

- <http://homepage.mac.com/cohora/ext/internethunts.html>



Online Activities/Projects

■ WebQuests

- A WebQuest is an inquiry-based project that includes Internet resources

■ Advantages

- Delivers inquiry-based learning
- Promote effective use of the Internet
- Promotes higher level thinking skills
- Provides real world experiences
- Promotes cooperative learning



Examples of WebQuests

- *Butterfly Life Cycle*

- <http://www.teachers.ash.org.au/jmresources/butlifecycle/>

- *Grow School Greens*

- <http://questgarden.com/79/09/6/090326165128/index.htm>

- *Cracking Dams*

- <http://simscience.org/cracks/>



WebQuest: To Be or Not to Be

- There are a wide range of topics, approaches and directed skills.
 - Beware of projects aimed at lower level skills
 - Labor intensive with little return
 - Shoot for projects that carry the biggest bang for your buck
 - Higher level thinking skills
 - Unique tech skill sets

The Hardest Task

- Do you have a topic, some curricular goals and some **essential questions** in mind for your **WebQuest**?
 - A good essential question is the principle component of designing inquiry-based learning.

Essential Questions

- Questions that probe for **deeper meaning** and set the stage for **further questioning** foster the development of critical thinking skills
- Essential questions are questions that require you to **make a decision** or **plan a course of action**.
- The best essential questions center around major issues, problems, concerns, interests, or themes that are **meaningful** to the students

Examples of Essential Questions

- What invention of the 20th Century has had the greatest impact? Justify your response (decision-making).
- What plan could be developed to reduce the impact of zebra mussels on the Great Lakes ecosystem? Your plan can include three strategies. (developing an action plan)

What's integral to WebQuest research?

- The scaffolding of higher-level thinking skills
 - Move through subtasks that break down a complicated bigger picture
 - concrete thought processes into abstract ones
 - Begins with uncovering facts and then **synthesize** and **analyze** them in order to construct meaning.

Eight Steps to a Successful Online Project

- **Step 1:** Think about your curriculum standards and goals.
- **Step 2:** Go online to see how other teachers are structuring their projects.
- **Step 3:** Once you have become familiar with a variety of online projects, revisit your curriculum and develop the type, topic, and content for your project.
 - Make sure that the topic appeals to your students.
- **Step 4:** Design your project with specific goals, tasks, and outcomes. Don't forget the essential question. Create a starter project that is doable.

Eight Steps to a Successful Online Project

- **Step 5:** Develop an evaluation tool that best supports the project.
 - Ex. Rubric- WebQuest
- **Step 6:** Set specific beginning and ending dates for your project.
- **Step 7:** Periodically, review the process of the project. Answer any questions and address any concerns.
- **Step 8:** At the project's conclusion, share the results of the project with all participants. Publish results if applicable.

WebQuest Resources

- Learning About WebQuests
 - A WebQuest About WebQuests
 - <http://webquest.sdsu.edu/webquestwebquest-hs.html>
- Best WebQuests.com
 - <http://bestwebquests.com/>
- Integrating WebQuests
 - Weaving the Web into K-12 Curriculum
 - <http://www.pitt.edu/~edindex/WebQuests/frames.htm>

Evaluating WebQuests

- Rubric [Form from Spartanburg](#)
- Bernie Dodge's Form
 - <http://webquest.sdsu.edu/webquestrubric.html>
- Eduscapes's Evaluation and Use
 - <http://eduscapes.com/sessions/travel/use.htm#2>



Development Process & Tools

■ Planning Phase

- Searching Phase
 - Searching Tools
- Research Phase
 - Lesson Plans
 - Project Warehouses
 - Assessments
 - Pre and post
 - Assess progress
 - Tools
 - Authoring
 - Productivity

■ Delivery Phase

- Productivity Tools
- Student Tools
- General Resources
- Training
- Project Tools
 - Communication
 - Sharing Data

