

# Making Sense of the World Wide Web

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# Making Sense of the Web

## ■ Origin of this work

- University of Michigan Digital Library
  - Kathleen Hamel, Tracy Hammerman, Elisabeth Klann, Beth Klein
- Observations of
  - Sixth grade science students
  - High school science students
  - Teachers 5-12
  - New capacities and trends on the Web

# This morning's presentation

## ■ Categorizing the Web by function

- Different way of thinking about Web resources
- Approximately thirty minutes

## ■ Interactive session

- Questions
- Comments
- Suggestions
- Approximately twenty minutes

# Preliminary observations

## ■ Learning uppermost

- Improvement or acquisition of cognitive, social, physical skills
- Increase of factual, procedural knowledge

## ■ Difficulty of assessment

- What changed?
- What are students doing?
- What do students “own”?
- What difficulties are students facing?

# Preliminary observations 2

## ■ Curriculum integration

- Students need to connect to regular activities
- Goals of Web work need to tie in

## ■ Technology problems

- It ain't a toaster
- Scheduling
- Learning software v. learning subject

# Content categorization

- Excellent, useful way to think about the Web
  - Yahoo ([www.yahoo.com/](http://www.yahoo.com/))
  - Hotbot ([www.hotbot.com/](http://www.hotbot.com/))
  - Argus Clearinghouse ([www.clearinghouse.net/](http://www.clearinghouse.net/))
- Web as encyclopedia
  - Most common use at this time
  - Learning activity?

# Function characterization

- **What capacity does this resource enhance?**
- **What kinds of educational activities follow?**
- **What will the challenges be?**

# Category structure

- **Characteristics of the category?**
- **Examples**
  - Not necessarily “best”
  - Not meant to be hot list
- **Where does it fit in?**
  - Educational activities
  - Lesson style
    - Grouping
    - Technology



# Categories

- Extend collections
- Current information
- Periodicals
- Forum for publications
- Interact with other students/teachers
- Use computer, other technical resources
- Take advantage of unique opportunities
- Curriculum/professional resources
- Motivation

# Extend local collections

## ■ Characteristics

- It's not possible for any media center to support every question every student might ask

## ■ Examples

- The Argus Clearinghouse
- Medline
- Middle Years Digital Library

# See Current Information

## ■ Characteristics

- Sites which give up-to-the-minute information
- Data is never “frozen”

## ■ Examples

- EarthCam Index
- Earthquake of the Day
- The Weather Channel

# Read Periodicals

## ■ Characteristics

- Data which changes periodically
- Centered on a topic area

## ■ Examples

- Annals of Improbable Research (AIR)
- Outside On-Line
- Sky & Telescope
- CNN Interactive

# Primary Source Material

## ■ Characteristics

- Most material students work with is secondary
  - Primary is too complex, fragile, expensive, or bulky

## ■ Examples

- American Memory
- California Census Data
- The Hiroshima Archive

# Forum for Student Publication

## ■ Characteristics

- Provides a place for student voices
- Does not need high-tech equipment to serve

## ■ Examples

- Folk Tales From Africa
- Middlezine

# Interact with Others

## ■ Characteristics

- As with publishing, allow students to be producers of information
- Parent permission is critical

## ■ Examples

- FreeZone E-Pals
- Kids as Global Scientists
- Teacher to Teacher Forum

# Use Technological Resources

## ■ Characteristics

- Computers have always been used to control devices
- Using resources over the Web gives access to costly, high maintenance technology

## ■ Examples

- Automatic Translation Service
- Aerodynamics Calculator
- National Budget Simulator



# Unique Opportunities

## ■ Characteristics

- Some things are too dangerous, too expensive, or too remote for kids to do

## ■ Examples

- MayaQuest
- KC-135 Vomit Comet

# Distribute Curriculum

## ■ Characteristics

- In addition to providing content, the Web can be a curriculum material distribution system

## ■ Examples

- Busted!
- Swarthmore's Math Forum
- Kids as Global Scientists

# Motivation

## ■ Characteristics

- Sometimes it's okay to make a cake, just so you can lick the frosting off the beater.

## ■ Examples

- Interactive Magic
- Beanie Babies' Home Page
- Movies.com

# Limitations

## ■ Of the Web

- Uncritically analyzed tasks for students
- Quality and bias of materials

## ■ Of this inquiry

- This was not itself a research study
- Examples cited not “best”, limited in number

# Directions

## ■ For the Web

- Further development of materials for teacher use
- More student production of knowledge

## ■ For us

- Please make this a dialogue
- Be critical of what you see

# Website, Contact Information

- [www-personal.umich.edu/~jmargeru/websense/](http://www-personal.umich.edu/~jmargeru/websense/)
  - Links to all website examples
  - On-Line “paper”
  - Feedback form
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