■ Assessment

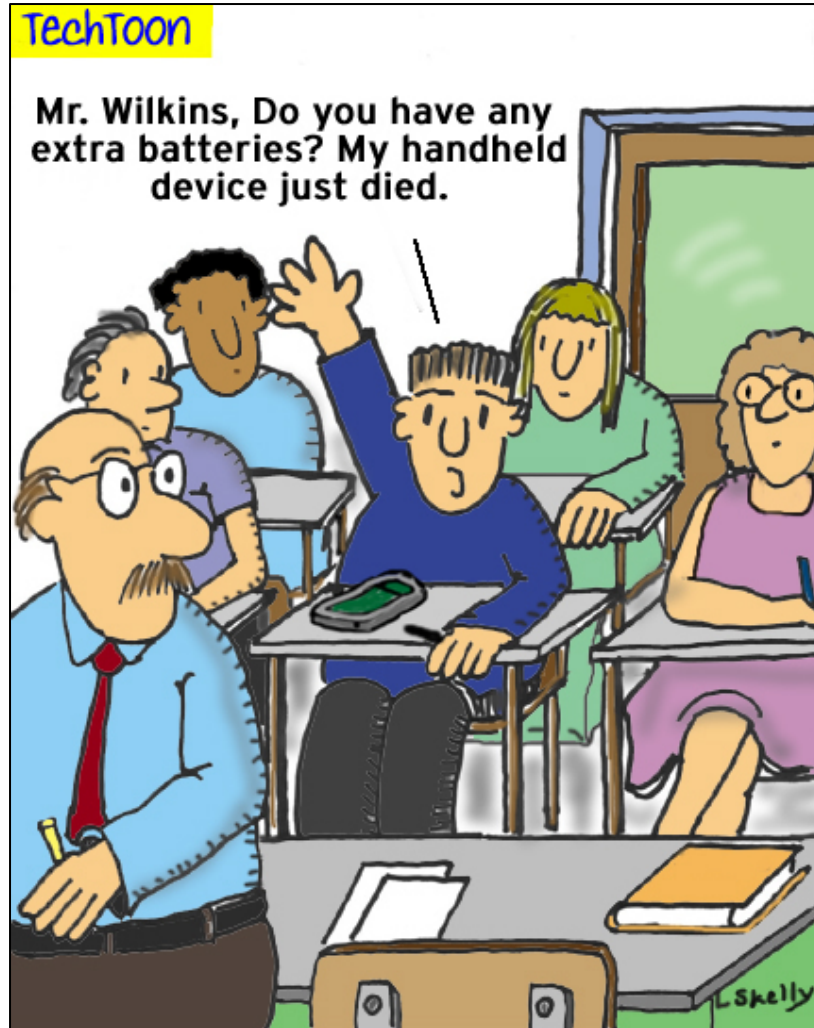


Planning Phase

- Tech Integration: Unit Planning
 - http://www.kent.k12.wa.us/curriculum/tech/proj_plan.html
- Creating Online Projects
 - *Teacher's Guide for Building Integrated Technology Projects*
 - www.essdack.org/building/
- WebQuests
 - <http://webquest.sdsu.edu/materials.htm>

TechToon

Mr. Wilkins, Do you have any extra batteries? My handheld device just died.



Searching Phase

- Searching Tools
 - Directory: www.dmoz.org or www.webbrain.com
 - Search Engine: www.google.com
 - Meta-search engine: www.dogpile.com
 - All the Web: <http://alltheweb.com>
- Natural Language
 - Brainboost: <http://www.brainboost.com>
- Clustering Information
 - Clusty: <http://www.clusty.com/>



Research Phase: Lesson Plans

- Mrs. Smith's Web Page
 - <http://home.earthlink.net/~jesmith/>
- Teacher's Lab
 - <http://www.learner.org/teacherslab/>
- TEAMS Distance Learning
 - <http://teams.lacoe.edu/>



Research Phase: Project Warehouses

- Bernie Dodge's WebQuest Site
 - <http://www.webquest.org>
- Blue Web'n
 - <http://www.kn.pacbell.com/wired/bluewebn/index.html>
- CyberBee
 - <http://www.cyberbee.com/>
- TrackStar
 - <http://trackstar.4teachers.org/trackstar>



Delivery Phase: Development Tools

- Filamentality
 - <http://www.kn.pacbell.com/wired/fil/>
- Trackstar
 - <http://trackstar.4teachers.org/trackstar/index.jsp>
- Ribit (Internet Based Inquiry Template)
 - <http://ribit.tielab.org/>
- Bernie Dodge's QuestGarden
 - New WebQuest generator
 - <http://webquest.org/questgarden/index.php>

Delivery Phase: Performance Assessment

- 4Teachers.org
 - RubiStar
 - <http://rubistar.4teachers.org/>
 - Online, electronic rubrics tool
 - Project-Based Checklists
 - www.4teachers.org/projectbased/
 - Online, electronic checklist tool
- Rubrics
 - http://www.teach-nology.com/web_tools/rubrics/



Delivery Phase: General Assessment

■ Online Quizzes

- Online quizzes that revolve around a curriculum topic
 - **QuizStar (free)**
 - <http://quizstar.4teachers.org>
 - **Quia!**
 - www.quia.com

■ Advantages

- Create electronic quizzes
- Variety of templates
- Compiles student scores
- Create electronic surveys

Delivery Phase: Student Tools

- Evaluating Internet resources
 - Kathy Schrock's Guide for Educators
 - <http://school.discovery.com/schrockguide/eval.html>
- Paradigm Online Writing Assistant
 - <http://www.powa.org/discover/index.html>
- Reading Corner
 - <http://www.carr.lib.md.us/read/>
- Virtual Presentation Assistant
 - <http://www.ukans.edu/cwis/units/coms2/vpa/vpa.htm>

Delivery Phase: Communication Tools

■ AirSet

- <http://www.airset.com>
- Collaboration site

■ Gaggle.net

- <http://www.gaggle.net>
- Teacher monitored email for students

■ ePals

- www.epals.com
- Teacher monitored email for students



Delivery Phase: Communication Tools

- imbee
 - <https://www.imbee.com/>
 - Secure blogging for kids



Delivery Phase: Authoring Tools

- Microsoft Word
 - <http://www.microsoft.com/>
 - A word processing application
 - Can convert documents to HTML
- Google Docs and Spreadsheets
 - <http://www.writely.com/>
 - Components
 - Edit, collaborate, publish, blog, revisions
- Weebly
 - <http://www.weebly.com>

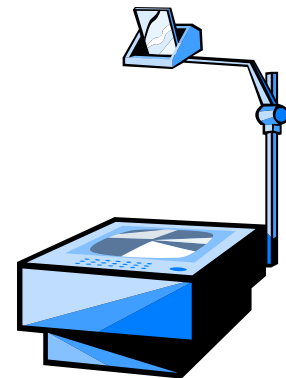


Good Old Days



Delivery Phase: Online Training

- Actden.com
 - www.actden.com
 - Microsoft Applications
 - Online tutorials for students and teachers
- Freeskills.com
 - www.freeskills.com



Delivery Phase: Sharing Information

- AirSet
 - <http://www.airset.com>
 - Collaboration site
- Delicious
 - <http://www.delicious.com>
 - Website that organizes and shares bookmarks



Any Questions?



For More Information



Harcourt Connected Learning
www.harcourtcl.com

